National Education Policy in the Era of AI Disruption: Strategic Adaptation of Human-Centered Learning Management

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Abstract . The rapid development of artificial intelligence (AI) has triggered changes in the global education ecosystem and given rise to the public perception that AI can replace human intelligence. This situation demands an adaptive and humanity-oriented national policy. This study aims to empirically analyze the direction of national education policy and its implementation in response to AI disruption, with a focus on adaptation strategies towards human-centered learning. The research method uses a qualitative approach with a policy analysis design, involving analysis of national policy documents. The study results show that national education policy has integrated digital literacy principles, namely the integration of coding and AI subjects, strengthening the data ecosystem and AI literacy, and cross-sector collaboration for STEAM and AI. As a follow-up, teachers are equipped with capacity building programs through training in deep learning and coding. Several challenges are faced, including: infrastructure readiness and equitable access, teacher pedagogical readiness, ethical use of AI, and personal data protection. These findings develop an "AI Human-Centered Policy Framework" policy model that balances technological efficiency with moral, cultural, and socio-emotional values in learning. This model is expected to serve as a reference for policymakers in ensuring that AI transformation does not replace human intelligence, but rather strengthens human intelligence and character in the digital age.
Keywords: National Education Policy, Artificial Intelligence, Human-Centered Learning, Digital Transformation

1 INTRODUCTION

It would be naive to assume that AI will not impact education. On the contrary, its potential is enormous, although, for now, it is overstated [1]. The rapid advancement of Artificial Intelligence (AI) has significantly transformed the global educational landscape, presenting both opportunities and disruptions that challenge traditional learning and teaching paradigms. AI's ability to automate cognitive tasks, personalize learning paths, and analyze vast amounts of educational data has generated optimism about its potential to improve learning outcomes.

However, this technological revolution has also raised ethical, social, and pedagogical questions about the role of human intelligence and the essence of education itself [2][3]. The increasing reliance on AI in education has sparked a critical debate: should education systems adapt to AI, or should AI be aligned to serve human-centered educational values?

In Indonesia, this question is particularly pressing as the nation moves toward realizing the President's Asta Cita vision in the Ministry of Education and Culture's 2025-2029 Strategic Plan (Renstra), which aims to build a resilient and adaptive education system toward a Golden Indonesia 2045. The Ministry of Education and Culture's 2025-2029 Strategic Plan (Renstra) positions educational transformation as an instrument of national development and explicitly frames digital capabilities and adaptive learning as strategic components of the next planning cycle[4][5]..

This stance aligns with the broader discourse on human-centered AI, which argues that technological systems should remain accountable to human agency, ethical reflection, and societal well-being rather than technological determinism [6].

The government recognizes AI as both a catalyst and a disruptor, emphasizing the need for policies that balance technological innovation with moral, cultural, and humanistic values. Educational transformation in this digital era requires not only the integration of AI and coding literacy, but also the development of critical thinking, empathy, and digital ethics-skills that preserve the essence of humanity amidst automation.

The Merdeka Curriculum and the 2013 Curriculum are still implemented in parallel within the immersive learning policy, but the student achievement framework has been updated through the Graduate Profile Dimension, which replaces the Pancasila Student Profile concept as per Ministerial Regulation No. 13 of 2025.

L. R. Sugiarti et al. (eds.), *Proceedings of the 2nd International Conference on Social Environment Diversity (ICOSEND 2025)*, Advances in Social Science, Education and Humanities Research 1011,
https://doi.org/10.2991/978-2-38476-565-2_35

Previous education policies, such as the 2020–2045 National Strategy for Artificial Intelligence (Stranas KA) and the previous framework from the Ministry of Education and Culture (2018-2025), have laid the foundation for digital transformation [7]. However, these frameworks often lack an explicit focus on human-centered learning and fail to adequately address the ethical and pedagogical implications of AI adoption in the classroom. Recent research highlights that while many countries are integrating AI into their education systems, challenges lie in ensuring equitable access, teacher preparedness, and ethical AI governance [2][8]. In the Indonesian context, disparities in infrastructure, digital literacy, and data protection remain significant barriers to inclusive AI implementation.

