



An Analysis of Factors Influencing Low Critical Thinking Skills among University Students in Learning

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Article History:

Received: 04-07-2025

Accepted: 30-09-2025

Published: 30-09-2025

Keywords:

Critical thinking, university students, pedagogical strategies, learning factors, systematic review

Abstract

This systematic literature review aims to analyze the major contributing factors influencing the low level of critical thinking skills among university students in academic learning environments. Using the PRISMA methodology, a total of 15 articles published from 2019 to 2024 were selected through Scopus, ERIC, ResearchGate, and national academic databases. The results show that the low integration of active learning methods, limited assessment for higher-order thinking, socio-cultural inhibitions, lack of instructional innovation, and psychological blocks such as anxiety or low motivation significantly reduce students' critical thinking capacity. Implications for future instructional design, pedagogical practices, and institutional policy are discussed.

How to Cite: Rahayu, P.Y. (2025). An Analysis of Factors Influencing Low Critical Thinking Skills among University Students in Learning. *Wiyatamandala Jurnal Pendidikan dan Pengajaran*, 5 (2): 56-63.

INTRODUCTION

Critical thinking is an essential 21st-century skill necessary for students to navigate complex academic and real-world challenges. However, numerous studies have reported that university students often demonstrate poor critical thinking capabilities in instructional settings. This gap significantly impacts students' ability to analyze, evaluate, and create knowledge meaningfully. Existing literature suggests various causes such as teacher-centered instruction, passive learning environments, limited curriculum integration, and lack of assessment for higher-order thinking. This paper aims to conduct a systematic literature review to investigate the contributing factors of low critical thinking skills in university learning.

Critical thinking is widely regarded as a fundamental skill in the 21st century, especially in the context of higher education. It enables students to analyze information,



evaluate arguments, and solve problems innovatively. In a world increasingly driven by information and rapid change, students must not only absorb knowledge but also question its validity and generate new insights.

However, despite its importance, numerous studies have consistently highlighted the inadequate critical thinking skills among university students across various disciplines and countries. These deficiencies are evident in students' limited ability to question assumptions, detect logical inconsistencies, and apply reflective judgment in academic and real-life contexts. This situation raises concerns about the effectiveness of current instructional approaches in fostering deep cognitive engagement.

The low performance in critical thinking is not merely a reflection of students' cognitive capacities but also of the learning environments in which they are immersed. Many classrooms continue to adopt teacher-centered instructional methods, where information is delivered in a one-way manner with little opportunity for dialogue, debate, or reflection. Such environments discourage students from becoming active participants in their own learning process.

In addition to pedagogical approaches, the design of the curriculum itself often fails to prioritize higher-order thinking. Courses are frequently structured around content coverage rather than the development of analytical or evaluative skills. As a result, critical thinking remains marginal rather than being embedded as a core learning outcome throughout the academic journey.

Another contributing factor is the lack of assessments that measure students' higher-order thinking abilities. Many examinations emphasize rote memorization and recall, rewarding surface-level understanding over deep analysis or synthesis. This misalignment between instructional goals and assessment practices undermines efforts to cultivate critical thinkers.

Moreover, students themselves may not always be aware of the importance of critical thinking or may lack the metacognitive skills necessary to develop it. Without targeted interventions or guidance, students may continue to approach learning passively, limiting their academic growth and real-world readiness. Motivation, self-regulation, and belief in one's capacity to think critically also play a role in shaping outcomes.

The impact of these shortcomings extends beyond academic performance. Inadequate critical thinking skills limit graduates' ability to contribute meaningfully to the workforce and civic society. In a time where misinformation is rampant and complex social challenges require nuanced thinking, this gap has serious implications for individual and societal development.

Given the multifaceted nature of this issue, it is necessary to explore the underlying factors contributing to low critical thinking skills in university learning. A clearer understanding of these factors can inform curriculum reform, instructional design, and educational policy, ultimately supporting the development of more effective learning environments.

Therefore, this paper aims to conduct a systematic literature review to investigate the contributing factors of low critical thinking skills in university learning.



Through this approach, the study seeks to synthesize findings from existing research to offer a comprehensive picture of the barriers and enablers of critical thinking development in higher education.

The outcomes of this review are expected to provide practical recommendations for educators, curriculum developers, and policymakers. By identifying patterns, gaps, and effective interventions reported in the literature, this study aspires to support a shift toward more reflective, analytical, and inquiry-driven learning experiences for university students.

