



Problem-Based Deep Learning Practice in Analyzing the Content of Muslim Hadiths Narrated by Abu Hurairah

Muhammad Qomaruddin^{1*}, Emah Khuzaemah², Abdul Hamid³

^{1,2,3}Universitas Islam Negeri Siber Syekh Nurjati Cirebon, Indonesia

*Corresponding author: margo13@mail.syekhnurjati.ac.id

Received: 11/04/2025 Revised: 30/05/2025 Accepted: 17/06/2025

ABSTRACT

Purpose – Learning is a series of important processes in an effort to maximize knowledge transfer between educators and students. The problem-based Deep Learning approach is one of the solutions to increase students' reasoning in understanding a material.

Methodology – This study employs a descriptive qualitative approach. The collected data serve as the primary source of information. The data are then analyzed using Miles and Huberman's theory through three stages: data collection, data reduction, data display, and conclusion drawing/verification.

Findings – The results showed an increase in students' critical reasoning as shown through observation of their analytical exposure in solving problems. This indicates a significant contribution of the deep learning approach to problem-based learning in an effort to strengthen students' deep understanding of the material being taught.

Novelty – This study offers a novel integration of the problem-based learning model with a deep learning approach in the context of Islamic religious education, specifically the analysis of Hadith content narrated by Abu Hurairah. Unlike previous studies that often treat religious learning as rote memorization, this research demonstrates how students can develop critical reasoning and deep conceptual understanding through analytical engagement. It provides a new pedagogical framework that links religious text analysis with higher-order thinking skills.

Significance – This study is particularly beneficial for Islamic education practitioners, curriculum developers, and educators in secondary schools, especially those seeking innovative methods to enhance students' comprehension of religious texts. Furthermore, it contributes to the broader field of educational methodology, offering insights for researchers and policy-makers interested in implementing student-centered and thinking-oriented learning strategies across different subject areas.

Keywords: Deep Learning; Life in The Afterlife; Muslim Hadiths; Narrated by Abu Hurairah; Problem-Based Learning.

How to cite: Qomaruddin M., Khuzaemah, E., Hamid, A. (2015). Problem-Based Deep Learning Practice in Analyzing the Content of Muslim Hadiths Narrated by Abu Hurairah. *International Journal of Contemporary Studies in Education*. 04(2), pp, 136-148, doi: <https://doi.org/10.56855/ijcse.v4i2.1574>



This is an open-access article under the CC BY license

1. Introduction

The era of global disruption, characterized by an unprecedented flow of information and constant change, compels a transformation in educational paradigms. To respond, learning must pivot from rote memorization toward analytical, scientifically reasoned understanding. This shift aligns with the principles of deep learning theory, which posits that making meaning is essential for students facing contemporary challenges (Bransford, Brown, & Cocking, 2000; Meyer & Land, 2003).

In this evolving landscape, teachers function as strategic facilitators, orchestrating learning activities and guiding students in constructing knowledge structures (Lai, 2011; King, Goodson, & Rohani, 1998). This view is supported by research indicating that effective facilitation dramatically enhances engagement and depth in student-centered environments (Hmelo-Silver & Barrows, 2008; Woods, 2000). One powerful method is constructive disorientation, inspired by Vygotsky, where students confront complex or conflicting information that sparks curiosity and drives deeper meaning-making (Laurillard, 2012; Engeström, 2001). Meta-analyses confirm that problem-based strategies incorporating disorientation elevate critical thinking and reduce surface learning habits (Savery, 2006; Barrows & Tamblyn, 1980).

Such cognitively stimulating strategies must be enacted within a supportive learning environment. This echoes Vygotsky's concept of the zone of proximal development, where peers and teachers jointly scaffold understanding (Rogoff, 1990; Lave & Wenger, 1991). Research shows that classrooms emphasizing psychological safety enable more active and sustained student participation (Van den Bossche et al., 2006; Ryan & Deci, 2000). In the context of Qur'an-Hadith studies—a core component of Islamic Religious Education—students learn tajwid (recitation), memorization, interpretation, and content analysis. When combined with problem-based deep learning, this instruction becomes transformative, fostering moral, cognitive, and spiritual growth (Qattan, 2019; Razali & Zaid, 2016).

During Phase D, students engaged with a hadith narrated by Imam Muslim through Abu Hurairah about balancing worldly life and the hereafter (Sidik, 2020). Encountering religious text in meaningful context promotes lasting understanding, consistent with findings in faith-based education (Smith, 2003; Jackson, 2016). Relying solely on memorization fails to foster deep knowledge retention. Mayer (2009) and Ausubel (2000) argue that passive learning leads to rapid forgetting, whereas problem-based strategies promote conceptual understanding and long-term knowledge sustainability.

