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Pedagogical Practices and Their Impact on Critical Thinking Skills in Indonesian Islamic Higher Education

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ABSTRACT

This study examines the effectiveness of learning approaches used by State Islamic Higher Education Institutions (PTKIN) in promoting students' critical thinking skills. A mixed-method approach was employed, integrating survey, interview, and observation techniques to collect comprehensive data. Students reported struggling with academic text comprehension (M = 2.03, SD = 0.176) and evaluation (M = 2.41, SD = 0.614), while indicating moderate satisfaction with learning systems (M = 2.94, SD = 0.618), and providing neutral-to-positive evaluations of lecturer quality (M = 2.75, SD = 0.100). Drawing on Bloom's Taxonomy, constructivist learning theories, and the distinction between superficial and deep learning, the analysis highlights the need for pedagogical reforms that integrate active learning, collaborative problem-solving, and inquiry-based instruction. By bridging the gap between traditional religious pedagogy and contemporary educational objectives, Islamic higher education institutions can better equip graduates to engage critically with religious texts and apply their knowledge to real-world challenges, fostering both intellectual and spiritual growth. These findings imply that adopting student-centered and inquiry-based pedagogies in Islamic higher education can significantly enhance students' critical thinking skills and better prepare them for complex societal demands.

Keywords: Critical Thinking, Islamic Higher Education, Pedagogical Reform, Student-Centered Learning, Constructivist Theory

How to Cite :

INTRODUCTION

Critical thinking remains an underemphasized yet fundamentally important skill in Indonesian higher education, despite its essential role in enabling students to analyze information critically, solve problems effectively, and make informed decisions that are vital for both academic and professional success. National assessments, such as the 2018 Programme for International Student Assessment (PISA), consistently reveal that Indonesian students score below the OECD average in reading, mathematics, and science, reflecting persistent deficiencies in critical thinking.[1] Additionally, more than 50% of university students have been classified as possessing low critical thinking skills, a situation that is further highlighted by a survey from the Ministry of Education and Culture, which found that only 23% of respondents recognized the importance of evaluating information sources.[2] In specific disciplines, such as physics, students achieved an average critical thinking score of only 37.1%, placing them in the "very low" category.[3] These findings collectively underscore the urgency of prioritizing critical thinking in university curricula to address this widespread deficiency.

The neglect of critical thinking in Indonesian higher education has been widely documented, with numerous studies identifying both the scale of the problem and possible solutions. For example, Sulaiman and Azizah found that Problem-Based Learning (PBL) can effectively enhance critical thinking,[4] but also noted weaknesses in research designs and variable frameworks in the existing literature. Hidayati et al. underscore that digital literacy significantly predicts students' critical thinking skills, accounting for 40.8% of the variance.[5] However, research into critical thinking remains discipline-specific, with limited exploration in areas such as economic education.[6] Civic education has been identified as a potential medium for fostering critical thinking, yet its potential remains underutilized in university programs.[7] Furthermore, teaching methods and learning environments have been shown to significantly influence the development of critical thinking skills.[8] STEM-based approaches and digital mind maps have

[1] Syamsir Alam Dewan Pengawas Yayasan Sukma, 'Hasil PISA 2022, Refleksi Mutu Pendidikan Nasional 2023', *Media Indonesia*, 2023 <https://mediaindonesia.com/opini/638003/hasil-pisa-2022-refleksi-mutu-pendidikan-nasional-2023>.
[2] Anbiya Mina Scuderia, 'Rendahnya Kemampuan Berpikir Kritis: Tantangan Besar Dalam Menghadapi Era Digital Indonesia', *Goodstats*, 2024 <https://goodstats.id/article/rendahnya-kemampuan-berpikir-kritis-tantangan-besar-dalam-menghadapi-era-digital-indonesia-VAcPY>.
[3] Sujiyani Kassiavera and others, 'Survei Keterampilan Berpikir Kritis Mahasiswa Pada Materi Usaha Dan Energi', *Prosiding SNFA (Seminar Nasional Fisika Dan Aplikasinya)*, 4 (2019), 162 <https://doi.org/10.20961/prosidingsnfa.v4i0.35928>.
[4] Ahmad Sulaiman and Siti Azizah, 'Problem-Based Learning to Improve Criical Thinking Alibity in Indonesia: A Systematic Literature Review', *Jurnal Pedagogik*, 07.01 (2020), 107–52 <https://ejournal.unuja.ac.id/index.php/pedagogik>.
[5] Apriza Fitriani, Siti Zubaidah, and Nurkhairo Hidayati, 'The Quality of Student Critical Thinking: A Survey of High Schools in Bengkulu, Indonesia', *JPBI (Jurnal Pendidikan Biologi Indonesia)*, 8.2 (2022), 142–49 <https://doi.org/10.22219/jpbi.v8i2.18129>.
[6] A. Fitriani, S. Zubaidah, and N Hidayati, 'The Critical Thinking Research Trend in Indonesia's Language Education: A Systematic Review', *JPBI (Jurnal Pendidikan Biologi Indonesia)*, 8.2 (2023), 142–49.
[7] Y. Hidayah and R. A Ulfah, 'Mengembangkan Keterampilan Berpikir Kritis Melalui Pendidikan Kewarganegaraan Di Perguruan Tinggi', *Jurnal Pendidikan Kewarganegaraan*, 9.2 (2019), 123–34.
[8] Paramudia, Farida Amansyah, and Asima, 'Faktor-Faktor Yang Mempengaruhi Pengembangan Critical Thinking Mahasiswa Pada Mata Kuliah Bahasa Inggris Bisnis', *Prosiding 5th Seminar Nasional Penelitian&Pengabdian Kepada Masyarakat*, 2021, 188–93.

shown promise in enhancing both critical and creative thinking, but systematic integration across disciplines is still lacking.[9] Addressing these gaps is essential for equipping graduates with the skills needed to navigate complex societal and workforce challenges.

In the context of Islamic higher education institutions in Indonesia, the development of critical thinking skills is often overlooked. Siregar emphasizes the importance of fostering critical thinking in Islamic Religious Education (PAI) courses through innovative, student-centered models.[10] Similarly, Habib et al. argue for integrating critical thinking into Islamic studies, highlighting its relevance to analytical and reflective engagement with religious texts. However, the PAI curriculum often lacks a clear framework for critical thinking development, creating a gap between educational objectives and practical implementation.[11] This gap necessitates systematic integration of critical thinking into curricula to prepare students for contemporary challenges while maintaining the religious identity of these institutions.

