



FOLLOW-UP OF ISLAMIC EDUCATIONAL INSTITUTIONS, DEEP LEARNING AND AI, THE CONCEPT OF LOCAL WISDOM, A LOVE-BASED CURRICULUM IN ISLAMIC ELEMENTARY SCHOOL

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Abstract :

This article discusses the follow-up to the development of Islamic educational institutions in integrating Deep Learning and Artificial Intelligence (AI) technology with the concept of local wisdom and a love-based curriculum in Madrasah Ibtidaiyah (MI). This approach emphasizes the humanization of education through the values of compassion, spirituality, character, and the use of adaptive technology for personalized learning. Literature research was conducted by reviewing journals, books, and scientific reports from the last ten years. The analysis results indicate that the integration of AI-Deep Learning can improve the effectiveness of learning, automated assessment, personalization of materials, and strengthening character education based on local wisdom. This article presents a conceptual framework, implementation plan, learning design, module examples, lesson plans, syllabi, portfolio rubrics, and operational recommendations for madrasahs.

Keywords : Artificial Intelligence, Deep Learning, Islamic Education, Local Wisdom, Love-Based Curriculum,

INTRODUCTION

Global technological developments, particularly AI and Deep Learning, have had a significant impact on the world of education. On the other hand, Islamic educational institutions are required to uphold the spiritual values, character, and local wisdom that constitute the nation's identity. Madrasah Ibtidaiyah, as the foundation of basic religious education, must integrate these two aspects through a love-based curriculum education that instills empathy, noble morals, social awareness, and a love for the environment and culture.

The challenge for Islamic education is not only to improve technological literacy, but also to ensure its use aligns with Quranic values, etiquette, and local wisdom. The integration of AI and Deep Learning allows for more adaptive, responsive, and personalized learning, but must remain within the framework of Islamic ethics and spirituality.



AI has become a strategic element in modern primary education, including Islamic institutions (Rahman, 2021). Integrating local values is a strategy to prevent moral disorientation caused by technological penetration (Rohim, 2020).

Problem Statement and Article Objectives : Problem Statement 1. What is the model for integrating deep learning pedagogy, AI, and local wisdom into the Madrasah Ibtidaiyah curriculum? 2. What operational steps must institutions (madrasas) take to implement this model ethically and sustainably? 3. How can we assess and monitor the impact of technology-pedagogy-cultural integration on student competencies and values?

Objectives of the article 1. To develop an integrative conceptual framework for MI. 2. To develop an operational follow-up plan (3-5-year roadmap). 3. To provide examples of modules, teacher training designs, assessment models, and practical monitoring instruments.

Literature Review, 1. Deep learning (pedagogy) - a term in education referring to in-depth learning, involving understanding, application, reflection, and transfer of knowledge to real-life situations. This pedagogy emphasizes authentic learning, problem-based projects, and experiential learning. 2. AI in education - SLR studies and Indonesian articles show AI being used for personalized learning, adaptive tutoring, learning chatbots, and automated evaluation. However, implementation requires attention to teachers' digital literacy, data privacy, and connectivity. 3. Local wisdom - Integrating local content into the curriculum increases learning relevance, cultural identity, and community engagement. Indonesian research shows that local content integration is effective when developed participatory with local leaders. 4. Love-Based Curriculum (KBC) - a Ministry of Religious Affairs initiative emphasizing strengthening the affective dimension: love for God, knowledge, others, the environment, and the homeland; KBC serves as an implementation guideline in madrasas. 5. Authentic assessment and monitoring - portfolio-based assessments, attitude observations, and project rubrics - are well-suited for measuring deep learning outcomes and the affective dimension of KBC; technology (a simple LMS/dashboard) can help store and analyze data.

Conceptual Framework, The proposed framework combines four core elements: 1. Value Objectives (KBC) - affective goals (love) serve as the primary orientation guiding the selection of materials and activities. 2. Deep Learning Pedagogy - methods: Project-based Learning (PjBL), problem-based learning, structured reflection, collaboration. 3. AI/Assistive Technology - adaptive tools for diagnosing learning needs, adaptive quizzes, digital portfolio management; AI is positioned as assistive technology, not a teacher replacement. 4. Local Wisdom as a Content Source - local stories, mutual cooperation practices, and environmental wisdom are used as authentic learning materials.