To realize this potential, the study applied a three-phase deep learning framework: cognitive scaffolding, independent inquiry, and collaborative synthesis. Zhang and Zhou (2019) affirm that such structured pedagogies foster learner autonomy, while Strobel and van

Barneveld (2009) highlight their impact on higher-order thinking. In the input phase, students were encouraged to explore diverse sources to uncover the hadith's meaning. This aligns with studies asserting that information literacy is critical for deep engagement (Head & Eisenberg, 2010; Bruce, 2016).

Within the hidden layer, students interrogated real-life scenarios through a critical lens. Kolodner et al. (2003) and Bell (2010) demonstrate that contextual problem-solving enhances analytical reasoning, consistent with our observations of group-based application of religious text. Variation in group performance was evident; students capable of synthesizing previous learning with problem-solving excelled. This mirrors research showing that academic success in PBL depends on students' integrative abilities and self-regulated learning (Hmelo-Silver, 2004; Schraw, Crippen, & Hartley, 2006).

Teachers acted as skilled facilitators, offering guidance without imposing conclusions. Wood (1998) and Schmidt et al. (2009) affirm that this balance enables learners to progressively develop independent expertise—a hallmark of successful deep learning environments. A robust digital infrastructure supported inquiry. The integration of online research, e-books, and multimedia encouraged deeper learning, as found in studies on digital pedagogy (Salomon, 2015; Redecker et al., 2011).

The alignment of religious teachings with students' lives promoted authentic engagement, demonstrating how content relevance drives deeper learning. Gardner (1999) and Habermas (2003) both emphasize the importance of personal and moral context in nurturing meaningful educational experiences. Beyond cognition, this method nurtured ethical and social growth. Delors et al. (1996) and Jackson (2016) contend that education should develop well-rounded individuals, a goal achieved when religious education is integrated with real-world challenges.

Introducing counter-narratives, such as challenging stereotypes about the pious and impoverished, cultivated critical reflection. Nichol and Tromp (2010) and Chang (2013) show that contesting preconceived notions enhances critical consciousness—a key target of deep learning. Students articulated nuanced understandings of spiritual maturity—balancing worldly obligations and spiritual duties. This finding aligns with moral development theories of Kohlberg (1981) and Noddings (2005), which highlight how ethical reasoning matures through reflective engagement. However, not all groups achieved this depth; some offered superficial analyses. Mezirow's (1991) theory of transformative learning and Bereiter (2002) argue that deep cognition demands metacognitive awareness and intentional instructional design—insights relevant for future curriculum refinement.

These challenges identify the need for adaptive scaffolding. Biggs and Tang (2007) advocate curriculum design that includes scaffolded prompts to progressively guide students toward sophisticated reasoning. Furthermore, advancements in AI-driven tutoring and instructional analytics, like those reviewed by Roll & Wylie (2016) and Holstein et al. (2019), suggest new avenues for personalized deep learning within religious education environments.

Overall, this study contributes to educational theory by demonstrating how a carefully designed, problem-based deep learning approach in Qur'an-Hadith education can engender

profound cognitive, ethical, and spiritual outcomes. Future research should explore longitudinal impacts and technology integration to scale the model across diverse educational settings. This study explores the practice of problem-based deep learning in analyzing the content of the hadith narrated by Muslim through Abu Hurairah, which discusses the relationship between worldly life and the hereafter. All data were obtained through observation of learning activities conducted with eighth-grade students at MTs Negeri 1 Kota Cirebon. May this study provide meaningful insights and contributions to the field.

2. Methods

This study employed a qualitative-descriptive approach. The collected data served as the primary source of information and were analyzed using Miles and Huberman's interactive model, which consists of three main procedures: data collection, data reduction, data display, and conclusion drawing/verification. The object of this study was the practice of problem-based Deep Learning in enhancing students' analytical skills in understanding the content of a hadith narrated by Muslim through Abu Hurairah.

During the data reduction phase, the researcher gathered all relevant information related to the research object, eliminated irrelevant data, selected priority information, and identified emerging themes and patterns. The data were then presented in a clear and coherent narrative form, illustrating the research findings. This narrative structure is intended to help readers better understand the conclusions drawn from the entire analytical process (Thalib, 2022, p. 28). The analytical flow is illustrated in the following model:

