Implementation of Inquiry Method in Christian Education: Forming Highly Competitive Students Based on Critical Thinking

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Abstract

Critical thinking is needed by every student in solving problems, including finding problem-solving strategies. This study examines the implementation of inquiry methods in Christian religious education in forming critical thinking. Students are positioned as active learning subjects to create their learning experience independently and create critical thinking. Critical thinking is an effort to frame considerations from various points of view, understanding, interpretation, assumptions, and decision-making from relevant information. This study used a quantitative approach with instruments in the form of tests. The respondents were students of IAKN Tarutung, with a sample of 100 students. The data was analyzed with the paired sample t-test and processed with the help of SPSS 25.0 software. The analysis results showed a significance value of 0.000, or < 0.05, meaning a significant difference exists between the pre-test and post-test results. Thus, educators can implement inquiry methods in Christian education learning to form students who have high competitiveness.

Keywords

Inquiry; Christian Education; Critical Thinking

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1. INTRODUCTION

Thinking is a natural part of the human experience and underlies our interaction with the world. The intellect given to humans is a unique attribute that shapes how we interact with the environment. Almost every action or decision we make is accompanied by a form of thought, conscious or subconscious. Thinking can be defined as the conscious or subconscious act of using reason in pondering and making decisions. It is a fundamental process that shapes our understanding of and response to the world. Individuals often need to develop logical thinking skills to engage in effective thinking. Logic provides a framework for thinking consistently and coherently. Learning logic is an important step in developing the ability to analyze situations, make informed decisions, and solve problems. It involves recognizing patterns, making deductions, and drawing conclusions based on evidence, which are key skills for dealing with the complexities of life.

After the COVID-19 pandemic, the world of education faces various challenges. One of the pressing problems is learning loss, where students experience a decline in their academic ability and competence due to disruptions in their education (Ahmady et al., 2021; Ali et al., 2021). This disadvantage is not limited to the cognitive realm. This extends to other dimensions of learning, including affective and psychomotor aspects, highlighting the compound nature of learning losses (Sariawan et al., 2020). While the cognitive aspect deals with intellectual knowledge and skills, the affective aspect deals with emotions, attitudes, and values. The psychomotor aspect involves physical skills and talent. The disruption caused by the pandemic has hindered students' academic progress and profoundly impacted their emotional well-being and practical abilities. The cognitive dimension of learning loss is the most visible. Students face disruptions in classroom instruction, reduced access to educational resources, and challenges from distance learning. These factors collectively contribute to the decline in academic performance. For some students, the lack of structure and support from a traditional classroom environment makes it difficult to maintain the same level of focus and engagement. The affective dimension of learning loss is also important. The emotional aspects of learning, such as motivation, self-esteem, and a sense of belonging, have been severely affected. The isolation imposed by the shutdown and the anxiety associated with the pandemic has impacted students' emotional well-being. Many students experience increased stress, loneliness, and diminished loss of their friends and teachers. These emotional challenges can hinder their ability to learn effectively. The psychomotor aspect of learning loss refers to a decline in physical skills and practical abilities. Students previously engaged in hands-based learning have had to adapt to a more seated, screen-based educational environment. These changes have limited their opportunities to develop and practice physical skills, which are important for various fields, and overcoming the challenge of thinking into a post-pandemic learning disadvantage requires a holistic approach. Educators, policymakers, and parents should work to not only address cognitive gaps but also provide emotional support and opportunities for practical skills development. This can involve creating a more flexible and inclusive learning environment accommodating learning styles and individual needs.

A person understands general truths relating to his life situation through logical actions. General truth is a type of truth that is universally accepted by society at large. However, not an individual's mindset is influenced by a wide array of factors, especially their background, and it shapes the value each individual believes to be true (Efendi & Wardani, 2021).

However, at this stage, there is the potential to be prone to errors in one's mindset. This is due to several factors, including cognitive biases, environmental influences, and information received. Cognitive biases are our natural tendency to process information differently based on previous experiences and beliefs. This can obscure the objective view of reality, leading to errors of judgment.