From a theoretical perspective, the relationship between AI and education policy can be understood through the lens of human-centered design and policy responsiveness. The human-centered learning paradigm emphasizes that technology should enhance, not replace, human cognition, creativity, and socio-emotional development. This human-centered learning paradigm was previously embedded in the Pancasila Student Profile framework but has been aligned to the Graduate Profile Dimensions as per Ministerial Regulation No. 13 of 2025. However, operationalizing this vision in national policy remains an ongoing challenge, particularly in ensuring that AI integration supports holistic human development.

This research seeks to empirically analyze the direction of Indonesia's national education policy and its implementation in response to AI disruption. Using a policy analysis approach, the research examines key policy documents, strategic plans, and stakeholder perspectives to identify how the government positions AI within the broader education transformation agenda. The paper's novelty lies in its formulation of a "Human-Centered AI Policy Framework," which emphasizes the balance between technological efficiency and the moral, cultural, and socio-emotional dimensions of learning [2][4]. This framework not only contributes to the scholarly discourse on AI and education policy but also provides practical insights for policymakers, educators, and researchers seeking to ensure that AI becomes a tool to empower, rather than undermine, human intelligence.

2 RESEARCH METHODOLOGY

This research uses a qualitative policy analysis approach, focusing on the study of national education policy and its strategic response to disruption caused by Artificial Intelligence (AI). This research aims to identify how the Indonesian education system has adapted its policy direction, implementation strategies, and human-centered principles in the era of digital transformation.

2.1 Type of Research

This research is classified as policy-oriented qualitative research, emphasizing the systematic interpretation of policy documents rather than subjective observation. This approach was chosen because policy research requires objectivity and relies on publicly available and verified data products that reflect the country's formal stance and strategic direction. This analysis is descriptive-analytical, aiming to interpret existing policy frameworks and align them with current educational challenges in the AI era.

2.2 Data Characteristics and Sources

The data used in this study are secondary data sourced from official government policy documents, strategic plans, regulations, and previous academic research. Primary data sources include the 2025-2029 Ministry of Education and Culture Strategic Plan (Renstra Kemendikdasmen), the 2025-2029 Ministry of Education and Culture/Kemdiktisaintek Strategic Plan, the 2020-2045 National Artificial Intelligence Strategy, and implementation frameworks derived from Merdeka Belajar (Freedom to Learn) and the Pancasila Student Profile (primary policy products). These are complemented by international guidance documents [2][8] and verified government communications on AI roadmaps and cross-ministerial coordination (Kominfo/Setkab) to ensure policy triangulation.

Primary data sources include:

a. The Ministry of Education and Culture's Strategic Plan (Renstra) 2025-2030
b. The President's Asta Cita towards a Golden Indonesia 2045
c. The National Strategy for Artificial Intelligence 2020-2045 (Ministry of Research and Technology/BRIN)
d. Student Profiles within the Pancasila Framework (Ministry of Education, Culture, Research and Technology)
e. Supporting regulations related to digital literacy, teacher competency development, and the ethical use of technology in education.

To strengthen contextual understanding, this study also references international policy frameworks and comparative research published by UNESCO [2], the OECD[8], and the World Economic Forum (2024), in addition to peer-reviewed journal articles on AI policy and educational transformation over the past ten years.

Background

The research setting is Indonesia's national education policy ecosystem, which includes the Ministry of Education, regional education authorities, and relevant institutions responsible for digital transformation in education. While the primary analysis focuses on the national level, some regional implementation insights were obtained through policy evaluation reports and public statements from education stakeholders.

Data Collection

Data collection was conducted through document analysis and literature synthesis. The researchers systematically identified, selected, and reviewed policy texts, strategic documents, and relevant research. Data coding was used to identify key themes related to AI adoption, human-centered learning, ethical considerations, and capacity-building initiatives.

2.3 Analysis Instruments and Tools

The primary analytical tool used was content analysis, supported by NVivo 14 qualitative software to categorize and map thematic relationships between policies. Data were analyzed using the Miles and Huberman [9] framework, which includes data reduction, data presentation, and conclusion drawing. Triangulation of data sources was conducted to ensure the reliability and validity of interpretations, combining official policy documents, academic analysis, and verified government publications.

