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Enhancing Critical Thinking Through General Education: A Study of Student Development

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KEY WORD

Student Development, Higher-Order Thinking, Qualitative Study

A B S T R A C T

This study examines the role of general education in enhancing students' critical thinking skills and supporting their overall intellectual development. In the context of modern education, critical thinking has become an essential competency that enables students to analyze information, evaluate arguments, and make informed decisions. General education, with its interdisciplinary and broad-based approach, provides a strong foundation for fostering these higher-order thinking skills.

This research employed a qualitative design to explore students' and lecturers' experiences in general education courses. The participants consisted of undergraduate students and lecturers selected through purposive sampling. Data were collected through classroom observations, semi-structured interviews, and document analysis, including course syllabi and students' assignments. The data were analyzed using thematic analysis to identify patterns and key themes related to the development of critical thinking skills.

The findings reveal that student-centered teaching strategies, such as discussions, debates, and problem-based learning, significantly contribute to the enhancement of critical thinking. Active student engagement and collaborative learning environments were also found to play a crucial role in promoting analytical and reflective thinking. In addition, interdisciplinary learning experiences in general education enable students to connect knowledge across different fields and approach complex problems from multiple perspectives. However, several challenges were identified, including students' lack of confidence, limited participation, and constraints related to time and class size.

In conclusion, general education serves as an effective platform for developing students' critical thinking skills when supported by appropriate teaching methods, active engagement, and well-designed curricula. The study suggests that educators and institutions should prioritize interactive and student-centered approaches to maximize the potential of general education in fostering critical thinking.

INTRODUCTION

In the contemporary educational landscape, the primary goal of education has evolved beyond the mere transmission of knowledge to the cultivation of essential skills that enable students to think critically, act independently, and adapt to rapidly changing global demands. Among these competencies, critical thinking stands out as a fundamental skill that empowers students to analyze information, evaluate evidence, solve problems, and make reasoned decisions. As societies become increasingly complex and information-driven, the need for individuals who can think critically and responsibly has become more urgent. In this context, general education plays a significant role in shaping students' intellectual capacities and fostering the development of critical thinking skills.

General education is designed to provide students with a broad and comprehensive understanding of various fields of knowledge, including the humanities, social sciences, natural sciences, and mathematics. Unlike specialized education that focuses on specific professional or technical skills, general education emphasizes the development of transferable competencies such as communication, analytical reasoning, and problem-solving. Through exposure to diverse disciplines and perspectives, students are encouraged to question assumptions, reflect on different viewpoints, and engage in meaningful intellectual inquiry. This interdisciplinary approach creates a strong foundation for the development of critical thinking.

Critical thinking itself is a complex and multidimensional process that involves not only cognitive skills but also attitudes such as open-mindedness, curiosity, and skepticism. Students who possess strong critical thinking skills are able to interpret information accurately, identify biases, construct logical arguments, and evaluate alternative solutions. These abilities are particularly important in the digital era, where students are constantly exposed to vast amounts of information from various sources, not all of which are reliable. Therefore, the ability to critically assess information has become an essential component of academic success and lifelong learning.

General education courses provide an ideal environment for fostering critical thinking because they often incorporate a variety of teaching and learning strategies that promote active engagement. For instance, classroom discussions, debates, group work, and problem-based learning activities encourage students to articulate their ideas, challenge assumptions, and consider multiple perspectives. In addition, assignments such as analytical essays, case studies, and research projects require students to apply critical thinking skills in practical contexts. Through these learning experiences, students develop not only their intellectual abilities but also their confidence in expressing and defending their viewpoints.

Furthermore, general education contributes to the holistic development of students by integrating knowledge across disciplines. This integration enables students to make connections between different areas of study and to apply their knowledge in real-world situations. For example, understanding social issues may require insights from sociology, economics, and ethics, while addressing environmental challenges may involve knowledge from science, policy, and cultural studies. By engaging with such

interdisciplinary problems, students learn to think more broadly and critically, enhancing their ability to approach complex issues with well-informed perspectives.

Despite its recognized importance, the role of general education in developing critical thinking skills is sometimes undervalued in higher education systems that prioritize specialization and workforce-oriented training. This trend raises concerns about whether students are being adequately prepared to face the challenges of modern society. Without strong critical thinking skills, students may struggle to evaluate information, make informed decisions, and participate effectively in civic life. Therefore, it is essential to examine how general education can be effectively utilized to enhance students' critical thinking abilities.

In addition, the effectiveness of general education in fostering critical thinking depends on several factors, including curriculum design, teaching methods, and assessment practices. Traditional lecture-based approaches may not sufficiently engage students in higher-order thinking processes. Instead, innovative pedagogical strategies such as inquiry-based learning, collaborative learning, and reflective practices are needed to stimulate critical thinking. Educators play a crucial role in creating learning environments that encourage questioning, exploration, and intellectual risk-taking.

