

Love-Based Curriculum Converges with Deep Learning: A Qualitative Study of Pedagogical Transformation in Madrasah Education

Sriati^a, Achmad Fanani^{b*}, Uswatun Qoyyimah^c

^{abc}*Universitas Pesantren Tinggi Darul Ulum*

*Corresponding author. E-mail address: achmadfanani@fbs.unipdu.ac.id

ABSTRACT

This study examines how a Love-Based Curriculum (*Kurikulum Berbasis Cinta* or KBC) can be integrated with deep learning to improve teaching practices in madrasah education. The study focuses on how values such as love, empathy, respect, and care are embedded in curriculum planning and classroom learning to create meaningful learning experiences for students. A qualitative case study was conducted at a public Islamic senior high school (madrasah) in Indonesia. Data were collected through semi-structured interviews, classroom observations, and document analysis involving teachers, school leaders, and curriculum coordinators. The findings show that integrating the Love-Based Curriculum with deep learning encourages teachers to move beyond simply delivering subject content. Instead, they design learning activities that help students think critically, reflect on their experiences, and develop social, emotional, and spiritual values. Teachers also became more focused on supporting students' individual learning needs and active participation. However, the study identified several challenges, including limited teacher readiness to implement reflective teaching practices and the need for stronger curriculum management. Overall, the findings suggest that integrating love-based values with deep learning can strengthen teaching quality in Islamic education. Within this pedagogical framework, technology can serve as a valuable tool for supporting teachers' lesson planning, assessment, and reflective practice, provided that it remains aligned with the curriculum's core principles of care, empathy, and meaningful human relationships rather than replacing them.

Keywords: Love-Based Curriculum, Deep Learning, Pedagogical Transformation, Madrasah Education

INTRODUCTION

The rapid development of digital technology and artificial intelligence (AI) has transformed educational practices worldwide, influencing not only how students learn but also how teachers design, evaluate, and continuously improve instruction (Voicu, 2025). Schools are no longer expected to focus solely on transmitting knowledge or preparing students for examinations. Instead, they are increasingly encouraged to cultivate students' critical thinking, creativity, collaboration, and capacity to solve authentic problems. Consequently, many education systems have adopted deep learning as a key pedagogical approach. Deep learning emphasizes meaningful understanding by encouraging students to connect concepts across disciplines, reflect on their learning processes, and apply knowledge in new and complex situations rather than relying on rote memorization (Fitrah et al., 2025; Zebua, 2025). Within this context, AI has emerged as a valuable pedagogical support tool, particularly for enhancing teachers'

reflective practice. By analyzing learning data, identifying students' learning patterns, and generating timely feedback, AI can help teachers evaluate instructional effectiveness, adapt learning activities, and make more informed pedagogical decisions (Strielkowski et al., 2024; Mohd Amin et al., 2025). Despite these advantages, scholars have cautioned that the increasing reliance on AI and data-driven educational practices may unintentionally prioritize efficiency and measurable outcomes over the relational and ethical dimensions of teaching (Holmes et al., 2022; UNESCO, 2023). This concern raises an important question about how technological innovation can be integrated without diminishing the values of empathy, care, respect, and meaningful teacher–student relationships that remain fundamental to effective education.

These concerns have encouraged researchers and educators to revisit the principles of humanistic education. Humanistic learning theory, developed by scholars such as Rogers (1969) and Maslow (1970), emphasizes that education should not only develop students' intellectual abilities but also support their emotional, social, and moral growth. According to this perspective, meaningful learning happens when students feel respected, valued, and emotionally supported throughout the learning process. More recent studies have extended these ideas by introducing the concept of human-centered AI in education. Rather than replacing teachers, AI should function as a tool that supports teachers in making better instructional decisions while preserving human interaction, empathy, and ethical responsibility (Cao et al., 2025). Therefore, emotional and relational aspects of teaching should not be viewed as additional components of education but as essential elements that help students achieve deep and meaningful learning.

These global discussions are highly relevant to the Indonesian education system, especially in madrasahs. As Islamic educational institutions, madrasahs have a unique responsibility to develop students intellectually, spiritually, morally, and socially. Learning in madrasahs is expected to balance academic achievement with character development and religious values. Recent educational policies in Indonesia have also introduced deep learning as part of curriculum improvement, encouraging teachers to create more meaningful, student-centered, and reflective learning experiences. However, many classroom practices still focus heavily on completing curriculum content and preparing students for assessments. Opportunities for students to reflect, discuss, explore ideas, and actively construct knowledge are often limited (Kholis, 2025; Bulkani, 2025). This situation shows that although educational policies encourage pedagogical transformation, the implementation of these ideas in classrooms remains challenging.