2.4 Data Analysis

Data analysis followed a deductive-inductive process. Initially, key policy directions were identified based on the 2025-2030 Strategic Plan framework and the National Artificial Intelligence (AI) Strategy. This framework was then compared with international benchmarks to determine alignment with global standards for human-centered AI in education. These findings were synthesized into thematic clusters: (1) integration of digital literacy and AI, (2) teacher capacity and pedagogical readiness, (3) ethical and cultural dimensions of AI, and (4) data governance and protection.

This analytical process provided an empirical basis for developing the proposed “AI Human-Centered Policy Framework,” which serves as the primary conceptual output of this study.

3 RESULTS

This analysis revealed four key findings related to the direction of Indonesia's national education policy in responding to AI disruption and promoting human-centered learning. These findings were synthesized from a content analysis of key policy documents, strategic frameworks, and academic sources reviewed in this study.

Table 1. Strategic Alignment of National Policies

No	Policy Document	Year	Main Focus	Relevance to AI & Human-Centered Learning
1	Strategic Plan of the Ministry of Education (Renstra Kemendikdasmen) 2025-2030	2025	Educational transformation, digital literacy	Integration of AI and adaptive learning
2	*Asta Cita* of the President of the Republic of Indonesia	2024	Indonesia Emas 2045 vision	Strengthening technologically empowered human resources
3	Indonesia National Artificial Intelligence Strategy (Stranas KA)	2020	National AI governance and innovation	AI ethics and cross-sector collaboration
4	Ministry Regulation No. 12 of 2024 (Permendikbudristek)	2024	Teacher capacity development	Strengthening data literacy, coding, and AI competencies
5	Graduate Profile Dimensions	2025	Learner character and competencies	Reinforcing human values within the digital context

3.1 Strategic Alignment of National Education Policy with AI Transformation

The Ministry of Primary and Secondary Education's 2025-2030 Strategic Plan (Renstra) demonstrates clear alignment with Indonesia's long-term vision for Golden Indonesia 2045 and the President's Asta Cita framework. AI is positioned as both an enabler and a challenge in achieving equitable and high-quality education. The Ministry emphasizes a shift from conventional digitalization to the integration of adaptive intelligence, where technology complements, rather than replaces, human creativity and empathy in learning [4] [5] [2].

This alignment is evident in key strategic objectives, including the development of AI literacy curriculum modules, a digital learning ecosystem, and teacher capacity-building programs that encourage the creative and ethical use of technology. The policy statement emphasizes that technological innovation must be balanced with cultural values and moral education, reinforcing Indonesia's educational philosophy, which is based on the Pancasila Student Profile. This policy shift is consistent with the OECD Education Policy Outlook (2023), which highlights a growing trend among Asia-Pacific countries to integrate AI into education through data-driven and competency-based learning models[10].

3.2 Integration of AI and Digital Literacy in the National Curriculum

Research indicates that the Indonesian government has initiated several pilot programs integrating AI-related competencies into the school curriculum. These programs include the introduction of coding and computational thinking in primary and secondary education, as well as discussions of AI ethics in civics and character education subjects [11].

The Merdeka Belajar initiative provides schools with autonomy to design contextual digital learning models, while the Merdeka Mengajar platform serves as a collaborative ecosystem that facilitates AI-assisted instructional design and teacher reflection. These efforts collectively reflect a move toward AI-inclusive pedagogy, which aims to enhance personalized learning without diminishing teacher agency. This integration aligns with the findings of [13] and [14], who argue that curriculum reform in the AI era must integrate critical digital literacy and ethical reasoning to ensure students become reflective, intelligent users of technology.

3.3 Teacher Capacity Preparation and Pedagogical Readiness

Another important finding relates to the government's focus on teacher development. The Teacher Mover Program and Teacher Mover Education (PGP) have been reoriented to include digital transformation and AI literacy components. Training modules now include data analysis for learning assessment, AI-based learning tools, and critical reflection on the ethical use of AI in the classroom.