In addition, the social environment's influence can also influence how individuals perceive general truths. People often tend to views espoused by their group, even if they contradict empirical evidence. This phenomenon is social conformity's ability to understand and accept more objective truths.
Fluctuations in the flow of information we receive also play a role in shaping truths. In the digital age, access to a wide range of information sources is vast, but it also tends to be exposed to biased or unverified information. This can make it difficult for individuals to distinguish between right and wrong, right and in judgment.

It is important to adopt a critical thinking approach to reduce the potential for errors in mindset. Critical thinking involves identifying and overcoming cognitive biases, assessing evidence, and reasoning objectively. Education that promotes critical thinking can help individuals develop this ability and produce a more accurate view of common truths (Al-Maawali, 2022).

In general, thinking is a human way to solve the problem. The complexity of the problem at hand determines the level of thinking of the individual. Again, the thought process depends largely on the individual’s knowledge and experience. The brain processes all these “raw materials” and generate thoughts. This study examines the application of examinees in Christian religious education in forming critical thinking.

Previous research on critical thinking methods in inquiry was conducted by Duran & Dökme (2016), who found that science and technology learning supported by guided activities developed in line with the IBL approach significantly affects students’ critical thinking skills in science and technology courses. According to Depan Thaiposi Wannapiroon (2015), learning activities consisting of three main steps have a key role in achieving effective educational goals. The first step, pre-teaching and learning preparation, involves careful planning and a deep understanding of the material to be taught. Good preparation assists educators in delivering structured and meaningful learning experiences for students.

The second step, improving students’ critical thinking skills through the teaching and learning process with inquiry-based learning activities using social networks and cloud computing, emphasizes using technology as an effective tool in the educational process. Inquiry methods allow students to actively seek and explore knowledge, while social networks and cloud computing enable collaboration and access to abundant resources.

The final step is measurement and evaluation. This is a critical stage in the learning process because it allows educators to measure student achievement, assess the effectiveness of the methods used, and formulate recommendations for improvement. Applying these steps in real practice proves that these learning activities meet current educational needs.

Sample satisfaction with these learning activities indicates that the approach can be successfully applied in everyday educational settings. This shows that careful preparation, the use of inquiry methods, and the integration of technology in learning are approaches that can significantly improve students’ critical thinking skills. This success will give educators a strong foundation to develop effective and innovative learning approaches.

Prayogi et al. (2018) show that the CIBL model is feasible because of its validity, practicality, and effectiveness. This means that the CIBL model can promote PTP CT capabilities. Validity in the learning context is about how much the learning model can measure what should be measured and whether it reflects critical thinking skills (CT) in PTP (Educational Action Participants). In this case, Prayogi et al. found that the CIBL model can perform this function well to promote learners’ critical thinking skills. This model’s validity indicates that CIBL is a learning approach with a strong theoretical basis and appropriate evaluation tools to measure students’ critical thinking skills.

In addition, this study also observed the practicality of the CIBL model. Practicality includes ease of use, affordability, and efficient deployment. The results showed that educators can apply the CIBL model smoothly and relatively easily. This practicality is important, especially in educational situations where resources and time are often limited.
The effectiveness of the CIBL model was also an important highlight in the study. Effectiveness refers to the ability of the learning model to achieve predetermined learning objectives. The findings showing that the CIBL model effectively improves learners’ critical thinking skills prove that this approach positively impacts educational contexts.

Prayogi et al.’s research concludes that the CIBL model is feasible to use in an educational context. This finding has significant educational implications, as valid, practical, and effective learning models can help improve learners’ critical thinking skills. As education dynamics become more complex, models such as CIBL become valuable assets to prepare a more skilled and critical generation.

However, future research may involve a deeper exploration of how the CIBL model can be optimized in various educational contexts, more detailed metrics to measure critical thinking skills, and continued study of the long-term impact of applying this model on learner development. This will enrich our understanding of the role of innovative learning models in education.