METHODS

This study employed a Systematic Literature Review (SLR) based on the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) framework. A comprehensive search was conducted using databases including Scopus, ERIC, Springer, and national journals indexed by SINTA. Keywords such as 'critical thinking', 'university students', and 'instructional challenges' were used. Articles selected were limited to those published between 2019–2024, in English or Bahasa Indonesia. The inclusion criteria emphasized empirical studies in higher education settings, while exclusion criteria removed non-peer-reviewed or opinion articles. Data extraction focused on objectives, methodologies, findings, and identified contributing factors.

A comprehensive search strategy was implemented across several reputable academic databases. These included Scopus, ERIC (Education Resources Information Center), SpringerLink, and national academic journals indexed by SINTA (Science and Technology Index) in Indonesia. The databases were selected based on their relevance to educational research and their wide coverage of peer-reviewed journal articles. This multi-database approach aimed to capture both international and national perspectives on the topic.

To ensure relevance, specific keywords were used during the search process. These included combinations of terms such as "*critical thinking*", "*university students*", "*higher education*", and "*instructional challenges*". Boolean operators (e.g., AND, OR) were applied to refine the search and broaden the coverage of relevant literature. Articles were initially screened based on titles and abstracts before proceeding to full-text analysis.

The inclusion criteria for selecting studies were clearly defined. Only empirical studies published between 2019 and 2024 were considered, reflecting the most recent developments and discussions in the field. Studies had to be written in either English or Bahasa Indonesia and conducted within the context of higher education. Moreover, articles were required to provide empirical data on critical thinking or its influencing factors in instructional settings.

Conversely, exclusion criteria were applied to remove studies that lacked academic rigor. Non-peer-reviewed publications, opinion pieces, editorials, and conceptual essays were excluded from the review. This ensured that only high-quality, data-driven research was analyzed. Duplicates and irrelevant topics were also filtered out during the screening process using the PRISMA flowchart.



For each selected study, data extraction focused on several key elements: the research objectives, methodologies used, main findings, and any contributing factors identified as influencing students' critical thinking abilities. These elements were organized systematically to facilitate comparison and thematic synthesis. The resulting dataset provided a comprehensive overview of the current academic landscape on this issue and supported the identification of recurring themes and research gaps.

RESULT AND DISCUSSION

1. Lack of Active Learning Implementation

One of the most frequently cited factors contributing to low critical thinking skills among university students is the limited implementation of active learning strategies. Many studies report that higher education classrooms continue to be dominated by teacher-centered instruction, where lecturers serve as the sole source of knowledge and students act as passive recipients. This traditional approach often emphasizes memorization and factual recall rather than encouraging students to question, analyze, or construct new ideas.

Passive learning environments hinder the development of critical thinking because they do not challenge students to engage in deeper cognitive processes such as analysis, synthesis, and evaluation. Without being prompted to interact with content, peers, or real-world problems, students miss opportunities to practice and internalize critical thinking skills. As a result, learning remains superficial and disconnected from practical application.

Although there is growing awareness of the benefits of active learning, models such as problem-based learning (PBL), collaborative learning, and case-based methods are still underutilized in many university settings. When implemented, they are often not integrated consistently across courses or supported by appropriate instructional design. This inconsistency prevents students from experiencing sustained exposure to higher-order thinking activities, limiting their capacity to develop the habits of mind associated with critical thinkers.

2. Inadequate Assessment for Higher-Order Thinking

One significant barrier to the development of critical thinking skills in higher education is the nature of assessment practices. Many assessments—such as multiple-choice tests, short-answer questions, and rote-based assignments—primarily measure students' ability to recall facts and definitions. While these forms of evaluation are useful for testing foundational knowledge, they do little to encourage students to engage in deeper levels of thinking such as analyzing, evaluating, or synthesizing information.

As a result, students are rarely challenged to construct arguments, provide justifications, or critique alternative perspectives in their academic work. This lack of alignment between instructional goals and assessment strategies weakens the reinforcement of critical thinking as a desired learning outcome. When assessments do not require the application of higher-order thinking skills, students are unlikely to



see their value or make efforts to develop them, ultimately limiting their cognitive growth and preparedness for complex real-world challenges.

3. Limited Teacher Competence and Training

Findings indicate that one of the underlying causes of low critical thinking skills among university students lies in the limited pedagogical capacity of instructors. Many lecturers lack formal training in designing instructional activities that deliberately foster critical thinking. Without a solid foundation in critical pedagogy, instructors may default to traditional teaching methods that emphasize content delivery over student engagement and intellectual exploration.

