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Harmony of needs a theory of human motivation and artificial intelligence shaping a new path for Indonesian Education

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ABSTRACT

Motivation is the main driver of learning success. Based on A Theory of Human Motivation proposed by Abraham Maslow, motivation grows gradually when basic human needs such as feeling safe, valued, and self-actualization are met. In the context of Indonesian education, which is currently transforming, harmony between fulfilling students' basic needs and technological innovation is an important key to creating a healthy and meaningful learning climate. This article examines how Maslow's principles can be applied in the school environment to increase motivation and build student resilience, namely, their ability to recover from difficulties and remain enthusiastic about learning. In the digital era, artificial intelligence (AI) is opening new paths in education by providing adaptive learning that is able to recognize individual learning needs personally and contextually. AI not only makes the learning process easier but also strengthens the human aspect of education: building empathy, self-confidence, and resilience in students. Although Maslow's theory has drawn criticism, his basic thinking remains relevant as a foundation for forming education that is more responsive, fair, and in favour of the needs of the whole person.

INTRODUCTION

Education in Indonesia continues to face multidimensional challenges, such as low student motivation to learn and significant inequality in access to education between regions (urban and rural). There is a gap in teacher quality and a curriculum that is not yet fully adaptive to the development of the times and the needs of Industry 4.0. Amidst this complexity, student motivation emerges as a central construct, reflecting the dynamic interplay between internal psychological factors such as self-concept and autonomy and external educational influences. Grounded in Self-Determination Theory, motivation is essential for fulfilling basic psychological needs, namely autonomy, competence, and relatedness, and shaping students' engagement, behaviour, and character within digital learning environments (Ntoumanis, 2023).Teori Abraham Maslow's theory (1970) which classifies human needs into five levels: physiological, security, social, esteem, and self-actualization, continues to offer a strong theoretical foundation for designing inclusive and adaptive educational strategies (Yuan et al., 2023;Huang, 2024;Lan et al., 2025). These recent studies reaffirm the relevance of Maslow's framework in contemporary contexts, including the modelling of student behaviour, the critical assessment of learner well-being, and developing need-aware educational technologies.

According to Slavin (2018), students' learning motivation is closely related to their perceptions of fulfilling personal and social needs in the school environment. In Indonesia, phenomena such as malnutrition in several areas, cases of bullying in schools and also the lack of opportunities for positive interactions often become obstacles for students to focus on learning. The need for a more humane and student-oriented approach is becoming increasingly urgent in the context of Indonesian education, which continues to develop. When students' basic needs, such as safety and social acceptance, are unmet, they may exhibit apathy, low self-confidence, and difficulty forming relationships. Evidence-based strategies that support social and emotional skills have been shown to reduce bullying and enhance students' sense of belonging and engageme (CASEL, 2023) Likewise, (OECD, 2021) emphasizes that a favourable school climate promotes student well-being and prevents isolation.

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Therefore, creating a supportive, inclusive and violence-free school environment is necessary to pave the way for fulfilling students' self-actualization needs (Amahoru & Ahyani, 2023). This is where the role of teachers, counsellors, and the entire academic community becomes very strategic in building a favourable learning climate.

On the other hand, technological developments such as artificial intelligence (AI) can be a catalyst for overcoming some of these educational challenges. AI can accelerate access to information, provide personalized learning, and help teachers understand students' learning needs and characteristics more deeply. Through this technology, teachers can design learning strategies that are responsive and adaptive to students' emotional, social, and academic needs. While ethical and humanistic approaches remain important, especially regarding data privacy, the digital divide, and human resource readiness (Widodo et al., 2024), AI can significantly improve academic activities if integrated thoughtfully. For example, AI-powered platforms can personalize learning paths based on students' strengths and weaknesses, automate assessment feedback, and support teachers in identifying at-risk students (Zawacki-Richter et al., 2019; Holmes et al., 2019). When aligned with Maslow's theory, AI tools can address students' basic and psychological needs by promoting inclusion, engagement, and self-actualization. Thus, when guided by ethical principles, AI has great potential to improve academic outcomes and comprehensive learner development in Indonesia. Education should not only focus on academic achievement but must also be able to touch the human side of students (Jauhari & Karyono, 2022). A more equitable, adaptive, and sustainable educational transformation can be realized through collaboration between policymakers, educators, and the community, leading Indonesian students to a more empowered and meaningful future.