2. METHOD

This study adopts a quantitative approach using tests as its main instrument. The respondents in this study were students of IAKN Tarutung, with a sample size of 100 students. Sampling is done through a simple random sampling method. The population that was the subject of the study was all students at IAKN Tarutung College. The instrument used in this study is a critical thinking test consisting of two parts, namely pre-test and post-test, each consisting of 10 questions. Although the questions on the two tests are different, they have similarities in the topics tested and underlie critical thinking. Before being used in research, pre-test and post-test question sheets must undergo a validation and reliability process. Validation is carried out by validators who are competent in their field to ensure that the instrument measures what it should measure. A positive validation result indicates that the instrument can be used confidently in the study. In addition, the instrument’s reliability is tested to ensure that it delivers consistent results if used repeatedly in the same situation. Instruments declared valid and reliable will be used for data collection.

The data analysis method used in this study was a paired sample t-test. It is an appropriate statistical method for comparing differences between two conditions measured from the same sample. The pre-test and post-test results will be analyzed using SPSS statistical software version 25.0. The analysis results will provide a deeper understanding of changes that may occur in students’ critical thinking after following certain interventions or treatments.

The conclusions from the analysis results will be extracted and discussed further. The results of this study will provide a better understanding of the effectiveness of interventions given to IAKN Tarutung students in improving their critical thinking skills. These conclusions can be used as a basis for recommending changes in curriculum or teaching methods, if necessary. In addition, this research can also contribute to the literature on the development and improvement of critical thinking in the context of higher education. In addition, this research can also help policymakers and university managers make better decisions related to education and learning. The results of this study can provide a clearer view of the importance of developing critical thinking in higher education and how to measure it. This can lead to significant improvements in the learning and teaching process at IAKN Tarutung College and can also be a reference for other educational institutions interested in improving the critical thinking skills of their students.

3. FINDINGS AND DISCUSSIONS

The analysis results showed a significance value of 0.000, or < 0.05, which means that there is a significant relationship between the pre-test and post-test, which means that there is a significant
relationship between the application of inquiry methods and critical thinking.

Table 1. Paired Samples t-Test

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<th>Paired Differences</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
<th>95% Confidence Interval of the Difference</th>
<th>t</th>
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The results of this study align with previous findings conducted by Pakpahan, which confirmed that the creativity of educators in determining learning methods has a significant positive impact on students’ progress. In Pakpahan’s research, she analyzes the role of educators’ creativity in creating learning environments that encourage critical thinking and explore students’ potential. In the current research context, the inquiry method was chosen as a learning strategy that highlights the creativity of educators in designing and implementing immersive learning experiences (Pakpahan et al., 2021). Other studies conducted by Ariawan (2018) proved that cooperative learning methods are effective in Christian education and can improve critical thinking skills. Ariawan examined the effectiveness of cooperative learning methods in Christian education and successfully demonstrated that this method could significantly improve students’ critical thinking skills. Ariawan’s study provides evidence that cooperative-based learning methods and interactions among learners have great potential to advance critical thinking skills. The study’s results also show that a cooperative approach in Christian education can provide a strong foundation for the development of character and values by religious principles. This means that besides improving critical thinking skills, this learning approach can support learners’ spiritual and moral growth. Thus, the findings of Ariawan’s study provide a more comprehensive view of cooperative learning methods’ role in Christian education. Developing critical thinking skills and reinforcing religious values can create a richer and more meaningful learning experience for learners. These conclusions enrich our knowledge of various learning strategies that can be used in various educational environments, including faith-based ones.

Critical thinking is an intellectual ability essential in problem-solving and effective decision-making. In this context, logic plays a very important role. Logic is formulating, analyzing, and evaluating arguments correctly and rationally. It enables individuals to understand cause-and-effect relationships, identify a statement’s assumptions, and draw reasonable conclusions from available information. One of the key elements in logic is the ability to sort through and choose the right problem-solving strategy. In the process of critical thinking, individuals are faced with various problems and situations that require solutions or actions. Logic helps them understand the problem’s essence, identify possible options, and evaluate alternatives well. With strong logic, one can identify the best solution based on rational considerations.