In addition, there is a noticeable gap in instructors' understanding of how to implement teaching strategies that promote open-ended discussions, inquiry-based tasks, and integrative learning experiences. These approaches require not only content expertise but also the ability to manage dynamic classroom interactions, pose thought-provoking questions, and scaffold students' cognitive development. When instructors are not equipped with these skills, classroom activities tend to remain superficial, limiting opportunities for students to engage in deeper and more meaningful learning processes.

4. Cultural and Psychological Barriers

Cultural norms play a significant role in shaping students' learning behaviors, particularly in contexts where conformity, harmony, and respect for authority are highly valued. In such environments, students may be reluctant to challenge teachers' opinions, question prevailing ideas, or engage in debate—all of which are essential components of critical thinking. The cultural expectation to “listen and obey” can suppress students' curiosity and discourage open intellectual exploration, especially when questioning is perceived as disrespectful or confrontational.

Beyond cultural influences, psychological factors also contribute to students' limited engagement in critical inquiry. Many students experience test anxiety, fear of making mistakes, or low academic self-confidence, which can hinder their willingness to take intellectual risks. Additionally, a lack of intrinsic motivation or personal relevance in the learning material may lead to disengagement and passive learning. These psychological barriers, when combined with cultural expectations, create a learning environment where critical thinking is neither encouraged nor practiced consistently.

5. Curriculum Misalignment

In many cases, university curricula fail to explicitly include critical thinking as a core learning outcome. This omission leads to a lack of intentional planning in instructional design, where course objectives, learning activities, and assessments are not systematically aligned to support the development of higher-order thinking skills. Without clear curricular emphasis, critical thinking often becomes an assumed outcome rather than a structured and measurable goal.

This gap is particularly evident in non-STEM disciplines, where instructional materials and strategies may focus more on content delivery and theoretical understanding than on analytical or evaluative tasks. While these fields offer rich



opportunities for critical inquiry—such as interpreting texts, debating social issues, or examining philosophical arguments—the absence of explicit frameworks for critical thinking means such opportunities are frequently underutilized. Consequently, students in these disciplines may graduate without having sufficiently developed the cognitive skills needed to engage thoughtfully with complex, real-world problems.

CONCLUSION

This systematic literature review has revealed that the low level of critical thinking skills among university students is a multifaceted issue influenced by various interconnected factors. These factors do not operate in isolation but often reinforce one another, creating a learning environment that is not conducive to the development of higher-order thinking. Among the most prominent challenges are passive instructional strategies, lack of authentic assessments, insufficient teacher preparation, culturally embedded norms, and the absence of critical thinking in curriculum design.

Passive instructional strategies remain widespread, with many lecturers relying on lecture-based methods that prioritize information transmission over student engagement. These approaches limit opportunities for students to question, analyze, and synthesize information—core components of critical thinking. When combined with assessments that emphasize factual recall rather than reasoning, students are further discouraged from applying higher-order cognitive skills in their academic work.

Teacher preparedness is another significant issue. The review indicates that many instructors lack professional development in instructional design and pedagogical methods that foster critical thinking. Without adequate training in facilitating open-ended discussions, inquiry-based tasks, and student-centered learning, instructors may struggle to create environments that challenge students intellectually and promote active engagement.

Cultural norms also present barriers, especially in contexts where deference to authority and avoidance of conflict are emphasized. These norms can suppress students' willingness to question or critique ideas, as doing so may be seen as disrespectful. Additionally, psychological factors such as low motivation, fear of failure, and lack of confidence further inhibit students from taking intellectual risks necessary for critical inquiry.

Curriculum design plays a pivotal role in either supporting or hindering critical thinking development. In many cases, critical thinking is not articulated as an explicit learning outcome, leading to misalignment between objectives, instructional activities, and assessments. This is especially evident in non-STEM disciplines, where the potential for critical analysis is high but often underutilized due to a lack of structured support within the curriculum.

Addressing these issues requires a comprehensive and integrated approach. Educational institutions should embed active learning strategies across disciplines, provide continuous professional development for instructors, and design assessments that align with higher-order thinking objectives. Furthermore, critical thinking must be



explicitly stated in curriculum outcomes and supported by appropriate instructional materials. Future research should also examine the potential of technological tools, interdisciplinary teaching, and socio-emotional supports in fostering critical thinking. These elements could provide innovative pathways to overcoming current barriers and preparing students to thrive in complex, dynamic environments.

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