As digital technology and Artificial Intelligence (AI) penetration in everyday life becomes more massive, the Indonesian education system faces new opportunities and challenges. AI can improve administrative efficiency and has transformative potential in personalizing learning experiences, providing adaptive feedback, and even helping to identify and meet student needs more proactively and measurably (Komarudin et al., 2024). Integrating Maslow's perspective with the potential of AI is expected to create a more responsive and effective education ecosystem in preparing the next generation (Tandiyono, 2024). This approach places student needs and motivations at the centre of a sustainable and relevant learning process in the digital era. Utilizing AI that aligns with Maslow's hierarchy of needs, the education system can be designed to meet students' basic needs for self-actualization systematically. For example, AI technology can be used to ensure the safety and comfort of the learning environment (basic needs and a sense of security), build healthy social interactions through collaborative platforms (needs for love and belonging) and encourage self-confidence through objective data-based reinforcement (rewards).

At its peak, AI acts as a catalyst in facilitating the exploration of students' unique interests and potential as part of self-actualization (Suartama, 2025). Furthermore, AI in education must consider the dimensions of ethics, values, and students' digital character formation. This is where educators' role becomes vital as learning facilitators and guardians of values and integrity in the digital ecosystem. AI is not a substitute for teachers but rather a tool that strengthens the humanistic role of teachers in guiding students to become learners who are not only intellectually intelligent but also emotionally and ethically mature (Septiani & Ramadani, 2025). This approach emphasizes the importance of synergy between technology and pedagogy in responding to the dynamics of 21st-century education.

Previous studies discussing learning motivation in Indonesia generally highlight various essential factors, such as students' socio-economic background, teacher competency quality, and school conditions and environments that support the learning process (Slavin, 2018; Amahoru & Ahyani, 2023). However, most of these studies have not yet fully integrated Maslow's basic needs theory with the use of artificial intelligence (AI) technology in Indonesia's education context. Especially in developing comprehensive and holistic learning motivation, the application of this concept is still minimal and has not been studied in depth.

This research also presents a significant novelty by systematically integrating Maslow's hierarchy of needs theory with artificial intelligence (AI) technology as a strategic tool with great potential in supporting personalized and adaptive education creation. The learning model designed

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emphasizes the synergy between human and digital aspects and prioritizes ethical principles in using AI in education. This approach is formulated as an appropriate response to the challenges and opportunities that arise in the 21st-century education era, which demands the development of an inclusive, sustainable learning system that can effectively answer the needs of diverse learners.

This study aims to develop an understanding of student learning motivation through a combination of Maslow's theory of needs and the use of AI. Specifically, the aims are:

1) Identifying the influence of students' basic needs based on Maslow's hierarchy on learning motivation.
2) Exploring the role of AI in supporting students' emotional, social and academic needs.
3) Designing an adaptive learning model that integrates a humanistic approach and digital technology to increase the effectiveness of learning motivation.
4) Examining ethical and value aspects in the application of AI in education to ensure sustainable and dignified education.

RESEARCH METHODS

This study employs a descriptive qualitative approach through a structured literature review to explore the relevance of Maslow's hierarchy of needs in Indonesian education, particularly concerning student needs and the emerging role of artificial intelligence (AI). The review synthesizes a wide range of academic and policy-oriented literature, including classical works such as Maslow's original theory, national education policies, and recent scholarly articles addressing student well-being and the integration of AI in education (Creswell, 2018; Snyder, 2019).

The primary research instrument is a document review protocol guided by clearly defined inclusion and exclusion criteria. The analysis is framed conceptually by Maslow's hierarchy of needs theory (Xiao & Watson, 2019), which provides a lens for interpreting the evolving priorities of learners in a technologically advancing educational environment.

Using targeted keywords, relevant literature was collected systematically from scholarly databases, academic books, and credible web-based sources. The scope of the review was limited to publications within the last ten years to ensure currency and relevance.