In addition, in the practice of logic and critical thinking, practicing solving problems is a very relevant step. Through problem-solving, individuals learn to face challenges with a systematic approach. They break down the problem into smaller components, identify key factors, and develop action plans accordingly. This process also allows them to exercise creativity in finding innovative solutions. It is important to remember that the thought process in individuals is often guided by the need to find solutions to problems. Critical thinking relies on logical and analytical skills to solve problems, identify weaknesses in arguments, and make decisions based on evidence and careful thinking. Critical thinking and logic are invaluable in facing challenges and making wise decisions in a complex and ever-changing world. Thus, the thought process forms new ideas based on existing ideas to produce new understanding to solve the problem (Kallet, 2019).

Thinking processes in an educational context can also be divided into two main categories:
associative and directed thinking. These two approaches reflect how students respond to subject matter, develop understanding, and go through the learning process. The associative thinking process in education refers to the ability of students to associate various ideas and concepts freely. This means that when students start thinking about one topic or concept, their thinking can expand and relate to other ideas that only sometimes have a direct connection to the original topic. In learning, two important concepts often used are “free association” and “controlled associations.”

Free association in the context of learning is when a student allows his mind to run freely and spontaneously connect ideas. For example, if students study world war history, their thinking might move to other topics, such as the war’s social, cultural, or technological impact. These associations arise without conscious effort to control them and often help students make deeper connections between their study concepts. Controlled associations in an educational context are when students retain control over how they relate ideas. The resulting thoughts tend to remain related to the initial topic of learning. A simple example is when a student learns about theoretical physics, and their thinking remains focused on related physical concepts, such as Newton’s laws or the theory of relativity. The associative thinking process in learning also includes activities such as imagining, fantasizing, and expressing creativity. Students can combine ideas from different subjects or connect concepts that may seem outside the domain. This helps them develop a deeper understanding and engage creatively in learning.

In learning, directed thinking is a more structural approach, where students have clear goals in learning and use structured thinking to achieve them. It is often used in problem-solving, analysis, or research that requires specific methods and critical judgment.

As students develop associative thinking skills, they can expand their creativity in connecting ideas, finding unexpected connections, and making a deeper understanding of the topic they are studying. These thinking skills are integral to intellectual development and creativity in education. In the process of directed thinking, an important part distinguishes it from associative, namely the existence of clear directions and goals in thinking. The direction and purpose of thinking also determine the type of directed thinking. There are two types of directed thinking, namely critical and creative thinking. Both of these thought processes (critical and creative) are classified as higher-order thought processes in Bloom’s taxonomy (Pieter et al., 2020). So, in the learning process, the inquiry method can improve students’ critical thinking.

Critical thinking attempts to frame considerations from multiple points of view, understanding, interpretation, assumptions, and decision-making from relevant information. This action stimulates individuals to sharpen their analytical skills and solve problems. Critical thinking skills make getting work done effectively and efficiently. In addition to focusing on formulating solutions to problems, critical thinking provides moral readiness to account for decisions and their consequences. Each individual must find a solution with the least risk (Hastings, 2017).

In the inquiry method, students are exposed to an active role in exploring, understanding and solving problems. This approach emphasizes conscious and deliberate critical thinking and encourages students to be agents in their learning process. Critical thinking occurs naturally and is encouraged and guided to develop deeper understanding and tested answers to existing questions.

In the inquiry method context, students receive not only the educator's answers. Instead, they are invited to ask, formulate, and identify their challenges. This process involves observation, experimentation, data analysis, benchmarking, and reflection. Students are taught to plan, execute, and evaluate their actions in answering questions during learning.

In addition, the inquiry method encourages the active involvement of students in relating questions that arise during learning. They learn to see how various concepts and information relate and how they can be used to find meaningful solutions or answers. This process develops a deeper conceptual understanding and students’ ability to integrate their knowledge with a broader context.
As a result, the inquiry method is not just about finding answers but also about developing deeper critical thinking. Students are taught to question assumptions, test ideas, and develop a strong understanding of the subject matter. In this way, they build critical thinking skills that can be applied in various contexts, enabling them to become lifelong learners capable of taking on complex challenges with critical and creative thinking.