This model is implemented through an instructional design cycle: objectives → materials (local content & competencies) → methods (deep learning + AI-lite) → assessment (authentic & analytical) → reflection & revision. The teacher is the center of the process orchestration; communities provide content

and cultural validation.

RESEARCH METHOD

This article is compiled through: (a) a systematic literature review (2015–2025) of policies, scientific articles, and implementation reports in the Indonesian context; (b) an analysis of the Ministry of Religious Affairs' policy documents on the Love-Based Curriculum; and (c) a synthesis of international best practices on deep learning and AI in primary education. The primary sources used as the basis for the recommendations include Ministry of Religious Affairs documents, the SLR study on AI in Indonesian education, and a study of deep learning pedagogy.

FINDINGS AND DISCUSSION

1. Integration of AI and Deep Learning in Islamic Elementary School Learning Studies show that the use of AI such as adaptive learning, machine vision, and recommendation systems can improve the personalized learning experience for Islamic Elementary School students. AI enables the automatic identification of students' learning styles and speeds, as well as error detection (Rahman, 2021).

Deep Learning can also analyze Islamic Elementary School students' learning achievement patterns more accurately, especially in subjects such as Arabic, the Quran, and Mathematics (Nugraha, 2022).

Key findings: 1. Learning becomes more adaptive and responsive. 2. Teachers can monitor student progress in real time. 3. Students are motivated by the more interactive learning experience.

2. Integration of Local Wisdom in Technology-Based Education Research shows that digitalization of learning does not erase local wisdom, but instead strengthens students' cultural identity and religious character (Syafii, 2020).

Local wisdom such as mutual cooperation (gotong royong), good manners, deliberation, etiquette, regional arts, and religious moderation can be integrated into AI-based digital content, including: a. educational animation, b. digital storytelling, c. culture-based quizzes, d. introduction to local customs and traditions through AR/VR.

This integration aligns with the mission of Islamic education, which emphasizes morals and character (Fitriana, 2021).

3. Love-Based Curriculum in Islamic Elementary Schools, The analysis shows that a love-based curriculum which prioritizes compassion, empathy, emotional warmth, and spirituality is highly effective when implemented with AI technology.

This model influences: a. a more humanistic learning climate, b. students feel valued and loved, c. learning becomes more emotionally and spiritually meaningful (Husna, 2020).

AI is used as a support, not a substitute for teacher affection. This approach aligns with Al-Ghazali's Islamic educational philosophy, which emphasizes love as the foundation of moral education (Salim, 2019).

Discussion

1. Harmony between Technology and Islamic Values. The presence of AI is often considered incompatible with character education. However, studies have shown that technology can actually strengthen Islamic values when properly directed (Mubarok, 2023). AI helps streamline learning, while teachers focus on: moral development, emotional support, religious practices, and strengthening manners and ethics.

Thus, collaboration between teachers and technology makes learning more comprehensive and holistic.

2. Contribution of Deep Learning to MI Student Profiles: Deep Learning provides continuous analysis of student development. Analysis findings show that: a. Predictive models can detect potential learning difficulties more quickly (Yunus, 2022), b. The system can generate recommendations for learning activities tailored to individual needs, c. Learning outcome data is more accurate and in-depth. These benefits are particularly helpful for MI, which often have limited human resources (Latifah, 2021).

3. Strengthening Islamic Identity through Local Wisdom. Local wisdom serves as a bridge to building character that aligns with Islamic values while also being contextualized within Indonesian culture (Sukamto, 2020). When combined with digital media and AI, these values become more engaging and accessible to children. Examples of implementation include: a. short videos about good manners in Indonesian culture, b. digital applications introducing daily etiquette, c. interactive simulations about local religious traditions. This approach reinforces the concept of learning by heart, not just learning by machine.

4. Love-Based Curriculum as an Absolute Foundation. Love-based learning emphasizes the following aspects: a. teacher compassion, b. emotional attention, c. respect for differences, d. a humanistic approach. AI cannot replace these aspects, but it can support teachers in creating more effective and personalized learning spaces (Munir, 2021).