However, the data also indicates uneven teacher readiness, particularly between urban and rural areas. Limited infrastructure, unequal access to training, and the digital divide remain key barriers. Government partnerships with universities, the EdTech industry, and local education offices have been identified as steps to reduce this gap. Research [15] and [16] showed that many educators still face challenges in infrastructure, technical skills, and ethical understanding when implementing AI-assisted teaching. These findings mirror global patterns reported by [17] and [18], emphasizing the urgent need for continued professional development and institutional support to bridge the digital divide..

3.4 Ethical, Cultural, and Governance Challenges

While the integration of AI in education continues to grow, significant challenges remain regarding data privacy, ethical governance, and cultural adaptation. Policy documents acknowledge the need to develop AI ethics guidelines for schools, ensuring that student data is managed securely and algorithmic tools are used transparently [7].

The National Strategy for Artificial Intelligence 2020-2045 highlights the principle of AI for Humanity, which aligns with the UNESCO 2023 framework emphasizing ethical AI education [2]. However, Indonesia's regulatory framework remains fragmented, with overlapping authority across ministries. Fragmented governance and the absence of a unified data protection mechanism have hampered coherent implementation, as noted in comparative analyses across Southeast Asia [8], [19]. There is also growing discourse about the potential erosion of humanistic values and local wisdom in the face of algorithmic efficiency. This requires stronger inter-ministerial coordination and the development of an inclusive AI roadmap that protects human values while encouraging innovation.

3.5 The Emergence of a “Human-Centered AI Policy Framework”

From the synthesis of these findings, this study formulated a Human-Centered AI Policy Framework that emphasizes three interrelated dimensions:

1. The Technological Dimension-promoting adaptive and inclusive AI systems to support diverse learners.

2. The Humanistic Dimension-strengthening emotional, cultural, and ethical intelligence as core learning outcomes.
3. The Governance Dimension-ensuring equitable infrastructure, transparent data use, and participatory policymaking.

This framework summarizes Indonesia's policy direction to maintain a balance between technological advancement and human values, ensuring that AI serves as a means to enhance, not replace, human intelligence in educational contexts.

Based on the synthesis of findings, this study produced a conceptual model called the AI Human-Centered Policy Framework, a policy adaptation framework that integrates the technological, humanistic, and governance dimensions to ensure AI implementation remains human-centered. This model was developed from the thematic patterns resulting from NVivo analysis and is the main contribution of the research.

4. DISCUSSION

The findings of this study indicate that Indonesian education policy has begun to internalize the disruptive potential of Artificial Intelligence (AI) through adaptive and human-centered reforms. This section discusses the significance of these findings from broader theoretical and policy perspectives, emphasizing their implications for national education governance and the future of humanistic learning.

4.1 Interpretation of the Results

The alignment of Indonesia's education strategy reflects a shift in policy orientation, from digitalization as an infrastructure improvement to digital transformation as a means of developing human potential. This transformation aligns with UNESCO's AI and Education: A Guide for Policymakers [2], which underscores the need for technology integration that upholds human agency, ethical responsibility, and inclusivity.

Indonesia's policy reform direction also aligns with global studies advocating for human-centered AI governance, emphasizing meaningful human control, contextual decision-making, and the protection of socio-moral values in technology-mediated learning [6].

Regulations regarding the use of AI in higher education in Indonesia are still under development, although there is significant policy groundwork in the Republic of Indonesia's National Strategic Plan for Artificial Intelligence 2020-2045 [20]. This plan aims to prepare Indonesia for the Industrial Revolution 4.0, including in the education sector, with a focus on infrastructure development, human resource development, and collaboration between universities, industry, and government [21]. However, specific regulations regarding ethics, data privacy, and security in the use of AI in education have not yet been fully formulated [22].

The integration of AI and digital literacy into the curriculum not only signifies technological modernization but also embeds ethics and critical awareness of AI into learning outcomes. This redefines the concept of literacy itself, expanding it from reading and writing to the ability to interpret, question, and manage intelligent technology [23]. Thus, Indonesia's education reform appears technologically progressive and morally grounded.