To respond to these challenges, the Indonesian Ministry of Religious Affairs introduced the Love-Based Curriculum (*Kurikulum Berbasis Cinta* or KBC) in 2025. The curriculum positions compassion, empathy, respect, and human dignity as the foundation of educational practice. This orientation is consistent with both humanistic education and Islamic educational philosophy, which view education as a holistic process of nurturing intellectual, moral, spiritual, and social development rather than merely transmitting knowledge. In Islamic educational thought, education (*ta'dīb*) seeks to cultivate individuals of sound character, wisdom, and responsibility through balanced development and ethical relationships, while humanistic education likewise emphasizes personal growth, meaningful learning, and respect for learners' dignity (Al-Attas, 1979; Noddings, 2013). Within this framework, love is understood not simply as an emotion but as a professional and ethical commitment expressed through caring relationships, respectful communication, inclusive teaching practices, and sustained attention to students' personal development. Teachers are therefore expected to act as facilitators who guide students with patience, kindness, and understanding while promoting

academic excellence. Although KBC has attracted considerable attention in educational policy, its practical implementation in curriculum planning, classroom instruction, and teacher professional development remains limited. Furthermore, little research has examined how KBC can be integrated with deep learning approaches and how AI can support teachers' reflective practice within a love-based pedagogical framework rather than merely improving instructional efficiency.

Previous studies provide valuable insights into these issues. First, research on deep learning consistently shows that this approach helps students develop critical thinking, problem-solving skills, and meaningful engagement with learning. Nevertheless, many teachers continue to face difficulties in understanding the concept of deep learning and applying it effectively in classroom practice (Cahyati et al., 2025; Abdullah, 2025). Second, studies on AI in education demonstrate that technology can improve personalized learning, increase learning efficiency, and support teacher reflection. However, researchers also warn that excessive dependence on technology may weaken pedagogical quality if teachers rely on AI without strong instructional knowledge and ethical considerations (Coppin, 2025; Melo-López et al., 2025). Third, qualitative studies conducted in Islamic educational settings indicate that contextual learning and reflective teaching strategies improve student participation and learning experiences. However, these practices are often implemented only in specific schools or classrooms and have not yet become systematic educational approaches (Mashudi & Hilman, 2025).

Fourth, research on humanistic education and character education emphasizes the importance of integrating emotional intelligence, moral values, and character development into curriculum design. These studies show that students learn more effectively when they experience supportive relationships, positive classroom environments, and opportunities for personal reflection (Bulkani et al., 2025). Fifth, emerging studies on love-based or compassion-centered education suggest that educational environments built upon empathy, care, and mutual respect can increase student motivation, strengthen classroom relationships, and create more inclusive learning communities. However, this field is still relatively new, and empirical evidence supporting these approaches remains limited. Finally, studies investigating teacher readiness consistently report that many teachers require further professional development to implement reflective teaching, student-centered learning, and value-based pedagogical practices successfully (Suparman et al., 2025).

Although these studies provide valuable insights, important gaps remain in the existing literature. Most previous research has examined deep learning, AI integration, and value-based education as separate lines of inquiry rather than as interconnected components of a coherent pedagogical framework. Consequently, there is limited empirical evidence demonstrating how values such as compassion, empathy, and love can be systematically translated into curriculum planning, classroom instruction, teacher reflection, and professional practice within technology-supported learning environments. Existing studies also offer few practical frameworks that explain how these humanistic values can be integrated with deep learning principles while using AI to support, rather than replace, teachers' pedagogical decision-making and reflective practice. As a result, the human dimension of education remains insufficiently connected to technological innovation, leaving a significant conceptual and practical gap between ethical educational values and contemporary pedagogical approaches.

This study seeks to address this gap by proposing an integrated perspective that combines the Love-Based Curriculum with deep learning. Rather than viewing love simply as a philosophical ideal, this study considers it an educational principle that guides curriculum

development, teacher reflection, classroom interaction, and instructional decision-making. Using a qualitative case study in an Indonesian madrasah, this research explores how teachers understand and implement the principles of KBC alongside deep learning. Specifically, the study investigates three main questions: (1) how teachers interpret and apply the principles of the Love-Based Curriculum and deep learning; (2) how these two approaches work together to transform pedagogical practice; and (3) what institutional, professional, and conceptual challenges teachers face during implementation.

