

Comparison of Evaluation Approaches: Tests and Non-Tests on Students' Critical Thinking at SMPN 1 Wera

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Abstract

This research is motivated by the importance of critical thinking skills in facing the challenges of the 21st century. The 2013 curriculum in Indonesia has emphasized the development of these competencies, but its implementation faces challenges in effective evaluation. This research aims to evaluate the effectiveness of test and non-test approaches in developing students' critical thinking skills at SMP N 1 Wera. The research results show that non-test approaches, such as projects and group discussions, have a significant positive impact on the development of students' critical thinking skills. Students feel more involved and motivated in learning when evaluated with a non-test approach. This approach gives them the opportunity to develop creativity, collaboration, and problem solving, which are important aspects of critical thinking skills. Although there are challenges in implementing non-test approaches, such as lack of time and resources, the benefits far outweigh the barriers. This research concludes that the non-test evaluation approach has great potential in improving student learning and developing critical thinking skills at SMP N 1 Wera.

INTRODUCTION

Background

Education is the main foundation in forming superior quality human resources. Education does not only function as a means of transferring knowledge from one generation to the next (Bailin, 1987). but also, as a medium for developing the potential for critical thinking and creativity. In the era of globalization and industrial revolution 4.0, critical thinking skills are becoming increasingly essential because students are faced with complex and dynamic challenges (Kusnadi, et al., 2020). Critical thinking skills enable individuals to analyze information objectively, make the right decisions, and solve problems effectively (Van, 2020).

Critical thinking is one of the 21st century skills that is highly emphasized by various international educational organizations such as UNESCO and the World Economic Forum (Dwyer, et al., 2014). UNESCO states that 21st century education must include the development of essential life skills, including critical thinking, collaboration, and creativity (Martinovic, & Freiman, 2017). Critical thinking skills are considered important to help students understand, evaluate, and use information wisely in the midst of a very heavy flow of information (Vysotska, & Vysotska., (2021).

In Indonesia, the education system continues to undergo reform to improve its quality and relevance. The 2013 (K13) curriculum implemented by the Ministry of Education and Culture emphasizes developing student competencies, including critical thinking skills, creativity, collaboration and communication (Latif & Saputro 2018). This curriculum adopts a more interactive and project-based learning approach to encourage students to think critically and creatively (Gunawan, 2017).

However, implementing a curriculum that emphasizes developing critical thinking skills is not easy. One of the biggest challenges is how to evaluate these skills effectively (Shahzadi, et al., 2021). Traditional evaluation methods based on written tests often only measure basic cognitive abilities and are less able to capture critical thinking abilities in depth (Alamrani, et al., 2017). This encourages the need for a more comprehensive and diverse evaluation approach (Carter, et al, 2018).

Evaluation approaches in education can be divided into two main categories, namely test and non-test approaches. The test approach includes written exams such as multiple choice, essays, and other standardized exams (Handayani, et al., 2022). This approach has advantages in terms of objectivity and ease

of quantitative data analysis. However, the limitation of this approach lies in its limited ability to measure higher cognitive aspects such as analysis, synthesis and evaluation (Ahmad, et al., 2018).

On the other hand, non-test approaches include evaluation methods such as projects, presentations, group discussions, and portfolios. This method is better able to capture the critical thinking process because it involves students in real situations that require the application of knowledge and skills (Thanassoulis, et al., 2017). Non-test evaluation also encourages students' active involvement in the learning process, which in turn can increase their motivation and interest in learning (FERNIAWAN, et al., 2020). However, non-test approaches also have weaknesses, such as the need for more time and resources and the potential for subjectivity in assessment (Butler, 2018).

SMP N 1 Wera, as one of the first secondary schools in Indonesia, has implemented various evaluation methods to measure and develop students' critical thinking abilities. This school uses a combination of test and non-test approaches in the evaluation process. Written exams are used to measure students' academic understanding, while projects, presentations, and group discussions are used to develop and assess their critical thinking skills

Formulation of the problem

Based on the background that has been described, the problem formulation in this research is as follows:

1. How effective is the test approach in measuring and developing students' critical thinking abilities at SMP N 1 Wera?
2. How effective is the non-test approach in measuring and developing students' critical thinking abilities at SMP N 1 Wera?
3. How does the effectiveness compare between test and non-test approaches in developing students' critical thinking skills at SMP N 1 Wera?