However, teacher readiness remains a determining factor. Research [24] and the OECD [8] indicates that teachers are the primary mediators between technology and learning. Without adequate pedagogical competence and confidence, AI risks exacerbating inequalities rather than reducing them. Educators, who play a key role in the education process, need to understand these changes and prepare for the new dynamics presented by artificial intelligence [25]. Professional teachers in this era must be able to integrate digital technology into learning to create innovative classrooms [26]. Educators need to consider security and privacy implications and ensure that artificial intelligence is used to support inclusive and equitable learning [27].

Educators also face challenges in managing classroom dynamics involving interactions between students and AI technology, as well as ensuring that diverse learning styles are accommodated in technology-enhanced learning environments [28].

Digital learning has a positive impact on primary and secondary education, increasing student motivation and engagement [29]. However, digital transformation also presents various challenges for Indonesian education. Research [30] outlined several challenges, such as the gap in internet access and technological devices between developed and underdeveloped regions, which remains a major obstacle. Many teachers still lack the skills and knowledge to use digital technology in their teaching, and the traditional teacher-centered learning culture remains a barrier to the effective implementation of digital learning [31].

Interestingly, however, artificial intelligence has also quietly entered the classroom [32]. Whether students, teachers, parents, and policymakers accept it or not, learning systems dubbed intelligent, adaptive, or personalized are increasingly being implemented in schools and universities [33] worldwide, collecting and analyzing vast amounts of student big data and significantly impacting the lives of both students and educators [34].

The shift in the framework from P5 to the Graduate Profile Dimensions has strategic implications for the overall design of AI-based competencies and digital literacy within the education system. With success indicators no longer referring to the six P5 dimensions, curriculum development must realign learning outcomes to be more responsive to the needs of the digital era.

The Graduate Profile Dimensions emphasize competencies that focus more on adaptability, complex problem-solving, critical thinking, technological literacy, and the ability to interact ethically with intelligent systems. This shift demands the integration of AI not merely as a technical tool, but as part of students' core competencies. Consequently, learning design must prioritize learning experiences that encourage students to develop agency, ethical awareness, and reflective skills in using technology.

In this context, teachers need to design learning strategies that enable students to understand how AI works, how to interpret its output, and how to make decisions that remain oriented toward human values. Thus, this shift in the framework is not merely administrative nomenclature but also redefines how schools assess students' readiness to participate in a digitalized socio-economic environment.

As AI more deeply integrates into learning, fundamental challenges arise regarding the extent to which humans can and should maintain control over intelligent systems. Critics of human control raise two key points. First, because humans make mistakes, automation can help reduce them by operating consistently and without fatigue. Second, they claim that even when controls are in place, only a small percentage of users will actually use them, sometimes because the controls are unappealing to them, but often because they are poorly designed [35].

This challenge of human control is closely related to broader debates about technology's place in social structures. The debate about whether technology is neutral or inherently political remains highly relevant [36]. AI complicates this debate because its complexity, autonomy, and personalized, adaptive behavior create challenges never presented by traditional technologies. Because AI systems can learn, adapt, and make decisions in ways that are difficult for humans to interpret, this "black box" nature makes it difficult to understand or challenge their output. Consequently, AI design and development must shift toward stronger alignment with human needs, emphasizing explainability, transparency, and data privacy [37].

Human-Centered AI (HCAI) places humans at the center of technology design, prioritizing their experience, satisfaction, and evolving needs. Rather than replacing human capabilities, HCAI aims to amplify, enhance, and refine them so that systems become more reliable, safe, and trustworthy in real-world use. This approach recognizes that technology works best when it amplifies human capabilities, rather than overshadowing them. Thus, HCAI plays a crucial role in supporting individuals' sense of self-efficacy, helping them feel confident and competent when interacting with AI systems.

HCAI also fosters creativity by providing tools that expand users' imagination and reach. Furthermore, HCAI clarifies responsibilities in human-AI collaborations, ensuring people understand who is responsible for decisions and outcomes. Ultimately, HCAI fosters meaningful social participation, enabling individuals and communities to engage fully and safely with the technologies that shape modern life [38].