By bringing together ideas from humanistic education, deep learning, Islamic educational philosophy, and AI-supported teaching, this study offers a more integrated framework for curriculum transformation in madrasah education. It also contributes to ongoing international discussions about how educational institutions can benefit from technological innovation while preserving the human values that remain at the heart of meaningful education. The findings are expected to provide theoretical contributions to educational research as well as practical recommendations for teachers, curriculum developers, school leaders, and policymakers seeking to create more compassionate, reflective, and effective learning environments in the digital era.

METHOD

This study used a qualitative interpretive case study to explore how the Love-Based Curriculum (KBC) and deep learning are integrated to improve teaching practices in a madrasah. A qualitative approach was chosen because it helps researchers understand how teachers and school leaders interpret their experiences and apply value-based teaching in everyday classroom practice. The interpretive perspective focuses on participants' views, beliefs, and experiences, while the case study design allows researchers to investigate this educational change in its real-life setting (Creswell & Poth, 2018).

The study was conducted at a public Islamic senior high school (*Madrasah Aliyah*) in Indonesia that had begun implementing the Love-Based Curriculum alongside deep learning. Participants were selected through purposive sampling because they had direct experience with curriculum planning and classroom implementation. The participants comprised ten teachers representing different subject areas, one vice principal responsible for curriculum, and one school principal. Data collection and analysis were conducted iteratively, with interview transcripts and field notes reviewed after each round of data collection. Saturation was considered to have been reached when ongoing coding and team discussions consistently revealed no new themes, categories, or insights relevant to the research questions, indicating that additional data were unlikely to contribute further conceptual understanding (Patton, 2015).

Data were collected over three months, from October to December 2025, using three main methods. First, semi-structured interviews were conducted with all participants to explore their understanding of the Love-Based Curriculum, deep learning, teaching strategies, and reflective practices. Each interview lasted about 45–60 minutes and was audio-recorded with participants' permission. Second, non-participant classroom observations were carried out to examine actual teaching practices. The observations focused on teacher–student interaction, critical thinking activities, classroom participation, empathy, and inclusive learning. Third,

document analysis was conducted by reviewing lesson plans, curriculum documents, and teachers' reflective notes to understand how these pedagogical principles were planned and implemented. During the research process, field notes and reflective memos were also written to record important observations and support deeper analysis.

The data were analyzed using thematic analysis following Braun and Clarke (2006). The researchers first became familiar with the data by reading the interview transcripts and field notes several times. They then developed initial codes using both inductive coding, which emerged from the data, and deductive coding based on the study's theoretical framework. Similar codes were grouped into categories and then developed into broader themes related to pedagogical transformation. These themes were reviewed and refined several times to ensure that they accurately represented the data and answered the research questions. The constant comparative method was also applied by comparing findings from interviews, observations, and documents to improve the consistency and credibility of the analysis.

To ensure the quality of the research, several trustworthiness strategies were applied. Credibility was strengthened through triangulation of multiple data sources and member checking, where participants reviewed the researchers' interpretations. Transferability was supported by providing detailed descriptions of the research setting and participants. Dependability was ensured through an audit trail documenting all research procedures and analytical decisions. Confirmability was enhanced by maintaining reflexive journals that helped reduce researcher bias and ensured that the findings were based on the collected data rather than personal assumptions (Lincoln & Guba, 1985).

Ethical standards were carefully followed throughout the study. All participants gave informed consent before taking part in the research. Their identities were protected through the use of pseudonyms, and all research data were securely stored and used only for academic purposes. Participants were also informed that they could withdraw from the study at any time without any negative consequences.

The analysis was guided by an integrated theoretical framework combining deep learning pedagogy, humanistic learning theory, and AI-supported pedagogy. Deep learning emphasizes meaningful understanding, reflection, and the application of knowledge (Fitrah et al., 2025). Humanistic learning theory highlights the importance of emotional development, positive relationships, and student-centered learning (Rogers, 1969). AI-supported pedagogy views technology as a tool that supports teacher reflection and instructional decision-making rather than replacing human interaction (Jose et al., 2025). Combining these three perspectives enabled the researchers to understand how cognitive, emotional, and technological factors work together to support pedagogical transformation in madrasah education.