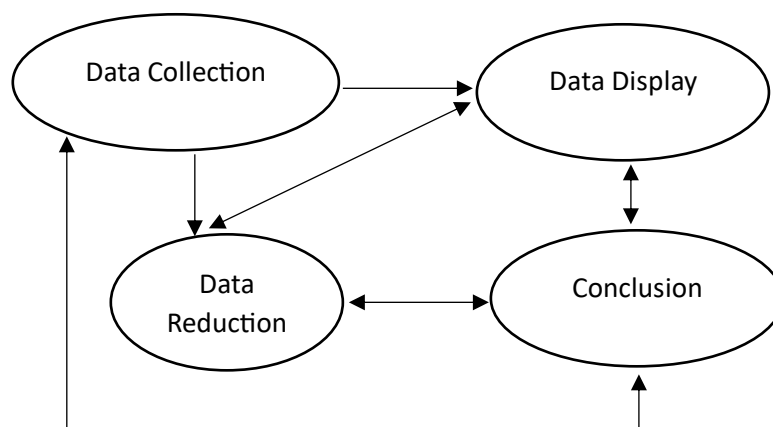


Figure 1. Steps of Analysis According to Miles and Huberman

3. Results and Discussion

3.1. Result

This section presents the findings and interpretations derived from the implementation of a problem-based deep learning approach in teaching the Hadith of Muslim narrated by Abu Hurairah to Class VIII B students at MTs Negeri 1 Kota Cirebon. The results are organized to illustrate the fundamental concepts of deep learning, the integration of problem-based learning (PBL) within religious education, and the observed impacts on students' critical

reasoning and conceptual understanding. The analysis highlights how the deep learning framework, structured through input, hidden, and output layers, effectively facilitated students' comprehension of the Hadith, linking spiritual teachings with real-life applications. Furthermore, the discussion elucidates the implications of these findings for enhancing meaningful and reflective learning in Islamic education contexts.

3.1.1. Fundamental Concepts of the Deep Learning Approach in Learning Activities

Deep learning is a core component of Artificial Intelligence (AI). It is used to enable computers to learn from data, functioning as a subfield of machine learning. This learning process is built upon artificial neural networks, which consist of interconnected nodes referred to as neurons. Through a series of real-valued activations, the network is able to learn complex functions. These networks typically operate in stages: the input layer, hidden layers, and output layer (Mayer & Jacobsen, as cited in Adriana, 2021).

In the context of education, the deep learning approach supports students in understanding complex and profound materials. Given how it functions, deep learning can be integrated with various instructional models, such as problem-based learning (PBL), project-based learning, contextual learning, and cooperative learning. Each of these models shares a three-layer philosophy: input, hidden, and output layers. The input layer serves as the entry point where students are encouraged to gather as much information as possible, leveraging all available resources in the learning process. In this phase, students demonstrate exploration skills, such as in problem-based learning or when completing tasks in project-based learning. The hidden layer involves processing that information through critical thinking and analytical tasks. Finally, in the output layer, students are expected to generate responses, articulate conclusions, or produce tangible products that reflect their understanding. This process is evaluated adaptively through methods such as adaptive assessments, performance predictions, and student retention analysis. These practices aim to achieve the learning objectives by maximizing the selected instructional model. All models applied are grounded in reinforcing the meaningful, mindful, and joyful aspects of learning. These three components are foundational to the deep learning approach (Astawan et al., 2025, p. 131).

3.1.2. Problem-Based Learning (PBL)

Problem-Based Learning (PBL) is a student-centered instructional model rooted in constructivist theory. It trains students to solve real-world problems. Rather than receiving information passively, learners are encouraged to use knowledge as a tool to analyze, explore, and resolve issues (Halawa, N., et.al., 2023).

Historically, this model has long-standing philosophical roots in the methods of Plato and Socrates, who guided their students to independently investigate knowledge, discover ideas, and engage in dialogue. Baptiste (2003), Rhem (1998), and Savery (2006) noted that the modern trend of PBL began in the 1970s at McMaster University's Faculty of Health Sciences in Canada. It was introduced as an innovative student-centered learning method grounded in andragogy, which motivates learners to explore independently and fosters long-term critical thinking (Owen, 2019, p. 167).

In general, PBL emphasizes real-world problem contexts where learners must apply critical thinking to reach solutions and synthesize new knowledge (Kania, N., et.al., 2023). Rhem (1998) defined PBL as learning that begins with a problem presented to students. Therefore, PBL uses the problem itself as a springboard for acquiring and integrating new knowledge—individually and in groups. The learning syntax (Owen, 2019, p. 169) is summarized below:

Table 1 - PBL Learning Activities and Steps

Activity	Steps	Role
Group Discussion I	1. Identify the problem, 2. Analyze the problem, 3. Form hypotheses, 4. Identify prior knowledge, 5. Identify needed knowledge	Facilitator/Teacher
Independent Study	1. Determine learning resources, 2. Identify new knowledge, 3. Synthesize new and prior knowledge	Learner
Group Discussion II	1. Repeat the process, 2. Clarify missed points, 3. Summarize findings for reporting	Facilitator/Teacher