Data were analyzed using thematic analysis techniques, including coding, reduction, and categorization. Key findings were organized around Maslow's core categories of physiological, safety, belongingness, esteem, and self-actualization and then contextualized within current educational technology trends and innovation policies in Indonesia.

RESULTS AND DISCUSSION

Implementation of Maslow's Theory in Indonesian Schools

Applying Maslow's theory in Indonesian education requires a deep understanding of the diverse social, cultural, and economic contexts (Fitriyati & Maemonah, 2022). As a country with wide ethnic, religious, and geographical diversity, the needs of students in each region can differ significantly. For example, students in urban areas may already be at the stage of esteem or self-actualization needs. In contrast, students in remote areas still struggle to meet basic needs such as safety, access to nutritious food, or adequate educational infrastructure. Therefore, a one-size-fits-all approach to implementing Maslow's theory is inappropriate in Indonesian education.

Teachers and policymakers need to adopt adaptive and contextual strategies. Identifying students' needs locally is essential so educational interventions are truly relevant and impactful. For example, providing free lunches or basic health facilities in schools may improve the quality of learning in disadvantaged areas more effectively than implementing a complex project-based curriculum. Conversely, in schools with a good digital learning ecosystem, AI-based interventions and soft skills

development can be the focus to accommodate students' self-actualization needs. This flexibility is the key to implementing Maslow's approach fairly and effectively throughout Indonesia (Rudiarta, 2022).

Furthermore, it is essential to realize that meeting students' needs cannot be done partially or sectorally. Cross-sector collaboration between government, schools, families, and communities is needed to create a comprehensive learning environment. Educational policies integrated with social, health, and economic policies will strengthen the position of schools as centres of child growth and development (Sugianti et al., 2020). Thus, Maslow's theory is a conceptual framework and an operational basis for formulating educational policies and practices that truly support students' needs according to their local context.

Figure 1. Interview with teacher

Table 1. Interview and Analysis of Maslow's Basic Needs in Elementary Schools

Needs Aspects	Teacher	Interview	Maslow's Analysis
Physiology	Homeroom Teacher	“Children often go to school without breakfast, only drinking water.”	Basic needs are not met, affecting stamina and concentration in learning.
Security	Homeroom teacher	“Bullying still often occurs during breaks; our supervision is limited.”	The sense of security is disturbed, impacting the comfort of learning and student engagement.
Social	Homeroom teacher	"Some children tend to be alone because they don't have close friends, especially if they have just changed schools."	The need for social acceptance is unmet, triggering feelings of loneliness and isolation.
Esteem	ICT Teacher	"There are students who feel inferior because they cannot follow ICT lessons as quickly as their friends."	The need for self-esteem and recognition is disturbed, which can reduce motivation.
Self-Actualization	ICT Teacher	“Our students are used to using laptops and fast internet.”	Self-potential is further facilitated through access to technology, supporting creativity and innovation.

1) Physiological Needs

Basic needs such as food, drink, rest and a comfortable physical environment vary widely in Indonesia. In big cities, school facilities are more complete, while in remote areas, many students have difficulty meeting these needs. This inequality affects students' concentration and participation in learning.

This inequality is a challenge in creating fair and inclusive education. Students whose basic needs have not been met tend to have difficulty learning optimally. Therefore, the role of the

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government, schools, and the community is vital in providing facilities and services that support students' basic needs so that the learning process runs smoothly and effectively.

a) Physical school facilities that need to ensure the availability of a healthy canteen with nutritious and affordable food (for example, the "Healthy School" program), clean and adequate toilets and classrooms that have good ventilation and proper lighting. Comfortable physical conditions greatly affect students' learning readiness (Santrock, 2011).

b) A proportional schedule requires lesson scheduling that considers sufficient rest and meal times to prevent students' physical fatigue (Welong et al., 2020).

c) Digital health in the digital era, physiological needs include eye health and body posture due to gadget use. Schools can educate students about the duration of healthy screen usage and provide relaxation space (Rukmala, 2022).

d) Nutrition support is needed to identify students with nutritional problems and collaborate with parents or government programs (e.g., providing additional school meals) to ensure adequate nutritional intake.