FINDING AND DISCUSSION

FINDING

The analysis reveals a coherent pattern of pedagogical transformation as teachers integrate Love-Based Curriculum (KBC) with deep learning principles. Across data sources, four

interrelated themes emerge: (1) a shift toward meaningful and inquiry-oriented learning, (2) the enactment of relational and affective pedagogy grounded in compassion, (3) the development of reflective professional practices, and (4) the use of technology as a support for pedagogical decision-making. These themes collectively indicate a move from procedural, content-driven instruction to a more holistic, human-centered approach to teaching and learning.

First, there is a clear shift from content coverage to meaningful learning. Observations and lesson documents show that teachers increasingly design tasks that require interpretation, connection, and application rather than recall. Classroom discourse moves from monologic explanation to dialogic engagement, where students are invited to question, justify, and relate concepts to real-life contexts. For example, teachers incorporate problem-based prompts and reflective questioning to deepen conceptual understanding. This shift is not uniform across all participants; however, even those at earlier stages demonstrate an emerging awareness that “finishing the syllabus” is less important than ensuring that students grasp underlying ideas. As a result, lessons become more structured around learning intentions and success criteria linked to understanding, not merely task completion.

Second, the integration of love-based values reconfigures classroom relationships and interactional norms. Teachers consistently report prioritizing empathy, respect, and care in their instructional decisions, which is corroborated by observation data showing more inclusive participation patterns and supportive feedback. Practices such as acknowledging students’ emotional states, allowing flexible pacing, and using affirming language are evident across classrooms. This relational orientation contributes to a psychologically safe learning environment where students are more willing to take intellectual risks and engage in discussion. Importantly, the enactment of compassion is not limited to affective gestures; it also shapes pedagogical choices, such as differentiating tasks and providing scaffolded support for struggling learners.

Third, teachers exhibit growing reflective capacity and pedagogical awareness. Interview data indicate that participants increasingly engage in systematic reflection on lesson effectiveness, student responses, and their own instructional decisions. This is visible in the use of brief post-lesson reflections and peer discussions to evaluate what worked and why. Reflection is often anchored in student evidence—such as misconceptions identified during class or patterns observed in student work—indicating a shift toward evidence-informed practice. However, the depth of reflection varies: while some teachers move toward critical reflection (questioning assumptions and redesigning tasks), others remain at a descriptive level (reporting what occurred without deeper analysis). This variation suggests an ongoing developmental trajectory in professional learning.

Fourth, technology functions as a facilitative tool for documentation, feedback, and reflection rather than as a driver of instruction. Teachers use simple digital tools to collect student responses, track participation, and store reflective notes. In several cases, technology supports formative assessment by enabling quick aggregation of student understanding, which informs immediate instructional adjustments. Notably, participants emphasize that technology enhances their ability to “see” learning processes but does not replace the relational core of teaching. This aligns with a human-centered orientation in which digital tools augment, rather than substitute, pedagogical judgment.

Despite these positive developments, the data also reveal implementation challenges. A recurring issue is the lack of a systematic curriculum management structure that explicitly integrates KBC and deep learning across planning, implementation, and evaluation cycles.

Teachers often rely on individual initiative, leading to variability in practice. Additionally, there are conceptual ambiguities surrounding “deep learning,” with some participants conflating it with the use of technology or with simply increasing task difficulty. Time constraints and administrative demands further limit opportunities for sustained reflection and collaborative planning. These constraints suggest that while pedagogical transformation is underway, it remains fragile and uneven without stronger institutional alignment.

Taken together, the findings indicate that integrating love-based values with deep learning catalyzes a reorientation of pedagogy toward meaning, relationships, and reflection. The transformation is most visible where these elements are coherently aligned—when teachers design for understanding, enact compassionate interactions, and use evidence to inform iterative improvement. Where alignment is partial, practices tend to revert to procedural routines, underscoring the importance of systemic support.