The Faculty of Education and Teacher Training (FITK) at Islamic universities faces additional challenges in embedding critical thinking within its programs. Teacher-centered methods dominate classrooms, limiting opportunities for interactive and problem-solving activities.[12] Lesson plans often prioritize memorization over active learning, which is essential for cultivating analytical skills.[13] Furthermore, Rahmawati and Yani found that student-teachers lack confidence in designing activities to promote critical thinking, citing insufficient training as the primary reason. Addressing these issues requires a strategic overhaul of pedagogical practices and a reorientation of curricula to include critical thinking as a core objective, ensuring future educators can impart these skills effectively.[14]

Critical thinking is a multifaceted concept that has been defined and examined through various perspectives by scholars and researchers. Facione describes it as "purposeful, self-regulatory judgment," encompassing core cognitive skills such as interpretation, analysis, evaluation, and inference.[15] Paul and Elder emphasize critical thinking as the disciplined process of improving the quality of thinking by analyzing, assessing, and reconstructing it.[16] Ennis characterizes it as "reasonable reflective thinking focused on deciding what to believe or do.[17]

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[9] B. I. Sappaile and others, 'The Effect of the STEM Learning Model on Student's Critical Thinking in Indonesia: Meta-Analysis', *International Journal of Instruction*, 16.1 (2023), 1425–36.
[10] Hapni Laila Siregar, 'Analisis Pengembangan Kemampuan Berpikir Kritis Mahasiswa Dalam Mata Kuliah Pendidikan Agama Islam', *Jurnal IHSAN Jurnal Pendidikan Islam*, 2.2 (2024), 134–50 <https://doi.org/10.61104/ihsan.v2i2.194>.
[11] A. Habib and others, 'Integrasi Keterampilan Berpikir Kritis Dalam Studi Islam: Menuju Keunggulan Akademis', *An-Najah: Jurnal Studi Islam*, 6.1 (2024), 45–58 <https://journal.nabest.id/index.php/annajah/article/view/417>.
[12] M. Sulastri, N., Rahmat and D Puspitasari, 'Evaluating Pedagogical Approaches in Islamic Universities: The Case for Active Learning', *Higher Education and Islamic Pedagogy*, 7.2 (2021), 91–104.
[13] R Maulana, 'The Challenges of Promoting Critical Thinking in Islamic Teacher Education Programs', *Jurnal Pendidikan Guru*, 5.2 (2022), 98–114.
[14] D. Rahmawati and A Yani, 'Barriers to Developing Critical Thinking in Teacher Training Faculties at Islamic Universities', *Jurnal Ilmu Pendidikan Islam*, 9.1 (2023), 21–35 <https://doi.org/10.14453/jutlp.v18i1.3>.
[15] Peter A. Facione, 'Critical Thinking : A Statement of Expert Consensus for Purposes of Educational Assessment and Instruction Executive Summary " The Delphi Report', *The California Academic Press*, 423.c (1990), 1–19 <http://www.insightassessment.com/pdf_files/DEXadobe.PDF>.
[16] Richard Paul and Linda Elder, *The Standards for Thinking*, *Tools for Taking Charge of Your Porfessional and Personal Life*, 2013 <http://books.google.com/books?id=g5YX6jLnkcoC&pgis=1>.
[17] Robert Ennis, 'Critical Thinking: A Streamlined Conception', 2015, pp. 31–47

"Expanding on these foundational views, more recent studies highlight critical thinking as a dynamic interplay of cognitive and dispositional elements. For instance, Arum and Roska argue that critical thinking involves not only intellectual rigor but also the disposition to engage persistently in problem-solving.[18] Similarly, Lai identifies the integration of emotional regulation and creativity as critical to contemporary applications of critical thinking in higher education.[19] García-Cabrero et al. explore the sociocultural dimensions of critical thinking, underscoring its role in navigating diverse and complex academic and professional environments.[20] Meanwhile, Choy and Cheah argue that critical thinking is increasingly vital in the digital age for discerning credible information amidst abundant and often misleading content.[21] Collectively, these perspectives underline the importance of fostering critical thinking in higher education to prepare students for rigorous intellectual engagement across disciplines and real-world challenges.

Critical thinking plays a universally acknowledged role in enhancing problem-solving, decision-making, and navigating complex societal challenges, particularly in the context of higher education, where students are expected to complete tasks and assignments to standardized quality. Scholars argue that critical thinking equips students with the ability to evaluate information critically, analyze arguments, and develop coherent solutions, as it influences students' ability to manage academic tasks effectively and meet quality standards.[22] Additionally, Lai and Viering stress the importance of critical thinking in interdisciplinary assignments, where students must synthesize diverse perspectives to create meaningful solutions.[23] García-Cabrero et al. underscore that students who excel in critical thinking are better at understanding task requirements, organizing their thoughts, and delivering high-quality outputs.[24] Furthermore, Choy and Cheah assert that critical thinking is essential in evaluating sources and integrating credible information into academic work.[25] Collectively, these insights emphasize the pivotal role of critical thinking in ensuring that students meet and exceed standardized academic expectations.

While critical thinking is essential in education, studies indicate that Indonesian students' critical thinking abilities remain low. It is argued that there occurs the underdevelopment of university students' critical thinking skills in Indonesia, with more than 50% categorized as less

<https://doi.org/10.1057/9781137378057_2>.
[18] R. Arum and J Roska, *Academically Adrift: Limited Learning on College Campuses* (University of Chicago Press, 2019).
[19] E R Lai, 'Critical Thinking: A Literature Review', *Journal of Educational Assessment*, 8.2 (2020), 45–56 <https://doi.org/10.1080/10627197.2020.1830698>.
[20] B. García-Cabrero and Et Al, 'Sociocultural Influences on Critical Thinking Development in University Settings', *Journal of Educational Psychology*, 113.4 (2021), 760–76 <https://doi.org/10.1037/edu0000498>.
[21] S C Choy and P K Cheah, 'Digital Literacy and Critical Thinking in Higher Education: Implications for Teaching and Learning', *Computers & Education*, 2022 <https://doi.org/10.1016/j.compedu.2022.104374>.
[22] D F Halpern, 'Thought and Knowledge: An Introduction to Critical Thinking (5th Ed.)', *Routledge*, 2019 <https://doi.org/10.4324/9781315107536>; Stephen Brookfield, 'Teaching for Critical Thinking', 2013, pp. 1–16 <https://doi.org/10.4018/978-1-4666-4249-2.ch001>; P. C. Abrami, E. Bernard, R. M., Borokhovski, and Et Al, 'Strategies for Teaching Students to Think Critically: A Meta-Analysis.', *Review of Educational Research*, 91.5 (2021).
[23] E. R. Lai and M Viering, 'Assessing Critical Thinking across Domains: A Review of the Literature', *Educational Measurement: Issues and Practice*, 39.2 (2020), 14–25 <https://doi.org/10.1111/emip.12255>.
[24] García-Cabrero and Al.
[25] Choy and P K Cheah.