2) Safety Needs

The need for safety includes physical safety, such as being free from physical violence, bullying, and the threat of an unconducive school environment. In several schools, verbal and physical violence are still serious problems that can disrupt students' comfort in learning. Students' focus and learning motivation can decrease drastically when they feel afraid or stressed. Therefore, schools must build a positive discipline culture and a strong child protection system to create a safe space for all students.

In addition, psychological safety is also an essential aspect of safety, namely the creation of a stable, predictive environment that supports students' mental health. A learning environment that is stressful, uncertain, or full of unhealthy competition can trigger anxiety and stress. Conversely, a friendly, inclusive classroom atmosphere that respects diversity will help students feel accepted and appreciated.

By fulfilling the physical and psychological aspects of safety needs, students will be better prepared to continue the learning process to the following stages according to Maslow's hierarchy of needs framework.

a) Bullying still often occurs in schools. Therefore, a clear and consistent anti-bullying policy is needed, coupled with technology-based counselling guidance, routine socialization, and a safe place to complain so that students feel comfortable and protected. Widiatmoko et al. (2024), research shows that bullying still occurs and needs serious handling.

b) Counseling services where schools provide counselling services that are easily accessible and friendly to students to help overcome emotional problems or trauma (Hikmah et al., 2023).

c) Digital security to educate students about cybersecurity and risks in cyberspace and block harmful content on school Wi-Fi networks (Shafira et al., 2025).

d) Environmental predictability to create clear routines and expectations so students feel safe and know what is expected. A safe environment with clear routines and expectations helps students feel comfortable, manage stress, and improve social relationships and overall mental health at school (Astuti, 2024).

3) Social Needs (Affiliation)

Regarding the need for a sense of belonging, students need healthy social relationships, such as supportive friendships and positive interactions with peers and teachers. When students feel they have strong social ties, they tend to be more motivated, confident, and active in learning. Good friendships in the school environment also help students develop empathy, cooperation, and interpersonal communication skills that are important for their future lives.

In addition, being accepted by the school group or community is an integral part of this need. Students who feel left out or unrecognized can experience a decreased enthusiasm for learning and even withdraw from the social environment. Therefore, schools must create an inclusive culture that values

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everyone regardless of background. Extracurricular activities, group projects, and collaborative learning can strengthen students' sense of togetherness and involvement in a healthy learning community.

a) Cooperative learning that encourages cooperative and collaborative learning methods (e.g., group discussions and joint projects) that provide positive interaction facilities between students. This collaborative learning will support a sense of belonging (Johnson, D. W., & Johnson, 1999).

b) Extracurricular activities include increasing and supporting various extracurricular activities (sports, arts, science clubs, scouts), where students develop their interests and talents and build social networks.

c) Inclusive culture to encourage an inclusive school culture, respect ethnic, religious, racial and inter-group diversity (SARA) and prevent discrimination. In this case, the principles of cooperation and togetherness can be internalized (Nadhiroh & Ahmadi, 2024). (Nadhiroh & Ahmadi, 2024).

d) Online collaboration platform by utilizing digital platforms to facilitate healthy social interactions and build online learning communities (Aprian et al., 2024).

4) Esteem Needs

Involving the need for recognition and appreciation, students need positive reinforcement that builds self-esteem and self-confidence. When their efforts and achievements are recognized, whether by teachers, peers, or parents, students will feel appreciated and motivated to continue to develop. This recognition does not always have to be in the form of high academic achievement. Still, it can also be appreciation for attitude, effort, creativity, or contribution to school activities. A learning environment that provides space for each student to show their excellence will strengthen a positive sense of self-worth.

In addition, a sense of competence is essential in building student identity and motivation to learn. When students feel able to complete tasks or overcome challenges, they will have a better perception of their abilities. Teachers play a significant role in fostering this sense of competence by providing constructive feedback. Then, challenges appropriate to the student's developmental level and consistent support. With the fulfilment of the need for appreciation and competence, students will be better prepared to move on to self-actualization, where they can express their unique potential and life goals optimally.

a) Diverse appreciation also provides appreciation not only limited to academic achievement but also non-academic, such as artistic talent, leadership, sportsmanship and other positive contributions. Recognition contributes to identity and self-confidence (Ormrod, 2016).

b) Constructive feedback by providing constructive and personalized feedback that focuses on students' strengths and areas of improvement, not just on mistakes.

c) Opportunities to contribute to efforts to provide students with opportunities to lead projects, become peer tutors or participate in decision-making in the classroom or school (Kuslulat, 2023).

d) Self-development to encourage students to set personal goals and celebrate even small achievements.