Table 1 Theme Core Description Empirical Indicators Implications for Practice

Theme	Core Description	Empirical Indicators	Implications for Practice
Meaningful, inquiry-oriented learning	Shift from content coverage to conceptual understanding and application	Dialogic teaching; problem-based tasks; explicit learning intentions; real-life connections	Prioritize depth over breadth; design tasks that require reasoning and transfer
Love-based relational pedagogy	Integration of empathy, respect, and care in instructional interactions	Inclusive participation; affirming feedback; flexible pacing; differentiated support	Build psychologically safe classrooms; embed values in pedagogical decisions
Reflective professional practice	Increased use of evidence-informed reflection to improve teaching	Post-lesson reflections; use of student evidence; peer discussion	Develop structured reflection routines; move from descriptive to critical reflection
Technology as pedagogical support	Use of digital tools to enhance feedback, documentation, and reflection	Quick formative assessment; data aggregation; reflective logs	Position technology as augmentation of teacher judgment, not replacement
Structural and conceptual challenges	Incomplete institutional alignment and varying teacher readiness	Fragmented implementation; ambiguity of “deep learning”; time constraints	Strengthen curriculum management systems; provide targeted professional development

Source: Analyzed by the researchers (2026)

DISCUSSION

This study provides a broader understanding of how the Love-Based Curriculum (KBC) and deep learning work together to transform teaching and learning in madrasah education. The findings show that these two approaches should not be seen as separate methods that are simply combined. Instead, they support each other and create a learning environment that is more meaningful, reflective, and centered on students. The results also show that successful pedagogical transformation depends on three important elements: meaningful relationships between teachers and students, deep and reflective learning, and the thoughtful use of technology. At the same time, the study identifies several institutional challenges that influence whether these changes can continue over time.

First, the findings show that teachers are moving away from traditional teaching that focuses mainly on completing curriculum content. Instead, they are beginning to create

learning experiences that encourage students to ask questions, solve problems, think critically, and connect new knowledge with their own experiences. This finding supports previous studies that describe deep learning as a process of developing conceptual understanding and transferring knowledge to different situations (Gkintoni et al., 2025). However, this study adds an important new perspective. Deep learning is not only about using better teaching strategies or asking students more difficult questions. It also depends on the quality of relationships in the classroom. Students learn more deeply when they feel respected, trusted, and emotionally supported by their teachers.

The classroom observations showed that teachers who consistently demonstrated empathy, patience, and respect created learning environments where students felt comfortable expressing opinions, asking questions, and making mistakes. In these classrooms, students participated more actively in discussions and were more willing to explore new ideas without fear of being judged. These findings support sociocultural learning theory, which explains that learning develops through social interaction and collaboration with others (Vygotsky, 1978). They are also consistent with research showing that dialogic teaching improves students' higher-order thinking skills by encouraging discussion, reasoning, and reflection (García-Carrión et al., 2020). Therefore, this study suggests that deep learning should not be viewed only as a cognitive process. Instead, it should be understood as relationally mediated learning, where supportive relationships between teachers and students create the conditions for deeper understanding. This perspective expands previous literature, which often describes deep learning mainly as a cognitive or instructional approach without paying sufficient attention to the importance of classroom relationships.

Second, the implementation of the Love-Based Curriculum demonstrates that compassion is not simply an educational value or moral principle. Instead, compassion becomes an important teaching strategy that directly influences how teachers design and deliver learning activities. Teachers in this study practiced love-based education by giving additional support to students who needed it, adjusting learning activities according to students' abilities, allowing flexible learning time, and providing encouraging feedback instead of focusing only on mistakes. These practices helped students become more confident and more willing to participate in classroom learning.

These findings are consistent with humanistic learning theory, which emphasizes that empathy, respect, and unconditional positive regard are essential conditions for meaningful learning (Rogers, 1969; Maslow, 1970). They also agree with more recent studies on social-emotional learning and culturally responsive pedagogy, which argue that students' emotional well-being, identity, and sense of belonging strongly influence their motivation and academic achievement (Bennouna et al., 2021). However, this study goes one step further by showing that compassion also influences teachers' instructional decisions. Teachers used compassion when deciding how to organize classroom activities, how much support to provide, how to scaffold difficult tasks, and how to respond to students' learning challenges. In other words, compassion became part of the teaching process itself rather than simply being an additional moral message. This finding contributes to the growing literature on compassion-centered education by providing practical evidence from an Islamic educational setting, where spiritual, ethical, and academic goals are closely connected.