3.1.3. Hadith of Muslim Narrated by Abu Hurairah

وَعَنْ أَبِي هُرَيْرَةَ رَضِيَ اللَّهُ عَنْهُ قَالَ: كَانَ رَسُولُ اللَّهِ صَلَّى اللَّهُ عَلَيْهِ وَسَلَّمَ يَقُولُ: اللَّهُمَّ أَصْلِحْ لِي دِينِي الَّذِي هُوَ عِصْمَةُ أَمْرِي وَأَصْلِحْ لِي دُنْيَايَ الَّتِي فِيهَا مَعَاشِي وَأَصْلِحْ لِي آخِرَتِي الَّتِي إِلَيْهَا مَعَادِي وَاجْعَلْ الْحَيَاةَ زِيَادَةً لِي فِي كُلِّ خَيْرٍ وَاجْعَلْ الْمَوْتَ رَاحَةً لِي مِنْ كُلِّ شَرٍّ. أَخْرَجَهُ مُسْلِمٌ

"O Allah, rectify my religion, which is the safeguard of my affairs; rectify my worldly life, which is my livelihood; rectify my Hereafter, which is my final destination. Make life an increase for me in every good and death a relief from every evil." (HR. Muslim)

This Hadith Sidik (2020) reflects the interconnectedness between worldly and afterlife affairs in the supplication of the Prophet Muhammad (peace be upon him). It highlights the importance of continuously striving and praying for balance and improvement in both life domains.

3.1.4. The Practice of Problem-Based Deep Learning in Teaching the Hadith of Muslim Narrated by Abu Hurairah

This study observed an Al-Qur'an Hadith lesson at MTs Negeri 1 Kota Cirebon, conducted on May 18, 2024, with Class VIII B students (32 in total). The lesson focused on the theme "Balancing Worldly and Spiritual Life Through Effort and Worship." The instructional challenge required the teacher to critically explore the Hadith and relate it to students' daily lives. To meet this goal, the educator employed a problem-based learning model supported by the deep learning approach. The objective was to help students understand and analyze religious material in light of real-life situations, ultimately guiding them toward drawing conclusions based on critical reasoning.

The lesson began with motivational activities, including greetings, prayers, and outlining the learning objectives. The teacher posed several trigger questions:

1. What do you know about life in this world?
2. What do you know about the afterlife?

3. Is there a relationship between worldly life and the hereafter? Would you prefer to be poor and go to paradise or rich and end up in hell?

Students' responses were collected and summarized as follows:

Table 2. Student Responses to Trigger Questions

No	Knowledge Area	Very Poor	Poor	Fair	Good	Excellent
1	Knowledge of worldly life	0	0	13	17	2
2	Knowledge of the afterlife	0	0	10	10	2
3	Understanding of world-afterlife link	0	15	12	5	0

The data indicated active participation and conceptual understanding, although misconceptions remained—particularly regarding the third question. Many students answered “the poor will go to paradise,” without providing a counter-narrative. According to Syawitri and Iryanti (2024), a counter-narrative is a rebuttal that challenges incorrect assumptions.

The teacher then introduced five real-world problems for group analysis. Students were divided into five groups, each assigned a scenario. The learning proceeded with the deep learning framework, where students collected data (input layer), engaged in analysis (hidden layer), and presented solutions (output layer). Each group demonstrated varying levels of critical reasoning, as summarized in the following table:

Table 3. Group Critical Reasoning Performance

No	Group	Poor	Fair	Excellent
1	Group 1			✓
2	Group 2		✓	
3	Group 3		✓	
4	Group 4			✓
5	Group 5			✓

Group 1 effectively connected the Hadith to a real-world example involving a street food vendor who neglects prayer due to business demands. Their recommendation—to hire an assistant and schedule breaks—was deeply insightful. Group 4 and 5 also exhibited high critical reasoning, analyzing inheritance laws, ethics in debt, and linguistic prejudice, while offering solutions aligned with Islamic teachings. Conversely, Groups 2 and 3 showed potential but lacked depth in their final recommendations. Group 3, for instance, merely advised “stop borrowing money,” without exploring how the character might responsibly manage debt. Ultimately, the learning session succeeded in stimulating critical thought and drawing meaningful connections between worldly responsibilities and spiritual obligations. It culminated in a student-led reflection asserting that poverty and ignorance can be sinful when they result from neglecting divine trust, and that Hell is the consequence of mismanaging worldly life—thus reinforcing the holistic message of the Hadith.

3.2. Discussion

This study examined the implementation of a problem-based deep learning approach in analyzing the content of the hadith narrated by Muslim through Abu Hurairah among eighth-grade students at MTs Negeri 1 Kota Cirebon. The results supported Ahmad et al. (2023), who

noted that such an approach enhances students' analytical engagement, and Su et al. (2025), who highlighted how PBL fosters deeper cognitive investment—confirming the method's suitability for enriching religious education through critical thinking and active learning.