The inquiry method also teaches students to become researchers in their world. They learn to organize, analyze, and present information systematically and evidence-based (Eltanahy & Forawi, 2019). That way, students develop a better understanding of a particular topic and valuable investigative skills that they can apply in various contexts of everyday life and the development of broader critical thinking. Thus, these activities will lead to the search for answers that are also a solution to the problem (Simatupang et al., 2022; Cloete, 2015).

The critical thinking process is an intellectual competence that is very much in line with the inquiry method in learning. In the inquiry method, students can actively ask questions, analyze evidence, evaluate arguments, and carry out conscious and directed thinking. It fits well with the inquiry method’s focus on developing higher thinking skills, such as analysis, synthesis, evaluation, and problem-solving. Incorporating critical thinking processes in inquiry methods creates learning experiences that strengthen students’ thinking skills, help them become more independent, analytical, and creative learners, and enable them to approach learning with more open thinking, rigorous research, and deeper understanding. That’s why inquiry and critical thinking methods are often considered a perfect match in education focusing on developing strong thinking skills. This aligns with Kallet’s statement that critical thinking processes can increase students’ discovery rates. These skills must be possessed to improve the quality of life so that effectiveness and efficiency are generated in life (Ariawan, 2020). In addition, these things are of special concern to educators so that all can be overcome through innovative learning implemented in the classroom (Wahyuni et al., 2021) as a product of an autonomous, integrative, and independent mindset (Blanchard, 2019). Thus, the role of a teacher in an educational institution involves important considerations related to non-technical aspects that can affect the quality of learning and the overall educational environment. One important aspect is financing, where teachers must understand how resource allocation can affect the availability of facilities, equipment, and learning materials that support teaching effectiveness. In addition, leadership in educational institutions is also a key factor to be considered, as a good leadership style can create an environment conducive to learning. The culture of an educational institution, including values, norms, and organizational culture, also plays an important role in shaping the student experience. Therefore, teachers must deeply understand the institution’s culture and contribute to forming an inclusive and positive environment. In addition, many other aspects also need attention, such as the sustainability of educational programs, relationships with stakeholders, and conflict management. Understanding and attention to these non-technical aspects helps teachers more effectively support student development and create an optimal learning environment (Key, 2015).

4. CONCLUSION

The results of tests conducted in the field have provided valuable information on the effectiveness of applying inquiry methods in Christian education. The discovery of significant differences between pre-test and post-test results, as indicated by a very low significance value (0.000), provides a strong basis for concluding that inquiry methods can improve students’ critical thinking. However, this study still opens up several further research opportunities that can deepen and expand the findings.

One of the possible studies to do is longitudinal research. The research will involve ongoing monitoring of students’ critical thinking development over several years rather than just on a pre-test and post-test basis. With this approach, researchers can understand whether critical thinking changes are long-term or only temporary effects of applying inquiry methods. In addition, further research may
include a more in-depth analysis of certain aspects of inquiry methods that have the most significant impact on improving critical thinking. This could include the application of key stages in the inquiry process, the types of questions asked, the role of teachers in supporting students' critical thinking, or the use of technology in inquiry learning. By understanding the most influential elements, educators can more effectively utilize these methods in Christian learning practice.

Furthermore, the study may consider additional variables that might influence the results in improved critical thinking. This could include factors such as student motivation, the learning environment, or interactions between students in the context of inquiry learning. By considering these factors, research can provide more comprehensive insight into the factors influencing students' critical thinking.

Another suggestion is to consider comparative research. This involves comparing the effectiveness of inquiry methods with other learning methods in improving students' critical thinking. This research will better understand whether inquiry methods are superior to other alternatives and which contexts are most effective.

Finally, future research could also consider deeper aspects of Christian education. Does the application of inquiry methods have an additional impact on understanding Christian values, morality, or ethics? Studying the impact of inquiry methods on these aspects can help develop a more holistic Christian education curriculum.

In conclusion, this study has provided strong evidence that applying inquiry methods effectively improves students' critical thinking in the context of Christian education. However, there are still many opportunities for advanced research that can deepen our understanding of the impact of these methods and how best to optimize them in the Christian learning process. With further research, educators can continue improving their teaching methods and positively contribute to developing highly competitive learners in this ever-changing era.

REFERENCES


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