Third, the study highlights the role of technology as a tool that supports teacher reflection rather than replacing teachers. Consistent with recent studies on artificial intelligence in education, teachers used digital technology to collect evidence of student learning, monitor student progress, provide timely feedback, and improve lesson planning (Blundell, 2021;

Mejeh et al., 2024). Importantly, technology was not used to make teaching decisions automatically. Instead, teachers continued to use their professional judgment while using digital tools to better understand students' needs.

This finding challenges the idea that technology alone can improve education. Instead, it supports the concept of human-in-the-loop, where technology assists teachers while teachers remain responsible for making instructional decisions. Technology helped teachers identify learning difficulties more quickly, evaluate student progress more accurately, and reflect on the effectiveness of their teaching practices. These findings are also consistent with the Technological Pedagogical Content Knowledge (TPACK) framework, which emphasizes that technology should be integrated with sound pedagogy and subject knowledge rather than being used independently (Adipat, 2021). This study extends the TPACK perspective by showing that technology should also support ethical and caring relationships between teachers and students. Therefore, the greatest value of technology lies not in automating teaching but in strengthening teachers' reflective practice and improving learning quality.

Although the study found many positive changes, it also identified several important challenges. One major challenge was the lack of a clear curriculum management system that fully integrates the Love-Based Curriculum with deep learning. As a result, implementation varied among teachers, and many practices depended on individual commitment rather than school-wide policies. This finding is consistent with curriculum research showing that successful educational change requires strong alignment between curriculum planning, classroom implementation, and assessment systems (Khan et al., 2025). Without this alignment, innovative teaching practices are difficult to sustain over time.

Another challenge was that some teachers had different understandings of what deep learning actually means. Some participants believed that deep learning simply involved giving students more difficult assignments or using digital technology more frequently. Others understood deep learning as reflective and inquiry-based learning. These different interpretations created inconsistency in classroom practice and suggest the need for shared professional understanding and continuous teacher training. The findings also showed differences in teachers' reflective abilities. While some teachers critically analyzed their teaching and continuously improved their instructional practices, others mainly described classroom activities without deeply reflecting on student learning or teaching effectiveness. This finding suggests that teacher professional development should focus not only on instructional techniques but also on developing reflective thinking and professional inquiry (Sherwood, 2024).

From a theoretical perspective, this study proposes an integrated framework connecting the Love-Based Curriculum, deep learning, and technology-supported pedagogy. In this framework, love-based values create supportive classroom conditions such as trust, empathy, inclusion, and respect. These conditions enable teachers to implement deep learning more effectively through inquiry, reflection, collaboration, and meaningful knowledge construction. Technology then strengthens this process by providing information that helps teachers evaluate learning and make better instructional decisions. Together, these three elements create a comprehensive model of pedagogical transformation that connects cognitive development, emotional support, ethical values, and technological innovation. This integrated framework provides a stronger explanation than previous studies, which often examine these components separately.

The findings also have important practical implications for madrasahs and other educational institutions. Schools that wish to promote deep learning should not focus only on

introducing new teaching methods or digital technologies. They should also build a school culture that values empathy, compassion, respect, and meaningful teacher–student relationships. Curriculum guidelines, classroom observation instruments, and teacher professional development programs should explicitly combine cognitive learning goals with relational and ethical values. In addition, schools should develop simple data systems that help teachers monitor student progress and reflect on learning without creating unnecessary administrative work. School leaders also play a critical role by providing professional support, encouraging teacher collaboration, allocating time for reflective discussions, and creating a culture where continuous learning and improvement are valued.

Overall, this study shows that effective pedagogical transformation depends on the integration of three closely connected elements: meaningful relationships, deep learning, and reflective use of technology. Deep learning becomes more effective when students experience compassion, trust, and emotional support from their teachers. Technology contributes most when it strengthens teachers' reflection and decision-making rather than replacing human interaction. Finally, strong curriculum management and supportive school leadership are essential to ensure that these innovative teaching practices can continue, expand, and improve over time.

CONCLUSION

This study demonstrates that the integration of Love-Based Curriculum (KBC) and deep learning fosters a meaningful shift in pedagogical practice from content-oriented instruction toward reflective, student-centered, and humanistic learning. The findings indicate that deep learning is not solely a cognitive process but is relationally mediated through values such as empathy, care, and respect. When these values are embedded in classroom interactions, they create conditions that support critical inquiry, student engagement, and meaningful understanding. Furthermore, technology plays a complementary role by enhancing reflection and evidence-based decision-making rather than replacing the teacher's pedagogical function. This positions pedagogical transformation as an alignment of cognitive depth, relational values, and reflective practice.