Research purposes

1. Identifying the Advantages and Disadvantages of the Test Approach

2. Identifying the Advantages and Disadvantages of Non-Test Approaches
3. Comparing the Effectiveness of Both Test and Non-Test Approaches.

Benefits of research

This research is expected to provide several benefits, both practical and theoretical:

1. For Teachers and Educators: Provides practical guidance in selecting and implementing effective evaluation methods to develop students' critical thinking abilities.
2. For Schools: Providing data and insights that can be used to improve evaluation and learning strategies at SMP N 1 Wera.
3. For Policy Makers: Provides useful information in formulating educational policies that support the development of critical thinking skills.
4. For Other Researchers: Provides a basis for further research on evaluation methods and the development of critical thinking skills in different educational contexts.

The scope of research

This research will be conducted at SMP N 1 Wera and will include class VIII students. The focus of the research is on comparing the effectiveness of test and non-test approaches in developing students' critical thinking abilities. Data will be obtained through various methods, including written tests, classroom observations, interviews, and document analysis.

Research Limitations

This research has several limitations that need to be considered:

1. Location Scope: This research was only conducted at SMP N 1 Wera, so the results may not be generalizable to other schools with different contexts.
2. Research Time: This research was conducted within a limited time period, so it may not cover all aspects that influence the development of critical thinking.
3. Subjectivity of Assessment: Although researchers attempt to conduct objective assessments, non-test approaches have the potential for subjectivity that can influence research results.

4. Number of Subjects: The number of research subjects may be limited, so the results may not fully represent the student population at SMP N 1 Wera.

Operational definition

To avoid misunderstandings, several key terms in this study are defined as follows:

1. Critical Thinking: The ability to analyze, evaluate, and synthesize information logically and objectively, and make rational decisions based on evidence.
2. Test Approach: An evaluation method that uses written questions, such as multiple choice, short answers, and essays, to measure students' knowledge and cognitive skills.
3. Non-Test Approach: Evaluation method that involves projects, presentations, group discussions, and portfolios to assess student abilities more comprehensively.
4. Effectiveness: The level of success of the evaluation method in measuring and developing students' critical thinking abilities.
5. SMP N 1 Wera: One of the first secondary schools in Indonesia which was the location of this research.

LITERATURE REVIEW

Theoretical basis

Critical Education Theory

Critical education is a pedagogical approach that focuses on developing students' critical and reflective thinking abilities. This education is rooted in the thoughts of Paulo Freire, who emphasized that education must free and empower students to understand and challenge existing social structures. Freire criticized the traditional model of education which he called "bank education," in which students are considered empty vessels that teachers fill with knowledge. According to Freire, education must be dialogical, encourage interaction between teachers and students, and position students as active subjects in the learning process.

Critical education theory emphasizes the importance of critical thinking skills as a means of overcoming social injustice and achieving societal transformation. Students are

invited to think critically about the social reality around them, identify problems, and look for innovative solutions. Critical education aims to build critical consciousness which enables students to understand the social, political and economic conditions that influence their lives, as well as to take action that can change these conditions.

1. Critical Thinking Theory

Critical thinking is the ability to analyze, evaluate, and synthesize information logically and objectively. Richard Paul and Linda Elder developed a framework for critical thinking that includes elements such as goals, questions, information, inferences, concepts, assumptions, implications, and perspectives. According to them, critical thinking involves the ability to:

- a) Analyzing Arguments: Identifying and evaluating arguments in a text or discussion.
- b) Identifying Biases and Assumptions: Recognize the biases and assumptions underlying arguments or information.
- c) Making Logical Inferences: Drawing conclusions based on evidence and logical reasoning.
- d) Evaluating Evidence: Assessing the relevance and credibility of the evidence presented.

John Dewey, an American educational philosopher, also made significant contributions to the theory of critical thinking. According to Dewey, critical thinking is a reflective process that involves testing ideas and hypotheses through experience and observation. This process involves steps such as identifying a problem, collecting data, analyzing evidence, and drawing conclusions. Dewey emphasized that education must provide opportunities for students to engage in solving problems that are real and relevant to their lives.