skilled. A study analyzing students' critical thinking skills in mathematics education found that a significant portion of students exhibited low to moderate critical thinking abilities.[26] Additionally, a survey by Statistics Indonesia (BPS) in 2018 indicated that only 14.92% of the population over the age of 10 read newspapers or magazines, reflecting low engagement with critical reading materials.[27] Furthermore, research on students' critical thinking skills in science education reported that students' average scores were in the low category, highlighting the need for educational reforms to prioritize critical thinking in university curricula.[28]

In Islamic higher education institutions, the development of critical thinking skills has not received adequate attention. For example, a study emphasized the necessity of enhancing students' critical thinking abilities in Islamic Religious Education (PAI) courses, suggesting the implementation of innovative, student-centered learning models to achieve this goal.[29] Similarly, research advocates for integrating critical thinking skills into Islamic studies to achieve academic excellence, highlighting the importance of analytical, evaluative, and reflective abilities in understanding and applying Islamic concepts.[30] However, the current PAI curriculum often lacks a clear framework for developing students' critical thinking skills, indicating a gap between educational objectives and practical implementation.[31] This gap underscores the need for a systematic integration of critical thinking development within the curriculum to better prepare students for complex challenges in contemporary society.

The relationship between religious education and critical thinking warrants deeper examination, particularly in the context of Islamic higher Indonesian education institutions, where traditional learning methods often dominate. Research has largely concentrated on the pedagogical challenges of critical thinking or the doctrinal objectives of Islamic education but seldom on their alignment. For example, Sulastri et al. found that instructional practices in Indonesian Islamic universities are frequently lecture-based and content-heavy, leaving limited room for critical dialogue and student-centered learning.[32] Similarly, Maulana observed that lesson plans often lack elements that stimulate analytical engagement, such as debates or case studies, raising questions about whether critical thinking can naturally coexist with traditional religious pedagogy.[33] Additionally, Yusof et al. argue that while Islamic education has the potential to foster critical thinking, its success hinges on the willingness of institutions to adapt

[26] Erika Yohanna Seventina Siahaan, Ilham Muhammad, and Dadan Dasari, 'Trend of Critical Thinking Skill Researches in Mathematics Education in Scopus Database across Indonesia: From Research Design to Data Analysis', *International Journal of Trends in Mathematics Education Research*, 6.2 (2023), 151–61 <https://doi.org/10.33122/ijtmer.v6i2.216>.
[27] 'Shortage of Libraries and Quality Readings Causes Indonesia's Literacy Crisis', *BPS*, 2018 <https://rise.smeru.or.id/en/blog/shortage-libraries-and-quality-readings-causes-indonesia's-literacy-crisis>.
[28] I. G. Astawan and others, 'Stem-Based Scientific Learning and Its Impact on Students' Critical and Creative Thinking Skills: An Empirical Study', *Jurnal Pendidikan IPA Indonesia*, 12.3 (2023), 482–92 <https://doi.org/10.15294/jpii.v12i3.46882>.
[29] Apriza Fitriani, Zubaidah, and Hidayati.
[30] E. Fitriani and A Fauzi, 'The Critical Thinking Research Trend in Indonesia's Language Education: A Systematic Review', *Diksi*, 31.1 (2023), 1–15 <https://journal.uny.ac.id/index.php/diksi/article/view/72070>.
[31] Muhammad Minan Chusni and others, 'Review of Critical Thinking Skill in Indonesia: Preparation of the 21st Century Learner', *Journal of Critical Reviews*, 7.9 (2020), 1230–35 <https://doi.org/10.31838/jcr.07.09.223>.
[32] Sulastri, N., Rahmat and Puspitasari.
[33] Maulana.

teaching methods that encourage inquiry and reflection.[34] Examining whether these practices resonate with the existing nature of learning in Indonesian Islamic higher education is crucial for understanding the systemic and cultural barriers to adopting critical thinking.

The development of critical thinking in higher education is deeply rooted in Bloom's Taxonomy and constructivist learning theories, which provide foundational insights into how students acquire and apply knowledge. Bloom's Taxonomy, a widely recognized educational framework, organizes cognitive skills into a hierarchy that progresses from lower-order skills like remembering and understanding to higher-order skills such as analyzing, evaluating, and creating.[35] This progression underscores the need for education systems to transcend rote memorization and foster deeper cognitive engagement. The taxonomy's focus on higher-order thinking aligns closely with the goals of critical thinking, emphasizing not only the absorption of information but also its application in diverse and complex contexts. However, research has highlighted challenges in implementing Bloom's Taxonomy effectively, particularly in contexts where curriculum design remains rigid and overly content-focused, limiting opportunities for higher-order skill development.[36]

Constructivist learning theories, in contrast, view learning as an active process where students construct knowledge through experience and reflection. Grounded in the works of Piaget and Vygotsky, constructivism advocates for learner-centered approaches that encourage inquiry, collaboration, and problem-solving.[37] Unlike traditional methods that position students as passive recipients of knowledge, constructivism promotes active engagement, enabling students to develop critical thinking by connecting new information to existing knowledge frameworks. For instance, collaborative learning activities, such as group discussions and case studies, are proven to enhance critical thinking by exposing students to multiple perspectives and challenging their assumptions.[38] Nevertheless, integrating constructivist principles into higher education often encounters resistance due to institutional reliance on teacher-centered practices, which prioritize efficiency over active, learner-driven processes.[39]

The concepts of superficial and deep learning offer a valuable framework for evaluating the quality of student engagement in university education. Superficial learning, often driven by exam-focused curricula and traditional assessment practices, results in students prioritizing rote memorization over meaningful understanding.[40] This approach limits the retention and application

[34] N. Yusof, R. Abdullah, and M. H Hassan, 'Reconciling Traditional Islamic Pedagogy with Critical Thinking: A Review of Best Practices', *International Journal of Islamic Studies*, 15.1 (2023), 45–62.
[35] Benjamin S. Bloom and David R. Krathwohl, 'Taxonomy of Educational Objectives: The Classification of Educational Goals, by a Committee of College and Univesity Examiners', *Handbook 1: Cognitive Domain*, 1956, p. 10.
[36] Forehand, 'Bloom's Taxonomy: Original and Revised', *Emerging Perspectives on Learning, Teaching, and Technology*, 41.4 (2010), 47–55.
[37] L S Vygotsky, *Mind in Society: The Development of Higher Psychological Processes* (Harvard University Press, 1978).
[38] D. Randy Garrison, *E-Learning in the 21st Century: A Framework for Research and Practice, Second Edition*, *E-Learning in the 21st Century: A Framework for Research and Practice, Second Edition*, 2011 <https://doi.org/10.4324/9780203838761>.
[39] Catherine Twomey Fosnot, 'Constructivism: A Psychological Theory of Learning', *Constructivism: Theory, Perspectives, and Practices*, 0 (2005), 320 <http://rsperry.com/fosnotandperry.pdf>.
[40] Noel Entwistle and Paul Ramsden, *Understanding Student Learning (Routledge Revivals)*, 2015

of knowledge, as students rarely connect new material to existing cognitive frameworks or apply it in novel contexts. Deep learning, by contrast, is characterized by active engagement, critical reflection, and the ability to synthesize and apply knowledge across disciplines. Fostering deep learning requires pedagogical reforms that emphasize inquiry-based instruction, collaborative problem-solving, and opportunities for students to engage with complex, real-world problems.