Grounded in constructivist theory, problem-based deep learning encourages learners to make meaning through authentic problems. This principle aligns with Marton and Säljö's (1976) work on depth of learning and Dolmans et al.'s (2016) findings that PBL promotes deep, rather than surface, approaches—supporting the premise that students internalize knowledge more thoroughly in this context. Within the realm of religious instruction, this study demonstrated how deep learning empowers students to deeply reflect on doctrinal texts. Mudin et al. (2023) emphasized that combining AI-aligned cognitive strategies with Islamic pedagogy enhances religious understanding, and Zhu et al. (2017) observed that design-based learning synergizes effectively with deep learning to foster higher-order thinking. Our classroom observations confirmed that PBL activates critical reasoning. Tamami et al. (2023) reported that combining deep learning and PBL strengthens students' autonomy and analytical skills, while Dolmans et al. (2016) similarly found that PBL encourages robust cognitive engagement, reflecting the students' lively participation during problem-solving tasks.

At the input stage, students earnestly sought information on the hadith, drawing from both print and digital sources. Zhu et al. (2017) link such exploratory behavior to effective deep learning, and Prince (2004) suggests that active learning positively impacts knowledge retention—both of which were evident in students' research efforts. Group 1's analysis of a street food vendor's case illustrated real-world application of the hadith. This mirrored findings by Trullàs et al. (2022) and Ulger (2018), who reported that contextualizing theory in real-world scenarios cultivates both creative and critical thinking. Students linked "repairing one's worldly life" to balancing business success and religious obligations—a meaningful application in a local context.

The depth of analysis varied across groups. Group 4's recommendations on inheritance and waqf issues, for instance, reflected strong synthesis of religious doctrine with ethical practicalities, validating Wulandari and Hastini's (2024) observation that PBL success hinges on synthesizing prior and new knowledge, and Alifia et al.'s (2024) emphasis on digital literacy as a facilitator of that synthesis. Teachers in this study functioned as motivators and facilitators—scaffolding inquiry much like Hmelo-Silver (2004) describes, and supporting Prince (2004)'s assertion that teacher–student interactions are instrumental for autonomous, active learning. This dynamic contributed to student engagement and ownership over their learning processes.

The integration of digital resources during the research phase underscores the development of students' digital literacy. Oktahariana et al. (2024) and Zhu et al. (2017) have posited that embedding digital tools into PBL enhances students' higher-order thinking—a trend reflected in the students' ability to locate, evaluate, and apply relevant information effectively. By explicitly tying hadith content to real-life issues, students experienced meaningful learning. Mudin et al. (2023) and Zhu et al. (2017) argue that deep learning facilitates ethical and conceptual integration—demonstrated here through students exploring the relationship between worldly behavior and spiritual responsibility. The study also fostered holistic competence across cognitive, social, and ethical domains—echoing the National Research Council's (2001) framework for holistic education, and reinforcing Mudin et al.

(2023)'s assertion that deep learning in religious education bridges cognitive growth with moral development.

An observed critical element was the use of counter-narratives. When challenged with "Do the poor enter paradise?" students were encouraged to deconstruct assumptions. This mirrors observations by Jiang et al. (2023) and Revelle et al. (2020) that PBL empowers learners to challenge entrenched beliefs, stimulating self-reflection and conceptual clarity. The interplay of spiritual awareness and moral reasoning was evident when students concluded that neglecting worldly responsibilities could constitute a spiritual failure. Ahmad et al. (2023) and Hmelo-Silver (2004) echo these findings, reporting that PBL in religious contexts heightens ethical awareness and personal agency. While several groups offered profound solutions, others demonstrated superficial analysis, highlighting a common challenge in PBL: not all students naturally reach deep learning without guided scaffolding and reflection prompts. Dolmans et al. (2016) and Marton and Säljö (1976) caution educators to intentionally support depth of understanding.

Overall, this study affirms that problem-based deep learning meaningfully enhances students' analytical and reflective capacities in religious education. Future research should address how to integrate long-term digital tool use, iterative curriculum design, and AI-enhanced PBL environments—as advocated by Nnamdi et al. (2025) and Miller and Krajcik (2019)—to sustain and deepen educational outcomes.

4. Conclusions

The practice of the deep learning approach is an appropriate effort in problem-based learning. Strengthening its procedural steps can stimulate students to become more motivated in exploring a given problem. This is reflected in the thorough information-gathering process, the level of critical reasoning applied in identifying and analyzing issues, as well as the recommendations formulated based on the conclusions drawn from their inquiry.

The implementation of a problem-based deep learning approach in the Al-Qur'an Hadith learning process among eighth-grade students at MTs Negeri Kota Cirebon—particularly in the analysis of the content of a hadith narrated by Muslim from Abu Hurairah—demonstrates the importance of selecting an appropriate learning model. Challenges such as student boredom, reluctance, and lack of motivation can be addressed effectively through the use of suitable instructional strategies. Deep learning emerges as an innovative pedagogical solution that offers a pathway to overcome these obstacles. Although not entirely resolving all issues (not 100%), observations indicated a significant improvement in students' critical reasoning following the implementation of this learning approach.