2. Constructivism Theory in Education

Constructivism is a learning theory that emphasizes that knowledge is constructed by individuals through experience and interaction with their

environment. Jean Piaget and Lev Vygotsky are two main figures in constructivism theory. Piaget argued that learning is an active process in which students construct their own knowledge through direct experience. The learning process according to Piaget involves stages of cognitive development which include sensorimotor, preoperational, concrete operational and formal operational. In each stage, students develop more complex schemes for understanding the world around them.

Lev Vygotsky emphasized the importance of social and cultural interactions in the learning process. The concept of "zone of proximal development" (ZPD) proposed by Vygotsky describes the distance between a student's current abilities and his potential with help from other, more knowledgeable people. According to Vygotsky, learning occurs most effectively when students work within their ZPD, with scaffolding support from teachers or more knowledgeable peers. Effective learning must involve collaboration and dialogue, allowing students to build knowledge through social interaction.

3. Evaluation Methods in Education

Evaluation in education aims to measure student achievement, provide feedback, and improve the teaching and learning process. There are various evaluation methods that can be used, including test and non-test approaches.

4. Test Approach

The testing approach involves the use of written questions, such as multiple choice, short answers, and essays. This test is designed to objectively measure students' knowledge and cognitive skills. Some of the advantages and disadvantages of the test approach are:

- a) Advantages: Objective, consistent, and provides quantitative data that is easy to analyze.
- b) Weaknesses: Limited in measuring critical thinking skills in depth and

tends to focus on mastery of material and ability to remember information.

The test approach is often used because of its ease in preparation and assessment. Standard tests, such as the National Examination, are a measuring tool that is often used to widely assess student academic achievement. However, these standardized tests often fail to measure critical thinking abilities and higher analytical skills.

5. Non-Test Approach

Non-test approaches involve more flexible and often more comprehensive evaluation methods in assessing student abilities. This method includes projects, presentations, group discussions, and portfolios. Non-test evaluation emphasizes the learning process and application of knowledge in real contexts. Some of the advantages and disadvantages of the non-test approach are:

- a) Benefits: Assesses critical thinking skills in depth, encourages active student engagement, and assesses interpersonal skills.
- b) Disadvantages: Requires more time and resources, and assessments can be subjective.

The non-test approach encourages students to actively participate in the learning process and develop practical skills that are relevant to real life. Methods such as group projects and presentations allow students to work collaboratively, develop communication skills, and apply knowledge in more real-world contexts. However, this method demands greater time and resources and requires training for teachers to carry out objective assessments.

Relevant Research

Various studies have been conducted to explore the effectiveness of test and non-test approaches in developing students' critical thinking abilities. A study by Brookhart (2010) shows that evaluation methods that emphasize open-ended assignments and projects that involve solving real problems are more

successful in developing students' critical thinking skills. Brookhart found that students who engaged in cognitively challenging tasks showed significant improvements in their critical thinking abilities.

Fook and Sidhu (2010) also examined the effectiveness of non-test evaluation methods in developing critical thinking skills. They found that group discussions and presentations were effective in developing students' analytical and evaluative skills. Group discussions allow students to share ideas, critique each other's arguments, and build a deeper understanding of the topic at hand. Presentations, on the other hand, develop communication skills and the ability to construct coherent arguments.

Research by Facione (2011) emphasizes the importance of integrating critical thinking teaching in higher education curricula. Facione argues that critical thinking skills can be taught and assessed through a variety of methods, including written tests, projects, and reflective assignments. This research shows that a diverse and comprehensive approach to evaluation can help develop critical thinking skills effectively.

Framework of thinking

The thinking framework in this research integrates critical education theory, critical thinking theory, constructivism theory, and educational evaluation theory to examine the effectiveness of test and non-test approaches in developing students' critical thinking skills at SMP N 1 Wera. This framework includes several key elements as follows:

1. Critical Education Theory: Emphasizes the importance of developing critical thinking skills to understand and challenge existing social structures.
2. Critical Thinking Theory: Provides tools to analyze and evaluate students' critical thinking abilities through elements such as argument analysis, bias identification, and evidence evaluation.
3. Constructivism Theory: Emphasizes the importance of direct experience and social interaction in the learning process to build knowledge.

4. Educational Evaluation Theory: Provides guidance on various evaluation methods and how they can be applied to comprehensively measure critical thinking skills.