From a policy perspective, the study underscores the importance of systematically integrating humanistic values into curriculum frameworks, teacher standards, and evaluation systems. The implementation of love-based pedagogy should not rely on individual initiative but must be institutionally supported through clear guidelines and professional development programs. Teacher training should emphasize reflective practice, collaborative learning, and the integration of ethical and relational dimensions in teaching. At the school level, leadership plays a critical role in fostering a culture of trust, inquiry, and continuous improvement by providing space for collaboration, reflection, and pedagogical innovation.

In practice, the findings suggest that effective pedagogical transformation requires a balanced integration of human-centered teaching and technology-supported reflection. Schools should prioritize the use of digital tools that enhance formative assessment and teacher reflection while maintaining the centrality of human interaction in learning. Although this study is context-specific, it offers a conceptual foundation for future research on integrating value-based education and deep learning in diverse educational settings. Ultimately, the study highlights that the future of education lies in harmonizing technological advancement with the preservation of human values, ensuring that learning remains both intellectually rigorous and deeply meaningful.

ACKNOWLEDGEMENT

Many thanks to DPPM Kemendiktisaintek the Republic of Indonesia for funding this research

REFERENCES

- Abdullah, E. J. (2025). Implementasi kurikulum berbasis cinta dalam membangun karakter siswa di MTs Laboratorium UIN Bukittinggi. *Jurnal Kajian Ilmu Pendidikan (JKIP)*, 6(4), 1802–1814. <https://doi.org/10.55583/jkip.v6i4.1774>
- Adipat, S. (2021). Developing technological pedagogical content knowledge (TPACK) through technology-enhanced content and language-integrated learning (T-CLIL) instruction. *Education and Information Technologies*, 26(5), 6461–6477. <https://doi.org/10.1007/s10639-021-10648-3>
- Bennouna, C., Brumbaum, H., McLay, M. M., Allaf, C., Wessells, M., & Stark, L. (2021). The role of culturally responsive social and emotional learning in supporting refugee inclusion and belonging: A thematic analysis of service provider perspectives. *PLOS ONE*, 16(8), e0256743. <https://doi.org/10.1371/journal.pone.0256743>
- Blundell, C. N. (2021). Teacher use of digital technologies for school-based assessment: A scoping review. *Assessment in Education: Principles, Policy & Practice*, 28(1), 1–22. <https://doi.org/10.1080/0969594X.2021.1929828>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Bulkani, B., Riadin, A., Ni'mah, N., & Setiawan, M. A. (2025). Impact of holistic learning models on character development: A systematic review. *The Education and Science Journal*, 27(5), 111–141. <https://doi.org/10.17853/1994-5639-2025-5-111-141>
- Cahyati, S., Nurdin, E. S., Ruyadi, Y., Dahliana, A., Hidayat, M., Warlim, W., Hakam, K. A., & Ganeswara, G. M. (2025). Ministry beyond tolerance: Reframing interfaith harmony through Kurikulum Berbasis Cinta (KBC) in Indonesia. *Harmoni*, 24(2), 232–253. <https://doi.org/10.32488/harmoni.v24i2.946>
- Cao, Y., Deng, L., Liu, X., Feng, Z., & Gao, Y. (2025). Ethical challenges in the algorithmic era: A systematic rapid review of risk insights and governance pathways for nursing predictive analytics and early warning systems. *BMC Medical Ethics*, 26(1), 151. <https://doi.org/10.1186/s12910-025-01308-z>
- Coppin, B. (2025). The potential of AI in education: Personalizing learning. *International Journal of Artificial Intelligence for Science*, 1(2). <https://doi.org/10.63619/ijai4s.v1i2.003>
- Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry and research design: Choosing among five approaches* (4th ed.). SAGE Publications.
- Fitrah, M., Sofroniou, A., Yarmanetti, N., Ismail, I. H., Anggraini, H., Nissa, I. C., Widyaningrum, B., Khotijah, I., Kurniawan, P. D., & Setiawan, D. (2025). Are teachers ready to adopt deep learning pedagogy? The role of technology and 21st-century competencies amid educational policy reform. *Education Sciences*, 15(10), 1344. <https://doi.org/10.3390/educsci15101344>
- García-Carrión, R., López de Aguilera, G., Padrós, M., & Ramis-Salas, M. (2020). Implications for social impact of dialogic teaching and learning. *Frontiers in Psychology*, 11, 140. <https://doi.org/10.3389/fpsyg.2020.00140>
- Gkintoni, E., Antonopoulou, H., Sortwell, A., & Halkiopoulou, C. (2025). Challenging cognitive load theory: The role of educational neuroscience and artificial intelligence in