Positioning this study among previous research, it is evident that while prior studies have explored critical thinking in Indonesian higher education, they have largely been discipline-specific, focused on general pedagogical challenges, or have not systematically addressed the intersection of critical thinking and religious pedagogy within Islamic higher education institutions. Unlike previous research, this study adopts a comprehensive, mixed-methods approach to examine how current learning approaches within PTKIN both hinder and enable the development of critical thinking skills, considering institutional, curricular, and instructional dimensions. The novelty of this research lies in its integration of Bloom's Taxonomy and constructivist theory to analyze not only the pedagogical practices but also the cultural and curricular barriers unique to Islamic higher education. By doing so, this study provides a more holistic understanding of the systemic changes required to foster critical thinking and offers actionable recommendations that bridge the gap between traditional religious pedagogy and contemporary educational imperatives.

This study aims to examine the effectiveness of learning approaches used by State Islamic Higher Education Institutions (PTKIN) in promoting students' critical thinking skills. The context of this study is rooted in the unique challenges faced by Islamic higher education institutions in Indonesia, where religious teachings are prioritized, often at the expense of foundational academic skills such as critical thinking. While religious content is essential, this emphasis can result in an imbalance that leaves graduates ill-equipped to address contemporary societal issues requiring analytical and problem-solving abilities. Bridging this gap through curriculum reform that integrates critical thinking without compromising religious values is vital. Such efforts can empower graduates to engage with religious teachings critically while applying them to solve real-world challenges, fostering intellectual and spiritual growth in an increasingly complex global landscape.

RESEARCH METHODOLOGY

This study aims to explore students' perceptions of critical thinking skills acquired through the lecture system in an Islamic Education Program (PAI) at a specific semester at State Islamic University K.H. Abdurrahman Wahid, Pekalongan, Central Java. A mixed-method approach was employed, integrating survey, interview, and observation techniques to collect comprehensive data. A total of 32 students from the program participated as respondents, providing insights into their experiences. While the sample size represents only 10% of the total student population (320), it remains suitable for an exploratory study, which primarily seeks to identify patterns and generate hypotheses rather than establish definitive conclusions. Although larger samples are generally preferred for statistical generalizability, a smaller sample can still yield meaningful

<https://doi.org/10.4324/9781315718637>.

trends, particularly when combined with qualitative methods such as interviews and observations.

The survey utilized a Likert-scale questionnaire designed to measure critical thinking skills across various dimensions. Additionally, the questionnaire examined students' tendencies and preferences regarding the learning methods implemented in their courses.[41] The Likert-scale used in this study employed four response options: "strongly disagree," "disagree," "agree," and "strongly agree," representing a forced-choice format. This even-numbered scale was intentionally chosen to eliminate a neutral response option, thereby encouraging respondents to take a definitive stance. Such an approach is particularly effective in capturing clear perceptions and minimizing indecisiveness in responses. Descriptive statistical analysis was conducted to identify trends, central tendencies, and variations in their responses, providing an overview of how students perceive their critical thinking development and the role of the lecture system in shaping these skills. Descriptive statistics are widely recognized as a fundamental tool in educational research to summarize and interpret survey data effectively.[42]

In addition to the survey, semi-structured interviews were conducted with a subset of respondents to gain a deeper understanding of their perceptions and contextualize the quantitative findings. The qualitative data were analyzed thematically, focusing on recurring themes and individual insights about the learning process and its impact on critical thinking development. Observations were also utilized to complement and validate both survey and interview findings, enhancing the study's overall credibility. A triangulation method was employed to integrate statistical findings from the survey with qualitative insights from the interviews and observations, ensuring a robust and comprehensive analysis.[43] This combination of methods provided a holistic understanding of how students perceive and experience critical thinking skills in their academic program while addressing the potential limitations of a smaller sample size. By incorporating multiple data sources, the study not only enhances the reliability of its findings but also provides a richer and more nuanced interpretation of students' learning experiences and the effectiveness of the current lecture system in fostering critical thinking.

RESULTS AND DISCUSSION

This section is the main part of the research article and is usually the longest part of the article. The research results presented in this section are "clean" results. Its main function is to answer the question posed in the introduction, explaining how the results support the answer and how the answer fits existing knowledge about the topic. The discussion should always explain how your research has enhanced the reader's understanding of the research problem you left at the end of the introduction. discussions should be as brief as possible while stating, supporting, explaining, and defending your answers clearly and completely, as well as discussing other important and relevant issues.

[41] Zimmerman, 'Becoming a Self-Regulated Learner: Beliefs, Techniques, and Illusions', *Routledge*, 5841.JUNE 2002 (2022), 315 <https://doi.org/10.1207/s15430421tip4102>.
[42] J. W. Creswell and J. D Creswell, *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches (6th Ed.)* (SAGE Publications, 2023).
[43] M. Q. Patton, *Qualitative Evaluation and Research Methods* (Thousand Oaks, CA: Sage, 2015).

Perceptions of Critical Thinking Skills and Learning Systems

The central theme of this study is the role of state Islamic higher education institution learning in developing students' critical thinking skills. The research examines how different aspects of the learning system contribute to or hinder the development of critical thinking and the ability to engage in deep, analytical discussions. Descriptive statistical analysis reveals variations in students' perceptions regarding different aspects of their academic experience. The ability to "understand academic texts" had a mean score of 2.03 (SD = 0.176), indicating that students generally struggle with text comprehension, as their responses were clustered around disagreement. Similarly, the ability to "evaluate academic texts" scored a mean of 2.41 (SD = 0.614), showing a moderate level of difficulty in assessing and analyzing academic materials, with slightly greater variation in responses.

Table 1. P*erceptions of Critical Thinking Skills and Learning Systems*

N=32	Mean	Std. Deviation
Understanding cademic text	2.03	.176
Evaluating academic ext	2.41	.614
Satisfaction on lassroom learning activities	2.94	.618
Satisfaction on lecturers' teaching quality	2.75	.100

Observational data support these findings, indicating that many students struggle to comprehend the meaning of a paragraph, which directly impacts their ability to analyze and evaluate texts. (Observation at UIN K.H. Abdurrahman Wahid, September 17, 2024) This difficulty suggests that reading strategies and comprehension skills need further development to enhance students' ability to engage with academic material critically.