Research Hypothesis

Through the use of non-test evaluation approaches, such as projects and group discussions, students at SMP N 1 Wera will have greater opportunities to develop critical thinking skills that go beyond conceptual understanding, so that they are able to apply their knowledge in real-life contexts and produce meaningful thinking, more analytical and reflective.

This hypothesis is based on the assumption that non-test evaluation methods, which encourage students to engage in complex tasks and collaborate, will provide a more varied and challenging learning experience. It is hoped that this will open up space for students to go beyond just mastering the subject matter and encourage them to develop deeper and more applied critical thinking skills. Thus, it is hoped that qualitative research can reveal the important role of non-test evaluation methods in forming students' critical thinking at SMP N 1 Wera in more depth.

RESEARCH METHOD

Research design

This research design will enable researchers to gain an in-depth understanding of the experiences, perceptions and meanings behind the use of evaluation approaches (test and non-test) in the context of developing students' critical thinking skills at SMP N 1 Wera. Descriptive and exploratory approaches will be used to explore and understand complex and diverse phenomena (Creswell, 2014).

Research methods

This research will use a qualitative approach, which allows researchers to explore the context and subjective understanding of participants. Interview techniques, observation, and document analysis will be used to collect and analyze qualitative data (Patton, 2015).

Research Sample Population

The population of this study consisted of students in grades VIII and IX at SMP N 1 Wera, as well as teachers who taught at the school. The student sample will be selected purposively, while the teacher sample will be selected based on certain criteria, such as teaching experience and understanding of evaluation approaches.

Research Instrument

The research instruments that will be used include:

1. Interview Guide for Students: Used to guide interviews with students about their experiences with the evaluation approach.
2. Interview Guide for Teachers: Used to guide interviews with teachers about their use of and perceptions of evaluation approaches.
3. Observation Journal: Used to record researcher observations during the classroom learning process.

Research procedure

The research procedure will involve the following steps:

1. Preparation: Researchers will prepare research instruments and obtain permission from the school to conduct research.
2. Data Collection: Interviews with students and teachers will be conducted, while researchers will also conduct classroom observations during the learning process.
3. Data Analysis: Data from interviews and observations will be recorded, transcribed, and analyzed thematically to identify emerging patterns and themes.
4. Interpretation of Results: The results of the analysis will be interpreted to describe the experiences and perceptions of students and teachers regarding the evaluation approach used.
5. Report Preparation: The research results will be prepared in a report that is in accordance with the qualitative

research format and presented clearly and systematically.

Data collection technique

Data will be collected through interviews with students and teachers as well as classroom observations during the learning process. Interviews can be conducted face to face or by telephone, while observations will be carried out directly in the classroom environment. (Creswell, 2014).

Data analysis technique

Qualitative data from interviews and observations will be analyzed using the thematic analysis method. Interview transcriptions and observation notes will be analyzed to identify patterns, themes, and concepts that emerge from the data. Analysis will be carried out manually by identifying relevant units of information and grouping them into appropriate themes Braun, & Clarke, 2006).

RESEARCH RESULT

Findings from Interviews with Students

Interviews with class VIII and IX students at SMP N 1 Wera provide an in-depth understanding of their experiences in dealing with evaluation approaches (test and non-test) in learning. The majority of students expressed a preference for non-test evaluation approaches, such as projects, presentations, and group discussions, compared to traditional test approaches. They reported that the non-test approach gave them the opportunity to collaborate with classmates, develop creativity, and apply their knowledge in real-life contexts.

Most students also stated that they felt more motivated and engaged in learning when evaluated with a non-test approach. They feel they have greater responsibility for the results of their work and enjoy the freedom to explore their ideas more freely. However, some students also expressed some challenges they faced with the non-test approach, such as a lack of time for preparation and a heavier workload compared to test assignments.

Findings from Interviews with Teachers

Interviews with teachers at SMP N 1 Wera provide valuable insight into the

implementation of evaluation approaches in the classroom. The majority of teachers stated that they tend to use a mix of evaluation approaches, including tests and non-tests, in their learning processes. They recognize that the non-test approach provides additional benefits in developing students' critical thinking skills, because this approach encourages students to think creatively, analyze information, and communicate effectively.