Therefore, meaningful learning can be achieved without coercion when students find joy in participating in the learning process. In-depth exploration and the provision of appropriate solutions signify a learning experience that is joyful, meaningful, and mindful. These three elements are key characteristics of the deep learning approach, which mimics the workings of the human brain (input, hidden, output). This model can serve as a promising solution in Islamic education in realizing its fundamental objectives—namely, forming an intellectually superior generation endowed with noble character (*akhlaq al-karimah*) that reflects both

humanistic and divine values. As a result, the vision of Islam as rahmatan lil 'alamin (a mercy to all creation) can be actualized in building a civilized and harmonious society.

Acknowledgments

The author would like to express sincere gratitude to Ibu Emah Khuzaemah, as the academic advisor from UIN Syekh Nurjati Cirebon, for her invaluable guidance, encouragement, and continuous support throughout the preparation and completion of this manuscript. Her insights and dedication greatly contributed to the quality and completion of this research.

Conflict of Interest

The authors declare no conflicts of interest.

References

- Adolph, R. (2016). Membangun Pola Pikir Deep Learning Guru Sekolah Dasar Boenga. *Kalam Cendekia: Jurnal Ilmiah Kependidikan*, 12, 1–23.
- Adriana. (2021). Model Pembelajaran Berbasis Deep Learning Bagi Siswa Inklusi di Pendidikan Vokasi Systematic Literature Review. *Jurnal Tiarsie*, 18(4), 1–9.
- Ahmad, S., Kholilurrohman, K., Hidayah, F., & Hussen, B. T. E. (2023). Enhancing critical thinking through problem-based learning in Islamic education. *Edureligia*, 8(2), 1–15. <https://doi.org/10.33650/edureligia.v8i2.9071>
- Alifia, A. O., Zaini, Z. A. H., & Ilmi, A. F. (2024). Digital literacy in PBL for Islamic education. *International Journal of Graduate of Islamic Education*, 6(1), 10–25. <https://doi.org/10.37567/ijgie.v6i1.3816>
- Ardianti, R., Sujarwanto, E., & Surahman, E. (2021). DIFFRACTION: Journal for Physics Education and Applied Physics Problem-based Learning: Apa dan Bagaimana. *DIFFRACTION: Journal for Physics Education and Applied Physics*, 3(1), 27–35. <http://jurnal.unsil.ac.id/index.php/Diffraction>
- Astawan, N., Liska, L. De, & Pertama, S. M. (2025). IMPLEMENTASI PENDEKATAN DEEP LEARNING DALAM. 3(1), 129–139.
- Barrows, H. S., & Tamblyn, R. M. (1980). *Problem-based learning: An approach to medical education*. Springer.
- Bell, S. (2010). Project-based learning for the 21st century: Skills for the future. *The Clearing House*, 83(2), 39–43. <https://doi.org/10.1080/00098650903505415>
- Bereiter, C. (2002). *Education and mind in the knowledge age*. Psychology Press.
- Biggs, J. (1999). *Teaching for quality learning at university*. Open University Press.
- Biggs, J., & Tang, C. (2007). *Teaching for quality learning at university* (3rd ed.). Open University Press.
- Bransford, J. D., Brown, A. L., & Cocking, R. R. (2000). *How people learn: Brain, mind, experience, and school*. National Academy Press.
- Bruce, C. (2016). *Seven faces of information literacy: Rethinking the concept*. Auslib Press.
- Chang, H. (2013). Toward an ethical learning of critical pedagogy: a study of China's "Three Links". *Educational Philosophy and Theory*, 45(7), 709–725. <https://doi.org/10.1080/00131857.2012.676828>
- Delors, J., et al. (1996). *Learning: The treasure within*. UNESCO.
- Dolmans, D. H. J. M., Loyens, S. M. M., Marcq, H., & Gijbels, D. (2016). Deep and surface learning in problem-based learning: A review. *Advances in Health Sciences Education*, 21(5),