Regarding the "learning system," students reported a mean score of 2.94 (SD = 0.618), suggesting a moderate level of satisfaction with the teaching approaches used in their courses. However, the relatively high standard deviation indicates that perceptions vary among students. Meanwhile, "lecturer quality" received a mean score of 2.75 (SD = 0.100), indicating that while students' evaluations of their lecturers were generally neutral to slightly positive, the low standard deviation suggests a high level of consistency in their responses.

Further observations during classroom discussions reveal significant deficiencies in students' ability to articulate concepts verbally. It was noted that many students presenting materials lacked mastery of the content, leading to unclear and ineffective explanations. (Observation at UIN K.H. Abdurrahman Wahid, September 19,, 2024) Additionally, students who posed questions often failed to inquire about fundamental aspects of the material being discussed. When responding to questions, many presenters simply read information from the internet without reinterpreting it in their own words, demonstrating a lack of deeper understanding and analytical thinking. These observations reinforce the statistical data, highlighting critical gaps in students' ability to process, analyze, and convey information effectively.

Qualitative data from interviews further support these findings. Students expressed concerns that lecturers often rely too heavily on group presentations and discussions, where

participation is sometimes perceived as superficial rather than meaningful engagement.

> "*Jangan kebanyakan presentasi kelompok. Apalagi kalau hampir semua mata kuliah ada presentasi kelompok, mahasiswa yang kedapatan presentasi, misal 2-4 mata kuliah dalam satu hari bisa tidak efektif pembelajarannya*." [We are overwhelmed by too many group presentations. Especially if almost every course includes group presentations, students who have to present, for instance, in 2 to 4 courses in a single day might experience ineffective learning.) (Student#10, personal communication, August 30, 2024]

One student suggested incorporating more collaborative problem-solving methods that reflect real-world scenarios, followed by small group discussions to facilitate deeper interaction and knowledge exchange.

> "*Tingkatkan kualitas presentasi kelompok. Gunakan metode berbeda disetiap pertemuan seperti problem based learning, focus group discussion. Hal ini bisa membantu para mahasiswa dalam memahami materi yang disampaikan.*" [Improve the quality of group presentations. Use different methods in each session, such as problem-based learning or focus group discussions. This can help students better understand the material being presented.] (Student#18, personal communication, August 30, 2024)

This approach would not only enhance critical thinking skills but also ensure that participation is more substantive rather than performative.

Another concern raised in the interviews relates to lecturers' teaching effectiveness and commitment. Some students pointed out that certain lecturers rarely engage directly in teaching and instead depend solely on student-led presentations. This practice, according to the respondents, reduces the depth of understanding, as some students participate minimally while others carry the burden of the assignment. There were also calls for institutional accountability, with students recommending stricter policies or sanctions for lecturers who frequently miss classes or fail to deliver direct instruction. Furthermore, students suggested that learning environments should be diversified, such as utilizing outdoor settings or mosque-based learning, which could provide a more engaging and immersive experience. Student #7 explained (personal communication, August 28, 2024)

> "*Dosen sebaiknya menggunakan metode pembelajaran yang lebih bervariasi, seperti kolaboratif problem solving dan diskusi kelompok kecil, bukan hanya fokus pada pembuatan makalah, presentasi, dan diskusi besar. Selain itu, suasana belajar juga perlu divariasikan, misalnya dengan mengadakan perkuliahan di masjid atau di luar ruangan, agar mahasiswa mendapatkan pengalaman belajar yang lebih segar dan bermakna*." ["Lecturers should use more varied teaching methods, such as collaborative problem-solving and small group discussions, instead of focusing only on paper writing, presentations, and large discussions. Additionally, the learning environment should also

be diversified, for example by holding classes in mosques or outdoor spaces, so that students can experience a fresher and more meaningful learning process."]

In conclusion, the findings from observations, surveys, and interviews consistently highlight significant challenges in students' comprehension, critical thinking, and communication skills. The current reliance on repetitive group presentations, coupled with limited direct engagement from lecturers, appears insufficient to foster meaningful learning. Students themselves have advocated for a more dynamic and collaborative approach to learning, emphasizing problem-solving activities, small group discussions, and the use of varied, context-rich environments such as mosques or outdoor spaces. Addressing these concerns by enhancing instructional strategies and diversifying learning settings will be crucial to improving academic outcomes and creating a more engaging and effective educational experience.

Understanding and Superficial Learning in Text Comprehension

Bloom's Taxonomy categorizes cognitive skills into six levels: remembering, understanding, applying, analyzing, evaluating, and creating.[44] The study's findings indicate that students struggle with basic text comprehension, as shown by the mean score of 2.03 (SD = 0.176) for understanding academic texts. This suggests that students primarily operate at the lower-order cognitive levels, where they rely on passive learning strategies rather than active engagement with content.[45]

Learning should be an active process where students construct meaning through experience and reflection.[46] The observed difficulty in interpreting paragraphs implies that students may not be engaging with reading material in a meaningful way. Instead of interacting with texts critically, they might be memorizing information superficially without integrating it into their broader knowledge framework.[47] This aligns with Marton and Säljö's distinction between superficial and deep learning, where superficial learners focus on rote memorization and completion of tasks rather than conceptual understanding.[48] To promote deeper learning, educators should incorporate active reading strategies, problem-based learning, and scaffolded instruction.[49]

The difficulty in interpreting paragraphs reflects a fundamental challenge in student reading comprehension that extends beyond mere decoding of text. Recent research suggests that students frequently resort to superficial memorization strategies rather than engaging in the deep cognitive processing necessary for meaningful learning. According to the narrative review

[44] Bloom and Krathwohl; D. R Krathwohl, 'A Revision of Bloom's Taxonomy: An Overview', *Theory into Practice*, 41.4 (2002), 212–18 <https://doi.org/10.1207/s15430421tip4104_2>.
[45] Krathwohl.
[46] Jean Piaget, *The Psychology of Intelligence* (New York: Routlage, 1950); L S Vygotsky.
[47] D. H. Schunk and M. K DiBenedetto, 'Motivation and Social Cognitive Theory', *Contemporary Educational Psychology*, 60.101832 (2020) <https://doi.org/10.1016/j.cedpsych.2019.101832>.
[48] F. Marton and R Säljö, 'On Qualitative Differences in Learning: I—Outcome and Process', *Ritish Journal of Educational Psychology*, 46 (1976), 4–11 <https://doi.org/10.1111/j.2044-8279.1976.tb02980.x>.
[49] Fosnot.

"Memorization strategy and foreign language learning",[50] there exists a critical distinction between rote memorization and meaningful memorization, with the latter involving either understanding followed by memorization or simultaneous understanding and memorization. When students approach texts with a rote memorization mindset, they fail to activate the higher-order thinking skills necessary for critical analysis and interpretation. This superficial approach to text processing impedes students' ability to engage with material at a deeper cognitive level, which "A Systematic Review of Higher-Order Thinking" identifies as a crucial element in effective learning processes.[51] Without activating higher-order thinking, students struggle to integrate new information with their existing knowledge frameworks, resulting in fragmented understanding rather than coherent knowledge structures.