However, some teachers also experience challenges in implementing non-test evaluation approaches in a busy curriculum and limited learning time. They acknowledged that preparing and assessing projects and presentations took longer and required considerable adjustments in learning planning. However, they also emphasized the importance of developing critical thinking skills in education and expressed their commitment to continually seeking ways to improve their evaluation approaches.

Integration of Findings

The integration of findings from interviews with students and teachers shows that the non-test evaluation approach makes a significant contribution in developing students' critical thinking skills at SMP N 1 Wera. Although there are some challenges in implementing it, the benefits of this approach far outweigh the obstacles. Students feel more involved, motivated, and have the opportunity to develop their critical skills, while teachers recognize that this approach makes a positive contribution to the development of students' critical thinking abilities.

Implications for Learning

The results of this research have important implications for learning design at SMP N 1 Wera and other schools. Teachers can use these findings as a basis for reconsidering the evaluation approaches, they use in the classroom. They can look for ways to integrate more non-test evaluation elements, such as projects and group discussions, into their learning to increase student engagement and the development of critical thinking skills.

Research Limitations

Although this research provides valuable insight into the use of an evaluation approach in developing students' critical thinking skills at SMP N 1 Wera, there are several limitations that need to be considered. First, this research was conducted in one school in a certain area, so the results may not be immediately generalizable to a wider context. Additionally, the use of qualitative methods to collect data through interviews and observations may influence research results by introducing subjective biases from researchers or participants. Moreover, time and resource limitations may also limit the depth of analysis or scope of the study. However, efforts have been made to minimize the impact of these limitations by carefully conducting the data collection and analysis process and seeking the validity and trustworthiness of the results through data triangulation.

Recommendations for Future Research

Based on the findings and limitations of this research, there are several recommendations that can be given for future research. First, further research could be carried out involving other schools or even expanding to various levels of education to gain a broader understanding of the use of evaluation approaches in developing students' critical thinking skills. Additionally, longitudinal research can be conducted to evaluate the long-term impact of a particular evaluation approach on student learning. Research could also explore other factors that may influence the effectiveness of evaluation approaches, such as teacher support and student characteristics.

Practical Implications

The results of this research have important practical implications for educational practitioners, especially teachers and policy makers in the education sector. They can use these findings to support their decisions in designing evaluation strategies that are more effective and oriented towards developing students' critical thinking skills. Teachers can consider expanding the use of non-test evaluation approaches in their teaching, while policy makers can consider providing the training and resources necessary

for teachers to implement these approaches successfully.

DISCUSSION

The Influence of Evaluation Approaches on the Development of Students' Critical Thinking

Findings from interviews with students show that the non-test evaluation approach has a positive influence in developing students' critical thinking skills at SMP N 1 Wera. Students stated that they felt more engaged and motivated in learning when evaluated with non-test approaches, such as projects, presentations, and group discussions. This approach gives them the opportunity to develop creativity, collaboration, and problem solving, which are important aspects of critical thinking skills. Students also felt that the non-test approach gave them the opportunity to apply their knowledge in a real-life context, which effectively strengthened their understanding.

However, some students also expressed some of the challenges they faced with the non-test approach, such as a lack of time for preparation and a heavier workload. Nonetheless, the overall positive impact of the non-test approach on student motivation and engagement suggests that this approach has the potential to strengthen the development of students' critical thinking skills at SMP N 1 Wera.

Implementation of the Evaluation Approach by Teachers

Interviews with teachers revealed various approaches used in the classroom evaluation process. The majority of teachers stated that they try to use a mix of evaluation approaches, including tests and non-tests, in an effort to meet the diverse needs of their students. They recognize that the non-test approach provides additional benefits in developing students' critical thinking skills, because this approach encourages students to think creatively, analyze information, and communicate effectively.

However, teachers also experience challenges in implementing non-test evaluation approaches, especially in a busy

curriculum and limited learning time. Preparation and assessment of projects and presentations takes longer and requires considerable adjustments in learning planning. However, teachers' willingness to continually look for ways to improve their evaluation approaches shows their commitment to the development of students' critical thinking skills.

Factors Affecting the Effectiveness of an Evaluation Approach

Analysis of findings from interviews with students and teachers revealed several factors that influence the effectiveness of evaluation approaches, especially non-test approaches, in developing students' critical thinking skills. One of the main factors is teacher support and commitment to the use of non-test evaluation approaches. Teachers who have a strong understanding of the benefits of this approach are more likely to integrate it into their instructional practices.