This study aims to investigate how general education contributes to the enhancement of students' critical thinking skills, with a particular focus on student development. It seeks to explore the ways in which general education courses, teaching strategies, and learning experiences influence students' ability to think critically. By understanding these relationships, this research is expected to provide valuable insights for educators and policymakers in designing more effective educational programs.

In conclusion, enhancing critical thinking through general education is a vital objective in modern education. General education serves as a foundation for developing students' intellectual abilities, enabling them to analyze information, solve problems, and engage thoughtfully with the world around them. As the demands of the 21st century continue to evolve, the integration of critical thinking within general education remains essential for preparing students to become competent, reflective, and responsible individuals.

METHOD

This study employed a qualitative research design to examine how general education enhances students' critical thinking skills and supports their overall development. A qualitative approach was considered appropriate because it allows for a deep exploration of students' learning experiences, perceptions, and interactions within general education courses. The research focused on understanding the processes through which critical thinking skills are developed rather than measuring them quantitatively.

The study was conducted in a higher education institution where general education courses are implemented as part of the curriculum. The participants consisted of undergraduate students enrolled in general education subjects and lecturers who taught these courses. They were selected using purposive sampling, ensuring that the

participants had direct experience and involvement in the teaching and learning processes relevant to the study. This selection enabled the researcher to obtain rich and meaningful insights into how critical thinking is fostered in the classroom.

Data collection was carried out through observations, interviews, and document analysis. Classroom observations were conducted to identify teaching strategies, student participation, and learning activities that reflect critical thinking processes, such as questioning, analyzing, discussing, and problem-solving. The researcher carefully observed how lecturers facilitated learning and how students responded to various instructional approaches.

In addition, semi-structured interviews were conducted with both students and lecturers to explore their perspectives on the role of general education in developing critical thinking skills. These interviews provided flexibility for participants to express their ideas while still focusing on key aspects such as teaching methods, learning experiences, and challenges encountered during the learning process. To complement these data, relevant documents including course syllabi, lesson plans, and students' assignments were analyzed to examine how critical thinking was integrated into instructional design and assessment practices.

The data obtained from these sources were analyzed using thematic analysis. This process involved organizing the data, coding important information, identifying patterns, and grouping them into themes related to students' critical thinking development. The analysis was conducted systematically to ensure that the findings accurately represented the data collected from different sources.

To ensure the trustworthiness of the study, several strategies were applied. Data triangulation was used by comparing findings from observations, interviews, and documentation. Member checking was conducted to verify the accuracy of the interview results with the participants. In addition, peer debriefing was used to enhance the credibility of the findings through discussions with colleagues or experts.

Ethical considerations were also maintained throughout the research process. Participants were informed about the purpose of the study and their voluntary participation. Their confidentiality and anonymity were protected by ensuring that no personal information was disclosed in the research report.

RESULT AND DISCUSSION

RESULT

The findings of this study reveal that general education plays a significant role in enhancing students' critical thinking skills through various instructional practices, learning experiences, and classroom interactions. The results are presented based on the major themes that emerged from the data analysis, including teaching strategies, student engagement, interdisciplinary learning, and challenges in developing critical thinking.

First, the study found that teaching strategies used in general education courses strongly influence the development of students' critical thinking skills. Lecturers who applied interactive and student-centered approaches, such as group discussions, debates, and problem-based learning, were more successful in encouraging students to think critically. These strategies provided opportunities for students to analyze issues, express their opinions, and evaluate different perspectives. In contrast, traditional lecture-based methods tended to limit students' active participation and reduced opportunities for critical thinking.

Second, student engagement was identified as a key factor in fostering critical thinking. The findings showed that students who actively participated in classroom activities demonstrated higher levels of critical thinking. They were more likely to ask questions, challenge ideas, and provide logical arguments during discussions. Moreover, collaborative learning activities allowed students to exchange ideas and reflect on different viewpoints, which further strengthened their analytical abilities. This indicates that an engaging learning environment is essential for promoting critical thinking development.

Third, the study revealed that interdisciplinary learning in general education contributes significantly to students' critical thinking skills. Exposure to different fields of knowledge encouraged students to make connections between concepts and apply their understanding in broader contexts. For example, students were able to relate social issues to economic and cultural perspectives, which enhanced their ability to analyze complex problems. This interdisciplinary approach helped students develop a more comprehensive and critical understanding of various topics.

In addition, the analysis of documents such as syllabi and students' assignments indicated that critical thinking was integrated into course objectives and assessment tasks. Assignments such as essays, case studies, and presentations required students to analyze information, construct arguments, and provide evidence-based conclusions. These tasks supported the development of higher-order thinking skills and encouraged students to engage deeply with the learning material.

However, the study also identified several challenges in developing students' critical thinking skills through general education. One of the main challenges was students' initial lack of confidence in expressing their ideas and questioning others' opinions. Some students were accustomed to passive learning and found it difficult to adapt to more active and participatory learning environments. Additionally, limited time for discussion and large class sizes were reported as obstacles that hinder effective implementation of interactive teaching strategies.