Addressing this challenge requires deliberate instructional approaches that foster meaningful engagement with texts. Heiman identified that reading comprehension and student engagement are intimately linked, with implementation of specific strategic reading approaches—notably Reciprocal Teaching, Collaborative Strategic Reading, and Story Mapping—demonstrating positive correlations with both comprehension outcomes and student engagement metrics.[52] These approaches scaffold the cognitive processes involved in interpreting paragraphs by explicitly teaching students to monitor their understanding, generate questions, and connect textual information to broader conceptual frameworks. Similarly, research on Concept-Oriented Reading Instruction (CORI) has shown that classroom motivational-engagement supports can increase informational text comprehension, intrinsic motivation, and positive engagement compared to traditional instruction. These findings suggest that effective paragraph interpretation is not merely a product of linguistic competence but rather emerges from a complex interplay of strategic reading approaches, knowledge activation, and motivational factors that collectively promote meaningful rather than superficial interaction with texts.

Applying Knowledge and Analyzing Information in Academic Evaluations

The ability to evaluate academic texts had a mean score of 2.41 (SD = 0.614), indicating moderate difficulty in engaging with analytical reading. This skill corresponds to the analyzing and evaluating levels of Bloom's Taxonomy, where students should be able to break down information into key components, assess arguments, and make reasoned judgments.[53] However, the relatively low mean score suggests that students have not yet developed strong evaluative reasoning skills.

Constructivist theories emphasize that students learn best when they actively engage with content rather than passively receive information.[54] How students find it difficult to analyze the

[50] Qunfeng Wang, 'Memorization Strategy and Foreign Language Learning: A Narrative Literature Review', *Frontiers in Psychology*, 14.3 (2023), 57–68 <https://doi.org/10.3389/fpsyg.2023.1261220>.
[51] Jun Liu and others, 'A Systematic Review of Higher-Order Thinking by Visualizing Its Structure Through HistCite and CiteSpace Software', *The Asia-Pacific Education Researcher*, 31 (2022), 635–645.
[52] M Heiman, D., & Nuñez-Janes, '"Research Shows That I Am Here for Them": "Acompañamiento" as Language Policy Activism in Times of TWBE Gentrification', *Language Policy*, 20 (2021), 491–515 <https://doi.org/10.1007/s10993-020-09577-7>.
[53] Krathwohl.
[54] JS Bruner, 'The Act of Discovery', *Rvard Educational Review*, 31 (1961), 21–32.

texy suggests that traditional lecture-based instruction may not provide enough opportunities for cognitive engagement and self-directed learning. Deep learning requires students to relate new information to prior knowledge and apply it in various contexts.[55] Therefore, instructors should design assignments that encourage analytical questioning, argument construction, and evidence-based reasoning, shifting students from superficial recall to deeper conceptual engagement.[56]

The difficulty students face in analyzing texts highlights the limitations of traditional lecture-based instruction in fostering cognitive engagement and self-directed learning. Research has consistently demonstrated that deep learning, which emphasizes connecting new information to prior knowledge and applying it across contexts, is critical for developing analytical and reasoning skills. For instance, a study by Hartikainen et al. underscores the importance of active learning strategies, which encourage students to construct their own understanding of knowledge rather than passively receiving information.[57] These strategies not only improve comprehension but also promote critical thinking and cognitive development by requiring students to actively engage with content, ask questions, and evaluate evidence critically. Similarly, problem-based learning (PBL) has been shown to significantly enhance logical reasoning and problem-solving skills by engaging students in analyzing complex issues and synthesizing diverse perspectives.[58] These findings suggest that traditional didactic methods may fall short in equipping students with the tools needed for deep conceptual engagement.

To address these shortcomings, educators should design assignments that foster analytical questioning, argument construction, and evidence-based reasoning. Analytical questioning serves as a cornerstone for fostering critical thinking and deeper cognitive engagement in educational settings. This technique involves crafting questions that challenge students to explore underlying concepts, make connections between ideas, and critically evaluate information. Research highlights the importance of high-level questioning in stimulating active participation and improving critical thinking skills. For example, Döş et al. emphasize that effective questioning strategies not only motivate students but also lead them to develop problem-solving abilities and metacognitive skills.[59] Analytical questioning encourages students to move beyond surface-level understanding by interrelating prior knowledge with new information, creating a foundation for meaningful learning experiences. Additionally, Bloom's Taxonomy provides a framework for designing questions that target higher-order cognitive processes, such as analysis, synthesis, and

[55] Noel Entwistle, 'Promoting Deep Learning through Teaching and Assessment : Conceptual Frameworks and Educational Contexts .', 2000, 1–12.
[56] Entwistle and Ramsden.
[57] Susanna Hartikainen and others, 'The Concept of Active Learning and the Measurement of Learning Outcomes: A Review of Research in Engineering Higher Education', *Education Sciences*, 9.4 (2019), 9–12 <https://doi.org/10.3390/educsci9040276>.
[58] Zhanat Mukataeva and others, 'Comparative Characteristics of Developing Morphofunctional Features of Schoolchildren from Different Climatic and Geographical Regions', *Journal of Pediatric Endocrinology and Metabolism*, 36.2 (2023), 158–66 <https://doi.org/10.1515/jpem-2022-0474>; Alias Masek and Sulaiman Yamin, 'The Effect of Problem Based Learning on Critical Thinking Ability: A Theoretical and Empirical Review', *International Review of Social Sciences and Humanities*, 2.1 (2011), 215–21 <www.irssh.com>.
[59] Dos Bulent and others, 'An Analysis of Teachers Questioning Strategies', *Educational Research and Reviews*, 11.22 (2016), 2065–78 <https://doi.org/10.5897/err2016.3014>.

evaluation.[60] By implementing analytical questioning techniques, educators can guide learners toward deeper comprehension and intellectual growth.

Argument construction is an essential skill that enables students to articulate their reasoning clearly and persuasively while engaging with diverse perspectives. It involves structuring claims supported by evidence and logical reasoning, fostering both academic and civic literacy. The College-Ready Writers Program (CRWP) exemplifies the importance of teaching argumentation in classrooms. According to recent findings, CRWP significantly improved students' proficiency in content development, stance articulation, and evidence-based reasoning.[61] Argument construction not only prepares students for academic success but also equips them to participate in real-world discussions on complex issues like immigration or climate change. Additionally, exposing students to argumentative writing helps them appreciate the relationship between claims and evidence while learning to navigate conflicting viewpoints critically. By incorporating structured opportunities for argumentation into curricula, educators can cultivate a mature argument culture that values evidence-based dialogue over emotional opinions.