Other influencing factors are student characteristics and the learning environment. Students who feel supported and motivated by their teachers and classmates are more likely to respond positively to non-test evaluation approaches. Learning environments that promote collaboration, reflection, and exploration can also increase the effectiveness of non-test evaluation approaches in developing students' critical thinking skills.

Challenges and Opportunities for Implementing an Evaluation Approach

Although non-test evaluation approaches offer many benefits in developing students' critical thinking skills, there are several challenges that need to be overcome in their implementation. One of the main challenges is the lack of time and resources available for project preparation and assessment and presentations. Teachers also need to receive adequate support and training to develop the skills and strategies necessary to successfully implement non-test evaluation approaches.

However, although these challenges exist, there are also great opportunities to increase the effectiveness of non-test evaluation approaches through collaboration

between teachers, students and other interested parties. By utilizing existing technology and resources, teachers can create a learning environment that supports the development of students' critical thinking skills in a more effective way.

Implications for Learning Practice

The findings from this research have many implications for learning practices at SMP N 1 Wera and other schools. First of all, teachers can consider increasing the use of non-test evaluation approaches in their instructional practices. This can be done by integrating more project activities, presentations, group discussions and problem-based assignments into their curriculum. Teachers can also encourage collaboration between students, provide constructive feedback, and encourage reflection to improve students' understanding and development of critical thinking skills.

In addition, schools and other related parties can provide the necessary support for teachers in implementing non-test evaluation approaches. This can take the form of training and guidance on how to effectively design, execute, and evaluate non-test assignments. Additional resources, such as instructional materials, sample projects, and evaluation tools, may also be provided to assist teachers in this process.

It is also important for schools and education policy makers to consider adjustments in curriculum and assessment policies to support the use of non-test evaluation approaches. This can be done by providing flexibility in the curriculum, allowing sufficient time for preparation and assessment of non-test assignments, and emphasizing the importance of developing critical thinking skills in educational standards.

Implications for Further Research

This research provides a strong foundation for further research in the fields of education and psychology. There are several areas that can be explored further to deepen our understanding of the use of evaluation approaches in the development of students' critical thinking skills. For example, longitudinal research could be conducted to

identify the long-term impact of non-test evaluation approaches on student learning. Research could also explore individual and contextual factors that may moderate the effects of evaluation approaches on the development of critical thinking skills.

In addition, further research could be conducted to compare the effectiveness of various non-test evaluation approaches and to identify the best strategies for implementing such approaches in different educational contexts. Research could also explore the relationship between the use of non-test evaluation approaches and other aspects of the student learning experience, such as motivation, engagement, and academic achievement.

CLOSING

Research Conclusion

This research has investigated the influence of evaluation approaches, both test and non-test, on the development of students' critical thinking at SMP N 1 Wera. Based on the findings obtained through interviews with students and teachers, as well as classroom observations, it can be concluded that the non-test evaluation approach has a significant positive impact in developing students' critical thinking skills. Students feel more engaged, motivated, and have the opportunity to develop creativity and problem-solving skills when evaluated with a non-test approach. Apart from that, teachers also recognize the benefits of this approach in developing students' critical thinking skills.

However, research also identifies several challenges faced in implementing non-test evaluation approaches, such as lack of time and resources, as well as necessary adjustments in learning planning. Nevertheless, the main conclusion is that the benefits derived from using non-test evaluation approaches far outweigh the barriers. This shows that the non-test evaluation approach has great potential in improving student learning and developing critical thinking skills at SMP N 1 Wera.

SUGGESTION

This research highlights several areas that could be further explored in future research. First, longitudinal research can be conducted to understand the long-term impact of non-test evaluation approaches on student learning. This will provide a better understanding of the long-term effects of using non-test evaluation approaches in the development of students' critical thinking skills.

In addition, further research could explore factors that moderate the effects of evaluation approaches on the development of students' critical thinking skills. This includes individual factors such as student motivation and teacher support, as well as contextual factors such as the learning environment.

Comparative studies can also be conducted to compare the effectiveness of various non-test evaluation approaches and to identify the best strategies for implementing such approaches in different educational contexts. This will provide valuable insight into which evaluation approaches are most effective in developing students' critical thinking skills.

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