- 1087–1112. <https://doi.org/10.1007/s10459-015-9645-6>
- Engeström, Y. (2001). Expansive learning at work: Toward an activity theoretical reconceptualization. *Journal of Education and Work*, 14(1), 133–156. <https://doi.org/10.1080/13639080020028747>
- Gardner, H. (1999). *Intelligence reframed: Multiple intelligences for the 21st century*. Basic Books.
- Habermas, J. (2003). *Truth and justification*. MIT Press.
- Halawa, N., Lisaria zalukhu, Merci Lestariani Lahagu, & Junius Laoli. (2023). Improving Students' Short Story Writing Skills: A Study on the Effects of Problem Based Learning with Image Media: Short Story , Writing Skills, Problem Based Learning with Image Media. *International Journal of Contemporary Studies in Education (IJ-CSE)*, 2(2), 137–148. <https://doi.org/10.56855/ijcse.v2i2.496>
- Head, A. J., & Eisenberg, M. B. (2010). *Lessons learned: How college students seek information in the digital age*. Project Information Literacy Progress Report.
- Hmelo-Silver, C. E. (2004). Problem-based learning: What and how do students learn? *Educational Psychology Review*, 16(3), 235–266. <https://doi.org/10.1023/B:EDPR.0000034022.16470.f3>
- Hmelo-Silver, C. E., & Barrows, H. S. (2008). Facilitating collaborative knowledge building. *Instructional Science*, 36(5–6), 483–506. <https://doi.org/10.1007/s11251-008-9053-7>
- Jackson, R. (2016). Religious education: Towards a re-imagined pedagogy. *British Journal of Religious Education*, 38(3), 215–228. <https://doi.org/10.1080/01416200.2015.1134766>
- Kania, N., Fitriani, C., & Bonyah, E. (2023). Analysis of Students' Critical Thinking Skills Based on Prior Knowledge Mathematics. *International Journal of Contemporary Studies in Education (IJ-CSE)*, 2(1). <https://doi.org/10.56855/ijcse.v2i1.248>
- King, A., Goodson, L. A., & Rohani, F. (1998). *Higher order thinking skills: Definition, teaching strategies, and assessment*. Hawker Brownlow.
- Kohlberg, L. (1981). *Essays on moral development, Vol. I: The philosophy of moral development*. Harper & Row.
- Kolodner, J. L., et al. (2003). Problem-based learning meets case-based reasoning in the middle-school science classroom. *Journal of the Learning Sciences*, 12(4), 495–547. https://doi.org/10.1207/S15327809JLS1204_2
- Lai, E. (2011). *Metacognition: a literature review*. CORE Education & Technologies.
- Laurillard, D. (2012). *Teaching as a design science: Building pedagogical patterns for learning and technology*. Routledge.
- Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge University Press.
- Marton, F., & Saljö, R. (1976). Deep and surface approaches to learning. *British Journal of Educational Psychology*, 46(1), 4–13. <https://doi.org/10.1111/j.2044-8279.1976.tb02919.x>
- Mayer, R. E. (2009). *Multimedia learning* (2nd ed.). Cambridge University Press.
- Meyer, J. H. F., & Land, R. (2003). *Threshold concepts and troublesome knowledge*. Routledge.
- Mezirow, J. (1991). *Transformative dimensions of adult learning*. Jossey-Bass.
- Mudin, I., Ali, M., & Hidayat, A. (2023). Critical analysis of deep learning in Islamic religious education. *Intiqad*, 5(1), 45–60. <https://doi.org/10.33541/intiqad.v5i1.24275>
- National Research Council. (2001). *Knowing what students know: The science and design of educational assessment*. National Academy Press. <https://doi.org/10.17226/10019>
- Nichol, D. M., & Tromp, S. (2010). *E-portfolios for lifelong learning*. Canadian Journal of