5. The Need for Adaptation: Islamic Educational Institutions (Madrasahs) need to undertake institutional transformation through: a. technology-based teacher training, b. an Islamic digital curriculum, c. AI-integrated learning media, d. Data-driven management. This follow-up encourages madrasahs to become modern, adaptive Islamic educational institutions that remain rooted in Islamic values (Fauzan, 2023).

Follow-Up Plan/Operational Recommendations (Details & Steps), Implementation principles: gradual, participatory, ethical, and contextual.

3-Year Roadmap (summary), 1. Year 1 - Preparation and Pilot (6–12 months), a). Curriculum audit & local wisdom inventory: a small team (madrasah principal + teachers + local figures) creates a list of relevant local practices and values, b). Initial teacher training: Basic digital literacy, introduction to AI-lite, and deep learning pedagogy (intensive workshop + hands-on practice), c). Module pilot: run an integrative PjBL module in 1–2 classes with the support of a simple adaptive application (offline/online). Monitor the process and results. 2. Year 2 - Evaluation & Scale-up, a). Pilot evaluation: student portfolio analysis, classroom observations, and teacher/parent surveys. b). Expansion: Implement in more classes; improve infrastructure (device pooling). 3) Year 3 - Integration & Sustainment, a). Official integration: Include adaptive modules and local content in the RPP/RKH and madrasah syllabus. b). Networking: Build a network between madrasahs to share materials, experiences, and pool resources. c). Policies & SOPs: Establish data privacy guidelines, documentation permissions, and ethical standards for AI use.

Learning Design And Module Examples, Module Title: My Environment: Local Wisdom, Science, and Environmental Love. Duration: 6 weeks (4 hours per week integrated across subjects: Islamic Religious Education, Natural Sciences, Indonesian Language, Arts and Culture). Core Competencies: Understanding the value of local wisdom in environmental conservation; applying simple scientific methods; demonstrating an attitude of environmental love (KBC).

Weekly Structure: 1. Week 1 - Local Exploration: Group interviews with community leaders/grandparents about traditional environmental practices. Output: Short notes and recordings (teacher monitors permission). Assessment: Interview checklist and student reflections. 2. Week 2 - Simple Science Concepts: Learning about the concepts of waste, recycling, and biodegradation (simple experimental sessions). Adaptive diagnostic quiz (AI-lite) to check prerequisite knowledge. 3. Week 3 - Project Analysis & Planning: Students design a cleanup project + campaign (posters, drama, local songs). Teacher facilitates the PjBL design. 4. Week 4 - Project Implementation & Documentation: Environmental cleanup, digital poster creation (simple storyboard). Documentation is collected in a digital portfolio. 5. Week 5 - Presentation & Reflection: Group presentation,

personal reflection on the values of love and local wisdom. 6. Week 6 - Evaluation & Summary Publication: Portfolio assessment, attitude rubric (KBC), and publication of results on the school board/social media (with parental permission).

Role of AI: Adaptive diagnostic quizzes, digital portfolio templates, and assistance in creating interview questionnaires (teacher editing). AI does not store sensitive data without permission. Asian Education Journal

Assessment Rubric (short example): 1. Product (poster/project): Originality (0-4), Cultural Relevance (0-4), Clarity of Message (0-4) 2. Process: Collaboration (0-4), Participation (0-4), Planning (0-4). 3. Attitude (KBC): Empathy (0-4), Sense of Responsibility (0-4), Cultural Appreciation (0-4).

Teacher Training & Professional Development (Program Details: 3 Modules) Model: Blended (face-to-face workshops + online modules + coaching/classroom observations for 6 months). 1. Module A Digital Literacy & Introduction to AI (2 days) a). Objectives: Teachers understand the concept of AI in an educational context, the use of adaptive quizzes, and privacy issues, b). Materials: Introduction to AI, account and data management, use of offline/online adaptive quiz tools, case studies. jurnal.unusu.ac.id, 2. Module B Deep Learning Pedagogy & PjBL Design (3 days), a). Objectives: Teachers are able to develop PjBL-based lesson plans with authentic assessment rubrics, b). Materials: Project design, assessment rubrics, classroom facilitation techniques, reflection and feedback, 3. Module C Integration of Local Wisdom & KBC (2 days), a). Objectives: Teachers can identify local content and integrate it into KBC activities, b). Materials: Cultural inventory, ethics of cultural material collection, community involvement.