HCAI is at the forefront of global technological shifts, reshaping how society interacts with AI systems by embedding ethical principles and prioritizing human values. As outlined in this study, HCAI is not simply an alternative approach to AI development; it is an imperative to ensure that advances in artificial intelligence serve as a force for societal good.

By embedding human values into AI systems, organizations can create technology that not only remains effective but also truly benefits individuals, communities, and institutions. When these values guide development, AI becomes more aligned with the diverse needs of the communities it serves, reducing the risk of harm and increasing the likelihood of just and respectful outcomes. This values-based approach is crucial as AI's influence spreads across social, economic, and institutional sectors. Prioritizing ethical implementation helps organizations anticipate and address AI's broader social impacts, from issues of equity and accountability to long-term public trust. Ultimately, grounding AI in human values fosters more responsible decision-making, ensuring that technological advancements align with what truly matters to human well-being and collective progress.

Figure 1. AI Human-Centered Education Policy Framework in Indonesia

4.2 Strategic Adaptation Model for Human-Centered Learning Management in the Era of AI Disruption

Based on the results of a thematic analysis of national policy documents, international guidelines, and the perspectives of education stakeholders, this study formulated a model called the AI Human-Centered Policy Framework for Strategic Pedagogical Adaptation. This model illustrates how the Indonesian education system can strategically adapt AI integration while maintaining human agency, moral values, and the holistic development of students.

This model consists of three core dimensions: Technology, Humanism, and Governance, which intersect and serve as the foundation for adapting learning in the AI era.

Technology Dimension: Adaptive and Inclusive AI Integration. This dimension emphasizes that AI integration must support the diverse needs of learners and strengthen students' digital competencies. AI technology is positioned not merely as an automation tool, but as a cognitive amplifier that can enrich the learning process.

Key components of the technology dimension:

1) Integration of AI literacy and coding into the curriculum
2) Adaptive learning through data-driven recommendation systems
3) Utilization of AI for formative assessment and instructional differentiation
4) Development of inclusive digital learning platforms

Strategic adaptation direction:

Technology is used to support creativity, problem-solving, and critical thinking, not replace them.

Humanistic Dimension: Strengthening Agency, Ethics, and Character. The humanistic dimension ensures that humans remain the center of moral and intellectual control in the learning process. AI should support value development, not dominate it.

Key components of the humanistic dimension:

1) Student agency
2) Reflective skills when using technology
3) AI ethical literacy and digital awareness
4) Preservation of cultural values, character, and empathy
5) Responsible human-AI collaboration

Strategic adaptation direction:

AI should strengthen students' self-confidence, creativity, and reflective capacity, and support the goals of Indonesian humanistic education.

Governance Dimension: Security, Fairness, and Accountability. AI integration requires strong governance to ensure fair, secure, and sustainable implementation.

Key components of the governance dimension:

1) Protection of students' personal data
2) Algorithmic transparency and bias mitigation
3) Synchronization of policies across ministries
4) Continuous teacher training (pedagogy + ethics)
5) Equitable digital infrastructure across regions

Strategic Adaptation Direction:

Governance ensures fair access, data security, and alignment of AI implementation with national education goals.

Inter-Dimensional Relationships

These three dimensions complement each other:

a. Technology provides new capabilities,
b. Humanistic provides moral direction,
c. Governance ensures security and sustainability.

These three dimensions form a strategic adaptation process to produce learning that remains human-centered despite rapid technological developments.