- redefining learning efficacy. *Brain Sciences*, 15(2), 203. <https://doi.org/10.3390/brainsci15020203>
- Jose, B., Cherian, J., Verghis, A. M., Varghise, S. M., S., M., & Joseph, S. (2025). The cognitive paradox of AI in education: Between enhancement and erosion. *Frontiers in Psychology*, 16, 1550621. <https://doi.org/10.3389/fpsyg.2025.1550621>
- Khan, H. F., Qayyum, S., Beenish, H., Khan, R. A., Iltaf, S., & Faysal, L. R. (2025). Determining the alignment of assessment items with curriculum goals through document analysis by addressing identified item flaws. *BMC Medical Education*, 25(1), 200. <https://doi.org/10.1186/s12909-025-06736-4>
- Kholis, N. (2025). Pedagogical practices and their impact on critical thinking skills in Indonesian Islamic higher education. *Eduprof: Islamic Education Journal*, 7(1), 177–199. <https://doi.org/10.47453/eduprof.v7i1.374>
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. SAGE Publications.
- Mashudi, M., & Hilman, C. (2025). Digital-based Islamic religious education: A new orientation in enhancing student engagement and spiritual understanding. *The Journal of Academic Science*, 2(1). <https://doi.org/10.59613/66eafx60>
- Maslow, A. H. (1970). *Motivation and Personality* (2nd ed.). New York: Harper & Row.
- Mejeh, M., Sarbach, L., & Hascher, T. (2024). Effects of adaptive feedback through a digital tool: A mixed-methods study on the course of self-regulated learning. *Education and Information Technologies*, 29(14), 1–43. <https://doi.org/10.1007/s10639-024-12510-8>
- Melo-López, V.-A., Basantes-Andrade, A., Gudiño-Mejía, C.-B., & Hernández-Martínez, E. (2025). The impact of artificial intelligence on inclusive education: A systematic review. *Education Sciences*, 15(5), 539. <https://doi.org/10.3390/educsci15050539>
- Mohd Amin, M. R., Ismail, I., & Sivakumaran, V. M. (2025). Revolutionizing education with artificial intelligence (AI)? Challenges, and implications for open and distance learning (ODL). *Social Sciences & Humanities Open*, 11, 101308. <https://doi.org/10.1016/j.ssaho.2025.101308>
- Patton, M. Q. (2015). *Qualitative research & evaluation methods* (4th ed.). SAGE Publications.
- Rogers, C. (1969). *Freedom to Learn*. Columbus, OH: Charles E. Merrill.
- Sherwood, G. (2024). Reflective practice and knowledge development: Transforming research for a practice-based discipline. *International Journal of Nursing Sciences*, 11(4), 399–404. <https://doi.org/10.1016/j.ijnss.2024.08.002>
- Strielkowski, W., Grebennikova, V., Lisovskiy, A., Rakhimova, G., & Vasileva, T. (2024). AI-driven adaptive learning for sustainable educational transformation. *Sustainable Development*, 33(2), 1921–1947. <https://doi.org/10.1002/sd.3221>
- Suparman, S., Hadi, M. S., Amalia, M., & Rose, S. (2025). Heutagogical self-directed learning in an Indonesian Islamic senior high school: Teacher scaffolding, digital practices, and policy implications. *Heutagogia: Journal of Islamic Education*, 5(2), 239–252. <https://doi.org/10.14421/hjie.2025.52.08>
- Voicu, C.-G. (2025). Integrating artificial intelligence into digital pedagogy: An analysis of challenges and opportunities. *Revista de Pedagogie Digitală*, 4(1), 31–38. <https://doi.org/10.61071/RPD.2543>
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press.
- Zebua, N. (2025). Education transformation: Implementation of deep learning in 21st-century learning. *Harmoni Pendidikan: Jurnal Ilmu Pendidikan*, 2(2), 146–152. <https://doi.org/10.62383/hardik.v2i2.1405>