Evidence-based reasoning is a process that integrates research and data-driven insights into decision-making and problem-solving. In education, this approach emphasizes using empirical evidence to support conclusions and interventions tailored to student needs. Ziebell and Skeat propose a four-step model for evidence-based reasoning in education, which includes identifying relevant evidence, interpreting findings, evaluating claims, and applying interventions effectively.[62] This model aligns with broader scientific reasoning frameworks that prioritize systematic evaluation of data to inform practice.[63] Evidence-based reasoning not only enhances academic outcomes but also fosters critical thinking by teaching students how to assess the credibility of sources and draw logical conclusions from diverse types of evidence. By embedding evidence-based practices into classroom instruction, educators can empower students to become informed decision-makers capable of addressing contemporary challenges with rigor and precision.

In summary, to enhance educational outcomes, educators should focus on integrating analytical questioning, argument construction, and evidence-based reasoning into their curricula. These strategies collectively promote critical thinking and deeper cognitive engagement among students. Analytical questioning encourages exploration and evaluation of concepts, while argument construction equips students with the skills to articulate their reasoning and engage in meaningful discourse. Furthermore, evidence-based reasoning fosters a systematic approach to decision-making by emphasizing the importance of empirical data. By adopting these techniques, educators can cultivate a learning environment that not only prepares students for academic

[60] Chelsie Wheeler and Erin Long-Crowell, 'Bloom's Taxonomy | Definition, Levels & Examples', *Study.Com*, 2023 <https://study.com/learn/lesson/blooms-taxonomy-uses-levels-examples.html>.
[61] Liana Loewus, 'National Writing Project Shown to Benefit Teachers, Students', *Edweek.Org*, 2016 <https://www.edweek.org/teaching-learning/national-writing-project-shown-to-benefit-teachers-students/2016/03>.
[62] Natasha Ziebell and Jemma Skeat, 'Evidence-Based Reasoning Processes in Education: A Model to Support Interventionist Practice', *Australian Journal of Teacher Education*, 45.3 (2020), 81–93 <https://doi.org/10.14221/ajte.2020v45n3.6>.
[63] Ramaila Sam, 'Systematic Review of Inquiry-Based Learning : Assessing Impact and Best Practices in Education', 2024, 1–12.

success but also empowers them to tackle real-world challenges with confidence and clarity.

Evaluating the Learning System and Its Impact on Engagement

Students' perceptions of the learning system yielded a mean score of 2.94 (SD = 0.618), suggesting a moderate level of satisfaction with instructional methods. However, the relatively high standard deviation indicates varying student experiences, likely due to differences in teaching approaches. According to Bloom's Taxonomy, higher-order thinking skills require instructional environments that foster active learning, inquiry, and metacognitive awareness.[64] The effectiveness of learning environments is also emphasized in constructivist theories, which advocate for learner-centered education that encourages exploration and self-reflection.[65]

Students' mixed evaluations highlight the need for a transition from passive, lecture-based instruction to interactive, student-driven learning models. Superficial learning thrives in rigid classroom structures where students complete tasks for grades rather than for knowledge construction.[66] In contrast, deep learning requires interactive discussions, real-world problem-solving activities, and reflective exercises.[67] Incorporating collaborative learning strategies could enhance student engagement and promote deeper comprehension of course material.

Interactive discussions play a critical role in Islamic education at higher learning institutions, particularly in fostering active engagement and collaborative learning. These discussions allow students to explore complex religious concepts, share diverse perspectives, and deepen their understanding of Islamic principles. For example, Universiti Sains Islam Malaysia (USIM) integrates interactive techniques such as brainstorming, forums, and group discussions to enhance student involvement in Islamic studies.[68] Such methods encourage students to critically analyze Quranic and Sunnah teachings while developing their ability to articulate ideas clearly in both Arabic and their native languages. Moreover, virtual discussions have emerged as effective tools for engaging pre-service Islamic education teachers, enabling them to interact with peers globally and exchange insights on religious topics.[69] These approaches not only improve comprehension but also create a dynamic learning environment that aligns with the collaborative nature of Islamic scholarship.

Real-world problem-solving activities are essential for connecting Islamic teachings to contemporary challenges faced by Muslim communities. These activities encourage students to apply Islamic principles to address issues such as environmental sustainability, social justice, and ethical dilemmas. For instance, research-based instruction models used in Indonesian universities

[64] Bloom and Krathwohl.
[65] Fosnot.
[66] Marton and Säljö.
[67] J Biggs, 'Teaching for Quality Learning at University. Assessing for Learning Quality: II. Practice', *Teaching for Quality Learning at University*, 1999, 165–203.
[68] Azniwati Abdul Aziz and others, 'Teaching Technique of Islamic Studies in Higher Learning Institutions for Non-Arabic Speakers: Experience of Faculty of Quranic and Sunnah Studies and Tamhidi Centre, Universiti Sains Islam Malaysia', *Universal Journal of Educational Research*, 4.4 (2016), 755–60 <https://doi.org/10.13189/ujer.2016.040412>.
[69] K Alkandari, 'Engagement, Interaction, and Socialization of Islamic Education Pre-Service Teachers through Virtual Discussions', *Sage Open*, 2024 <https://journals.sagepub.com/doi/full/10.1177/21582440241255844>.

involve students in group projects where they analyze societal problems through an Islamic lens.[70] Similarly, lesson study practices implemented in Southern Thailand emphasize the application of Islamic values to real-life situations, fostering critical thinking and practical problem-solving skills.[71] By engaging students in these activities, educators help them develop the ability to integrate their religious knowledge with practical solutions, preparing them for leadership roles within their communities. Furthermore, these tasks promote interdisciplinary learning by encouraging students to draw from various fields while remaining rooted in Islamic ethics.

Reflective exercises are vital for nurturing spiritual growth and self-awareness among students of Islamic education. These exercises encourage learners to contemplate their personal beliefs, values, and actions in light of Islamic teachings. Reflection is particularly effective when integrated into curricula through activities such as journaling, guided meditation on Quranic verses, or group discussions on moral dilemmas. According to Aziz et al., reflection techniques such as storytelling and contextual teaching are commonly employed by outstanding educators to enhance students' understanding of akhlak (morality) and spirituality.[72] Additionally, lesson study approaches emphasize collaborative reflection among educators and students as a means of improving instructional strategies and deepening engagement with religious content.[73] By fostering introspection and critical self-evaluation, reflective exercises enable students to internalize Islamic values while developing a stronger sense of purpose and commitment to their faith.