- Learning and Technology, 36(3).
- Noddings, N. (2005). *The challenge to care in schools*. Teachers College Press.
- Oktahariana, A., Zaini, Z. A. H., & Ilmi, A. F. (2024). Digital literacy in PBL for Islamic education. *IJGIE*, 6(1), 10–25. <https://doi.org/10.37567/ijgie.v6i1.3816>
- Owen, C. (2019). Problem-Based Learning. *Learning and Teaching in Higher Education: Perspectives from a Business School*, 139–151. <https://doi.org/10.4337/9781788975087.00027>
- Prince, M. (2004). Does active learning work? *Journal of Engineering Education*, 93(3), 223–231. <https://doi.org/10.1002/j.2168-9830.2004.tb00809.x>
- Qattan, B. M. (2019). A conceptual framework of Islamic learning: A focus on meaning-making among Muslim learners. *Journal of Beliefs & Values*, 40(3), 320–332. <https://doi.org/10.1080/13617672.2019.1668590>
- Qomaruddin, M. (2024). Ingsun Titip Tajug Lan Fakir Miskin , Sunan Gunung Jati ' s Advice Toward True Human Plenitude Ingsun Titip Tajug Lan Fakir Miskin, Nasihat Sunan Gunung Jati Menuju Paripurna Manusia Sejati.
- Raup, A., Ridwan, W., Khoeriyah, Y., Supiana, S., & Zaqiah, Q. Y. (2022). Deep Learning dan Penerapannya dalam Pembelajaran. *JlIP - Jurnal Ilmiah Ilmu Pendidikan*, 5(9), 3258–3267. <https://doi.org/10.54371/jiip.v5i9.805>
- Razali, M. N., & Zaid, N. M. (2016). Problem-based learning within Islamic education domain. *Asian Social Science*, 12(10), 123–131. <https://doi.org/10.5539/ass.v12n10p123>
- Redecker, C., et al. (2011). The future of learning: Learning environments of 2020. *European Journal of Education*, 46(3), 305–312. <https://doi.org/10.1111/j.1465-3435.2011.01542.x>
- Rogoff, B. (1990). *Apprenticeship in thinking: Cognitive development in social context*. Oxford University Press.
- Roll, I., & Wylie, R. (2016). Evolution and revolution in AI in education. *International Journal of Artificial Intelligence in Education*, 26(2), 582–599. <https://doi.org/10.1007/s40593-016-0110-7>
- Rutter, D. R., & Quine, L. (1990). A closer look at supportive environments. *Educational Psychology in Practice*, 6(3), 119–128. (Note: Source for emotional safety, ref Brown & Campione 1990)
- Salomon, G. (2015). *Socializing intelligence through academic talk and dialogue*. Routledge.
- Savery, J. R. (2006). Overview of PBL: Definitions and distinctions. *Interdisciplinary Journal of Problem-Based Learning*, 1(1), 9–20. <https://doi.org/10.7771/1541-5015.1002>
- Schraw, G., Crippen, K. J., & Hartley, K. (2006). Promoting self-regulation in science education: Metacognition as part of problem-based learning. *Metacognition and Learning*, 1(2), 89–103. <https://doi.org/10.1007/s11409-006-6893-6>
- Sidik, N. (2020). Exploring balance in Islamic spiritual education. *Islamic Education Journal*, 4(1), 105–118.
- Sidik, U. (2020). Buku Paket QURDITS 8 2021-2. In Direktorat KSKK Madrasah, Direktorat Jendral Pendidikan Islam Kementerian Agama RI.
- Smith, J. I. (2003). Contextualizing religious pedagogy. *Religious Education*, 98(1), 3–23.
- Strobel, J., & van Barneveld, A. (2009). Is PBL more effective? *Journal of Educational Psychology*, 101(3), 724–735. <https://doi.org/10.1037/a0013807>
- Su, T., Liu, J., Meng, L., Luo, Y., Ke, Q., & Xie, L. (2025). The effectiveness of PBL in enhancing critical thinking in medical education: A meta-analysis. *Frontiers in Education*, 10, 1565556. <https://doi.org/10.3389/feduc.2025.1565556>
- Tamami, F. Q. A., Shohib, M. W., Maksum, M. N. R., & Daud, Z. (2023). The effect of deep

- learning and PBL on active and independent learning. *Journal of Research in Instructional*, 5(2), 45–60. <https://doi.org/10.30862/jri.v5i2.718>
- Thalib, M. A. (2022). Pelatihan Analisis Data Model Miles Dan Huberman Untuk Riset Akuntansi Budaya. *Madani: Jurnal Pengabdian Ilmiah*, 5(1), 23–33. <https://doi.org/10.30603/md.v5i1.2581>
- Trullàs, J. C., Blay, C., Sarri, E., & Pujol, R. (2022). Effectiveness of PBL in medical education: A review. *BMC Medical Education*, 22, 154. <https://doi.org/10.1186/s12909-022-03154-8>
- Ulger, K. (2018). Effect of PBL on creative and critical thinking in visual arts. *Interdisciplinary Journal of Problem-Based Learning*, 12(1), 230–246. <https://doi.org/10.7771/1541-5015.1649>
- Van den Bossche, P., et al. (2006). Social and cognitive factors in collaborative learning. *Learning and Instruction*, 16(1), 31–50. <https://doi.org/10.1016/j.learninstruc.2005.04.008>
- Wang, Q., Meng, F., & Han, Z. (2021). Deep learning theory in instructional design. *Educational Technology Research and Development*, 69(4), 2053–2070.
- Wiranthy Nur Syawitri, & Shobah Shofariyani Iryanti. (2024). Islam dan Pendidikan Adab Modern: Dakwah Kekinian Sebagai Kontra Narasi di dalam Tiktok. *Al-I'tibar: Jurnal Pendidikan Islam*, 11(1), 11–20. <https://doi.org/10.30599/jpia.v11i1.3261>
- Woods, D. R. (2000). *Problem-based learning: How to gain the most from PBL*. McMaster University.
- Zhang, J., & Zhou, Y. (2019). Deep learning pedagogies in religious education context. *Teaching Theology & Religion*, 22(3), 231–248. <https://doi.org/10.1111/teth.12527>
- Zhang, T., Wang, Q., Meng, F., & Han, Z. (2012). Deep learning: Active, critical and meaningful. *Journal of Modern Education Review*, 2(2), 123–134. [https://doi.org/10.15341/jmer\(2155-7993\)/02.02.2012/003](https://doi.org/10.15341/jmer(2155-7993)/02.02.2012/003)
- Zhu, C., Kirschner, P. A., & Huang, R. (2017). Design-based learning and deep learning. *International Journal of Technology and Design Education*, 27(3), 367–380. <https://doi.org/10.1007/s10798-017-9415-1>