5) Self-Actualization Needs

The peak of Maslow's hierarchy (1943) is self-actualization, when an individual tries to achieve their best potential. At this stage, a person focuses on fulfilling basic needs and begins to pursue the meaning of life, self-development, and broader contributions to their environment. In education, self-actualization reflects the ability of students to recognize and develop their unique potential, whether in academics, arts, leadership, or other aspects.

Self-actualization also involves thinking creatively, solving problems, and responding to challenges independently and reflectively. Students who reach this stage usually show a high level of

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curiosity, a willingness to continue learning, and a passion for innovation that has a positive impact. Therefore, the learning environment must provide a broad space for exploration, meaningful intellectual challenges, and healthy freedom of expression so students can grow optimally according to their interests and talents.

Personal growth as part of self-actualization is also significant to note. This includes self-awareness, character development and understanding of life goals. Schools can play a role in facilitating this growth through a reflective learning approach, fostering values and ongoing emotional support. Thus, education does not stop at academic achievement but becomes a means to form whole, resilient individuals who can make meaningful contributions to society.

a) Project-based learning by providing space for developing creativity, critical thinking and participation in innovative projects relevant to real-world problems. An environment that supports creativity helps achieve self-actualization (Azzahra et al., 2019).

b) Differentiated curriculum to implement a more flexible and differentiated curriculum to accommodate diverse learning styles and interests, allowing students to explore their passions (Kristiani et al., 2021).

c) Digital and AI literacy by integrating digital literacy, programming and basic AI concepts into the curriculum, equipping students with 21st-century skills relevant to the future.

d) Mentorship by providing mentorship programs or guidance from teachers or experts in specific fields for students with special interests.

The following is a table that shows the relationship between the five levels of needs in Maslow's Hierarchy Theory and its implementation in the school environment:

Table 2. Maslow's Hierarchy of Needs Table in the School Context

No	Level of Need	General Description	General Description
1	Physiological Needs	Basic survival needs	Eating in the canteen, adequate rest, comfortable classrooms
2	Safety	Feeling safe physically, emotionally, and socially	Bullying-free schools, clear rules, protection from violence
3	Love/Belonging	Feeling accepted, loved, and part of a group	Positive relationships with friends and teachers, a friendly and inclusive classroom climate
4	Esteem	Recognition, achievement, and self-confidence	Praise for effort, recognition of achievement, support for self-confidence
5	Self-Actualization	Developing potential and becoming the best version of yourself	Extracurricular activities, creative projects, freedom to choose how to learn

This table illustrates Maslow's five levels of needs and how each can be met in the context of the school environment. Meeting these needs is essential to supporting students' motivation to learn, emotional well-being, and optimal development.

AI and Maslow's Hierarchy in Education

AI technology offers great potential to support the fulfilment of Maslow's hierarchy of needs more effectively and personally in Indonesian education (Empati et al., 2024). AI can help identify individual student needs, from basic to self-actualization, through real-time student learning and behaviour data analysis. With its adaptive capabilities, AI enables learning tailored to students' interests,

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abilities, and learning styles. This supports creating a more inclusive, responsive, and learner-centred learning environment so students can develop according to their unique potential.

Students' motivation to learn will grow when schools gradually fulfil their basic needs, from feeling safe, accepted, and appreciated to being allowed to develop their full potential.