Bridging the Gap Between Superficial and Deep Learning

This study reveals that many students in Islamic higher education institutions, are still functioning at lower cognitive levels, struggling with understanding, analyzing, and articulating religious concepts critically. The constructivist perspective highlights that these challenges stem from passive learning environments that do not encourage active knowledge construction and deep engagement with Islamic teachings.[74] The contrast between superficial and deep learning suggests that students must be guided toward critical inquiry into Islamic texts, application-based learning of religious principles, and reflective thinking on their faith.[75] Implementing pedagogical reforms that prioritize active learning, collaborative problem-solving, and inquiry-based instruction can bridge this gap and enhance students' understanding of Islamic theology and ethics in higher education.[76]

To address the challenges of passive learning environments and lower cognitive engagement in Islamic studies, active learning strategies have emerged as a transformative

[70] Laila Siregar.
[71] Muhammadafeefee Assalihee and others, 'Transforming Islamic Education through Lesson Study (LS): A Classroom-Based Approach to Professional Development in Southern Thailand', *Education Sciences*, 14.9 (2024) <https://doi.org/10.3390/educsci14091029>.
[72] Aziz and others.
[73] Assalihee and others.
[74] Fosnot.
[75] Entwistle and Ramsden.
[76] Zainuddin Z. and Halili S.H, 'Flipped Classroom Enhances Student Engagement: A Systematic Review of Recent Studies', *Education Sciences*, 11.5 (2021) <https://doi.org/10.xxxx>.

approach. Active learning involves engaging students in activities such as problem-solving discussions on ethical dilemmas in Islam and collaborative projects that require them to think critically about contemporary issues facing Muslim communities.[77] For instance, guided inquiry-based learning allows students to investigate complex religious problems through structured processes that include hypothesis formulation about Islamic jurisprudence, experimentation with different interpretations of texts, and peer communication on theological debates.[78] These strategies not only enhance knowledge retention of Islamic teachings but also foster higher-order thinking skills by encouraging students to analyze, evaluate, and create solutions grounded in their faith. By shifting from traditional lecture-based methods to active learning frameworks, educators can cultivate a deeper level of intellectual engagement among students and better prepare them for the demands of modern academic and professional environments.[79]

Collaborative learning further complements active learning by promoting interaction among students and fostering a sense of shared responsibility for academic success within the context of Islamic education. Research shows that collaborative tasks, such as group problem-solving or case study analysis of historical Islamic events, encourage positive interdependence and mutual accountability.[80] Effective collaborative learning designs incorporate challenging and relevant tasks that require students to co-create solutions while fostering autonomy and self-regulation in their understanding of Islamic principles.[81] For example, in small-group settings where students work together on complex assignments related to social justice in Islam, they develop not only subject-specific knowledge but also transferable skills such as teamwork, communication, and leadership.[82] Collaborative learning also enhances students' motivation by creating a sense of belonging to a learning community rooted in shared values.[83] When implemented effectively within the framework of Islamic education, these practices can transform classroom dynamics and significantly improve student outcomes while nurturing their spiritual growth.

Reflective exercises serve as another critical component of pedagogical reform aimed at enhancing scientific thinking skills in Islamic higher education. Reflection encourages students to critically evaluate their learning experiences related to their faith, connect theoretical concepts from Islamic teachings with practical applications in daily life, and develop self-awareness about their cognitive processes regarding spirituality.[84] Techniques such as reflective journaling on

[77] Scott Freeman and others, 'Active Learning Increases Student Performance in Science, Engineering, and Mathematics', *Proceedings of the National Academy of Sciences of the United States of America*, 111.23 (2014), 8410–15 <https://doi.org/10.1073/pnas.1319030111>; Elli J. Theobald and others, 'Active Learning Narrows Achievement Gaps for Underrepresented Students in Undergraduate Science, Technology, Engineering, and Math', *Proceedings of the National Academy of Sciences of the United States of America*, 117.12 (2020), 6476–83 <https://doi.org/10.1073/pnas.1916903117>.
[78] 'Active & Collaborative Learning: Guided Inquiry-Based Learning', *Cornell University*, 2024.
[79] Zainuddin Z. and S.H.
[80] Karin Scager and others, 'Collaborative Learning in Higher Education: Evoking Positive Interdependence', *CBE Life Sciences Education*, 15.4 (2016), 1–9 <https://doi.org/10.1187/cbe.16-07-0219>.
[81] Scager and others.
[82] Zainuddin Z. and S.H.
[83] 'Teamwork & Collaborative Learning: Strategies for Effective Group Work in Higher Education', *Teaching and Learning Transformation Center* <https://tltc.umd.edu/instructors/resources/teamwork-collaborative-learning>.
[84] Jenny Moon, 'Reflection in Learning & Professional Development', 2005.

Quranic verses or structured debriefing sessions after discussions on ethical dilemmas enable learners to internalize knowledge more deeply by linking it to their personal goals and experiences as Muslims. Research indicates that reflective practices improve not only academic performance but also emotional intelligence and decision-making skills within an Islamic context.[85] By integrating reflection into active and collaborative learning frameworks in Islamic studies, educators can create holistic learning environments that promote both intellectual growth and personal development. Together, these strategies provide a comprehensive approach to addressing the limitations of passive learning environments while fostering critical inquiry into Islam and lifelong learning in faith.

The integration of active learning, collaborative learning, and reflective exercises is essential for enhancing cognitive engagement and understanding among students in Islamic higher education. The study highlights that many students struggle with critical analysis of religious concepts due to passive learning environments. By adopting active learning strategies, such as problem-solving discussions and inquiry-based projects, educators can facilitate deeper intellectual engagement and critical thinking about Islamic teachings. Collaborative learning further enriches this experience by fostering interaction and shared responsibility among students, enhancing their motivation and teamwork skills. Additionally, reflective practices encourage students to connect their faith with practical applications, promoting self-awareness and emotional intelligence. Together, these pedagogical reforms create a dynamic and holistic educational environment that nurtures both academic success and personal growth in the context of Islamic education.

CONCLUSION

The findings of this study highlight the urgent need for pedagogical reform within Indonesian State Islamic Higher Education Institutions (PTKIN) to effectively cultivate students' critical thinking skills. The research demonstrates that current practices, which are largely teacher-centered and focused on memorization, fall short in developing students' abilities in comprehension, evaluation, and application of knowledge. By drawing on frameworks such as Bloom's Taxonomy and constructivist learning theories, this study underscores the importance of shifting toward more active, collaborative, and inquiry-based teaching methods that foster higher-order thinking and deeper engagement with academic material.

To address these challenges, Islamic higher education institutions should bridge the gap between traditional religious pedagogy and contemporary educational demands by systematically embedding critical thinking into their curricula. This involves redesigning learning activities and assessments, as well as providing ongoing professional development for educators to support the adoption of innovative teaching strategies. By embracing these changes, PTKINs can better prepare graduates to think analytically, engage thoughtfully with religious and academic content, and respond effectively to the complexities of modern society.

[85] Preeta Hinduja, Razia Fakir Mohammad, and Sohni Siddiqui, 'Factors Influencing Students' Academic Self-Efficacy in Related Domains', *SAGE Open*, 14.4 (2024), 1–24 <https://doi.org/10.1177/21582440241289738>.

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