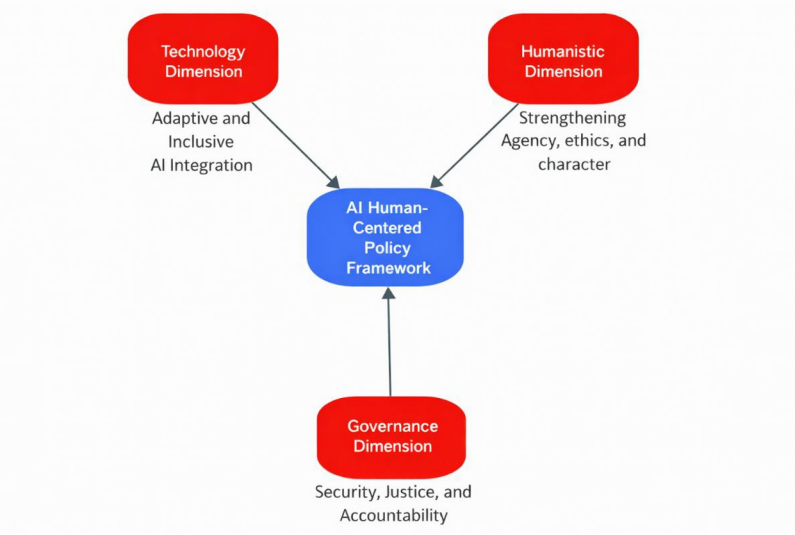
Strategic Adaptation Process

This model proposes four steps for learning adaptation:

1. Assessment → mapping the readiness of schools, teachers, and students for AI
2. Alignment → aligning curriculum, pedagogy, and digital competencies
3. Implementation → implementing adaptive, ethical, and human-centered learning
4. Evaluation & Iteration → improving practices based on data and feedback

This cycle makes policies adaptive and responsive to technological dynamics.

Figure 2. AI Human- Centered Policy Framework



4.3 Policy and Practical Implications

The results of this study have several important implications for educational management and policymaking:

a. Human-centered curriculum design: AI education should not only emphasize technical competencies but also integrate emotional intelligence, empathy, and ethical reasoning, crucial dimensions for sustainable education in the digital age[2].

b. Teacher empowerment: Continuous professional development should evolve from technical workshops to reflective learning communities that foster critical and ethical AI practices.

c. Data governance and security: Because AI applications rely on massive data sets, a robust framework for data protection and algorithmic transparency is crucial to prevent misuse and ensure fairness.

d. Collaborative governance: Policymaking should involve cross-sectoral collaboration between ministries, universities, the EdTech industry, and local governments to ensure equitable access and contextual adaptation.

If implemented effectively, this policy could position Indonesia as a regional leader in ethical and human-centered AI education, in line with the broader Indonesia Emas 2045 vision that places human dignity and innovation at the heart of national progress.

Research Limitations. While its document-based analysis is comprehensive, this study has several limitations. First, it relies heavily on publicly available documents, which may not fully capture the dynamics of internal decision-making or unpublished pilot evaluations. Second, because many AI-related policies are newly formulated or still in the implementation phase, their long-term impact on learning outcomes remains uncertain. Third, although this study draws on comparative international sources, more in-depth field validation, through interviews, policy evaluation metrics, or case studies, would strengthen the empirical foundation.

These limitations point to the need for future research that combines policy analysis with field-based observations to monitor how AI policies are interpreted and implemented at the school level.

Broader Implications. Ultimately, Indonesia's experience offers meaningful reflections on how developing countries can pursue technological sovereignty without sacrificing human values. The proposed Human-Centered AI Policy Framework encapsulates a balanced approach, where AI serves as a tool to expand human capacity, not replace it. This balance between efficiency and empathy is what distinguishes AI for Humanity from AI for automation.

As global education enters an era of rapid algorithmic influence, Indonesia's policy trajectory presents an emerging model of ethical innovation, one that reaffirms the essence of education as a deeply human endeavor.

5. CONCLUSIONS AND RECOMMENDATIONS

This research conceptually proposes the AI Human-Centered Policy Framework as a relevant policy adaptation model for human-centered learning in the era of AI disruption.Indonesia's Strategic Plan and related national AI strategy documents demonstrate a deliberate shift toward integrating AI and digital literacy into educational planning, while maintaining the rhetoric of humanist values (Pancasila Student Profile). To operationalize this goal, policymakers must: (1) develop a detailed roadmap for AI implementation in education; (2) expand equitable teacher professional development with a focus on pedagogy and ethics; (3) consolidate cross-ministerial governance and data protection instruments; and (4) prioritize monitoring and evaluation to guide iterative policy refinement [2], [7], [4].

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