Overall, the results demonstrate that general education can effectively enhance students' critical thinking skills when supported by appropriate teaching methods, active student participation, and interdisciplinary learning experiences. At the same time, addressing the identified challenges is necessary to optimize the role of general education in fostering critical thinking development.

DISCUSSION

The findings of this study highlight the significant role of general education in enhancing students' critical thinking skills, particularly through the use of interactive teaching strategies, active student engagement, and interdisciplinary learning approaches. These results reinforce the idea that critical thinking is not developed through passive learning, but rather through active participation and meaningful intellectual engagement within the classroom.

One of the key findings shows that student-centered teaching strategies, such as discussions, debates, and problem-based learning, are highly effective in promoting critical thinking. This supports the view that learning environments which encourage students to question, analyze, and evaluate information are essential for higher-order thinking development. When students are given opportunities to express their ideas and challenge different perspectives, they become more confident and capable of constructing logical arguments. In contrast, traditional lecture-based methods tend to limit these opportunities, resulting in lower levels of critical engagement. Therefore, the shift from teacher-centered to student-centered pedagogy is crucial in general education contexts.

Furthermore, the study emphasizes the importance of student engagement in the learning process. Students who actively participated in classroom activities demonstrated stronger critical thinking abilities, as they were more likely to analyze issues, ask questions, and reflect on different viewpoints. This finding aligns with the notion that critical thinking develops through practice and interaction rather than through memorization. Collaborative learning, in particular, was found to be effective in fostering critical thinking, as it allows students to exchange ideas, negotiate meaning, and evaluate alternative perspectives. Such interactions help students refine their reasoning and deepen their understanding of the subject matter.

Another important aspect discussed in this study is the role of interdisciplinary learning in general education. By integrating knowledge from different disciplines, students are encouraged to view problems from multiple perspectives and develop more comprehensive solutions. This approach not only broadens students' knowledge but also enhances their ability to connect ideas and think critically about complex issues. The findings suggest that interdisciplinary learning experiences are essential for preparing students to להתמודד real-world challenges that require analytical and flexible thinking.

The integration of critical thinking into curriculum design and assessment practices also plays a vital role. The study found that assignments such as essays, case studies, and presentations effectively promote critical thinking by requiring students to analyze information, construct arguments, and support their ideas with evidence. This indicates that assessment should not merely focus on content knowledge but also on the development of higher-order thinking skills. Well-designed tasks can serve as powerful tools to encourage students to engage more deeply with the learning material.

However, the study also identifies several challenges that need to be addressed. Many students initially struggle with expressing their ideas and participating in discussions due to a lack of confidence or prior exposure to passive learning environments. This suggests that the transition to active learning requires time and support from

educators. Teachers need to create a supportive classroom atmosphere that encourages students to take intellectual risks without fear of making mistakes. Additionally, large class sizes and limited instructional time can hinder the effective implementation of interactive teaching methods, making it difficult for all students to participate actively.

These challenges indicate that while general education has strong potential to enhance critical thinking, its effectiveness depends on how it is implemented. Educators must be equipped with appropriate pedagogical skills and supported by institutional

CONCLUSION

This study concludes that general education plays a crucial role in enhancing students' critical thinking skills and supporting their overall intellectual development. Through exposure to diverse disciplines, students are encouraged to analyze information, evaluate different perspectives, and develop reasoned arguments. General education provides a strong foundation for fostering higher-order thinking skills that are essential in both academic and real-life contexts.

The findings indicate that the effectiveness of general education in developing critical thinking largely depends on the use of appropriate teaching strategies. Student-centered approaches such as discussions, debates, and problem-based learning have proven to be more effective than traditional lecture-based methods. These approaches create opportunities for active engagement, allowing students to participate, question, and reflect, which are key elements in the development of critical thinking.

In addition, student engagement and interdisciplinary learning were identified as important factors that contribute to critical thinking development. When students actively participate in collaborative learning environments and are exposed to multiple perspectives across disciplines, they become more capable of analyzing complex issues and generating well-informed solutions. Furthermore, the integration of critical thinking into curriculum design and assessment practices, such as through analytical assignments and presentations, strengthens students' ability to think critically and independently.

However, the study also highlights several challenges, including students' lack of confidence, limited classroom interaction, and constraints related to time and class size. These challenges suggest that efforts to enhance critical thinking through general education require continuous support, effective classroom management, and innovative teaching practices.

Overall, general education serves as a vital component in preparing students to become critical, reflective, and independent thinkers. Therefore, educators and institutions should prioritize the development of critical thinking within general education programs by implementing interactive teaching methods, fostering active learning environments, and designing curricula that emphasize higher-order thinking skills. By doing so, general education can effectively contribute to equipping students with the competencies needed to face the demands of the modern world.

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