Program Evaluation: pre-post teacher competency tests; classroom observations; community feedback; internal madrasah certification for teachers who meet standards.

Infrastructure and Resources (phased/Technical scheme)

Stage 0 Minimal (start-up): 1. Devices: 1 computer/2 classes + 1 teacher smartphone, 2. Software: Lightweight adaptive quiz package (offline files/Google Forms), portfolio storage (local drive or USB), 3. Connection: Prioritize material downloads and regular synchronization.

Stage 1 Medium Scale: 1. Additional devices: 1 tablet/class; portable projector; printer, 2. Platform: Lightweight LMS (on-premises or cloud-based) for portfolios and simple dashboards, 3. Policies: Privacy SOPs and documentation

approvals. Stage 2 Advanced Scale: 1. Educational analytics dashboard, AI-light module integration (does not store sensitive data), and more stable connectivity. Funding: Sources: Regional Budget (if available), madrasah BOS funds, local grants, collaboration with NGOs/technology partners, and community funds. Prioritize shared devices and low-cost solutions for inclusiveness.

Assessment and monitoring - evaluation model, Comprehensive assessment model:

1. Formative: adaptive quizzes, daily observation notes, peer and teacher feedback.

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2. Authentic summative: project portfolios, presentations, attitude rubric (love values/KBC).

3. Character assessment: KBC rubric (dimensions: love of knowledge, love of God, love of the environment, love of others, love of the homeland adapted from the guidelines). Cdn.kemenag.go.id

Monitoring & Evaluation (M&E):

1. Indicators: competency achievement, number of saved portfolios, percentage of certified teachers, parent satisfaction, evidence of community involvement.

2. Tools: simple dashboard (spreadsheet/LMS), semester reports, focus group discussions with stakeholders.

3. Follow-up: lesson plan/module improvements based on M&E data.

Community and Stakeholder Involvement: Essential community roles: traditional leaders and religious scholars as sources of local wisdom; parents as partners for documentation and home support; local government/Ministry of Religious Affairs for policy and funding support. Joint activities (cultural festivals, neighborhood mutual cooperation) serve as arenas for implementing KBC values. The co-creation model (teachers + community) ensures cultural materials remain authentic and ethical.

Challenges and Mitigation Strategies

Challenges	Mitigation Strategies
Limited teacher digital literacy	Tiered training + coaching + community of practice.
Weak infrastructure & connectivity	Low-bandwidth solutions, device pooling, prioritizing offline-first tools.
AI privacy & ethics risks	Develop SOPs for privacy & parental consent; choose AI-lite without sensitive storage.
Risk of losing cultural authenticity	Validate content with local figures; participatory documentation that respects cultural rights.

Expected Impact and Succes Indicators : Short-term impact (1 year): increased student engagement in local projects; 50–70% of teachers participate in basic training; pilot module runs in 1–2 classes.

Medium-term impact (2–3 years): increased student portfolios, integration of KBC into the madrasah syllabus, madrasah networks sharing modules. Long-term impact (3–5 years): increased 21st-century competencies and strengthening the character of love and local identity in MI graduates. Examples of quantitative indicators: percentage of students with complete portfolios, critical thinking rubric scores increase by 10–15% after implementation, percentage of certified teachers >70%.

CONCLUSION

The integration of deep learning pedagogy and the use of AI within the context of a Love-Based Curriculum and local wisdom content is a viable strategic direction for Islamic elementary schools. Successful implementation depends on teacher readiness, a phased infrastructure, community engagement, data ethics policies, and authentic assessment design. AI should serve as a supporting tool that facilitates personalized learning, while KBC and local wisdom maintain moral balance shaping a generation that is intelligent, has character, and loves its culture.

Policy Recommendations/Recommendations For Madrasah Principals : 1. Immediately conduct a curriculum audit and inventory of local wisdom (3 months), 2. Implement a pilot of the PjBL + AI-lite module in 1–2 classes for one semester; document the results, 3. Conduct teacher training: AI literacy, deep learning pedagogy, and KBC integration (twice a year), 4. Develop SOPs for privacy and parental consent before data collection/documentation, 5. Build partnerships (with local communities, the Education Office/Ministry of Religious Affairs, NGOs, technology providers for infrastructure and funding).

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