Figure 2. Maslow's hierarchy of needs

1) Meeting Physiological Needs with AI
    a) Personalized study schedules with AI can analyze student learning patterns and suggest optimal schedules to prevent burnout by optimizing retention to ensure adequate rest time.
    b) Digital well-being monitoring in AI-based applications can monitor screen time, provide break reminders, and suggest eye exercises or posture.
2) Meeting Security Needs with AI
    a) Early detection of risky behaviour where AI can analyze students' digital communication patterns (with privacy maintained) to detect indicators of cyberbullying or other potentially dangerous behaviours that allow for quick intervention from counsellors.
    b) Physical Security of Schools through AI-based surveillance systems can improve the physical security of schools by detecting anomalies or unauthorized access.
    c) Adaptive learning resources where AI can provide learning materials tailored to students' level of understanding, which can reduce frustration and anxiety due to learning difficulties.
3) Meeting Social Needs with AI
    a) Forming optimal study groups such as AI algorithms can suggest forming cooperative study groups based on student's learning styles, strengths and weaknesses, ensuring that each member feels like they are contributing.
    b) AI-powered smart collaboration platforms can facilitate communication and collaboration in online group projects, translate languages and suggest collaborators based on interests.
4) Meeting Esteem Needs with AI

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a) Adaptive personal feedback with AI tutors can provide real-time, highly personalized feedback on student assignments, highlighting specific progress and areas for improvement, thereby enhancing a sense of competence and self-esteem.

b) Automated achievement recognition systems where AI can identify student accomplishments (academic and non-academic, such as active participation in forums) and automatically provide recognition or digital badges by motivating students to continue the process.

c) AI-powered digital portfolios that can help students build digital portfolios highlighting their strengths and achievements, providing a sense of pride and recognition for their learning journey.

5) Meeting Self-Actualization Needs with AI

a) Personalized Learning Paths AI tools can analyze students' interests, strengths and career goals, then provide highly personalized learning path recommendations, additional resources and innovative projects that allow students to explore their unique potential.

b) AI-based creativity tools to empower students with generative AI tools (for art, music, and coding) that can expand their creativity and innovation boundaries.

c) Virtual simulations and experiments, meaning AI, also allow students to conduct complex simulations or virtual experiments in science or engineering without physical limitations to encourage critical thinking and problem-solving.

d) 21st-century skills development AI can teach and train computational thinking skills, complex problem solving, and data literacy, which are essential for self-actualization in the future.

Contextual Challenges in Indonesia

Although Maslow's theory and AI integration offer great potential to improve the quality of education, their implementation in Indonesia still faces challenges that are not simple. Differences in infrastructure, educators' readiness and understanding of technology are the main obstacles to its implementation evenly across regions.

The application of AI in supporting information literacy has shown positive impacts, such as more adaptive and efficient learning. However, challenges such as data privacy issues, ethics in the use of technology, and disparities in access and resources between schools in cities and remote areas still need serious attention, including:

1) Flexibility of Needs and Multicultural Context

Not all students strictly follow Maslow's hierarchical order, especially amidst Indonesia's diverse cultures and socio-economic conditions (Hopper, 2020). Some students may prioritize social or spiritual needs over esteem needs that depend on the values of their community. A rigid approach to Maslow's hierarchy can ignore these nuances.

2) Cultural and Socio-Economic Variations

Differences in cultural, geographic, and socio-economic backgrounds in Indonesia greatly influence priorities and the manifestation of needs.

a) The digital divide, where access to technology and the internet is not evenly distributed throughout Indonesia, is a significant obstacle to the implementation of AI (Zam Zam Hariro et al., 2024). This can affect and exacerbate the educational gap if not addressed.

b) Communal values: From the perspective of several cultures in Indonesia, communal values and togetherness (cooperation and family) may be more emphasized than individualism, which can affect the way social needs and appreciation are manifested. Maslow's theory is considered too idealistic in a multicultural context (Hofstede, 2011).

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c) Teacher capacity, where teachers' readiness to adopt AI technology and understand the diversity of student needs is also a challenge.

3) Limitations of the Concept of Self-Actualization in a Local Context

Measurement and evaluation of self-actualization need to be developed contextually and with multiple methods. The concept of "self-actualization" may need to be reinterpreted to align with local wisdom values and national education philosophy, such as the Pancasila Student Profile, which emphasizes global diversity, independence, cooperation, critical thinking, creativity and noble character (Kemendikbudristek, 2022).

Practical Implications

Based on the analysis above, there are several practical implications for the development of education in Indonesia:

1) Curriculum Development

The curriculum must be designed to be more flexible, contextual, and oriented towards the holistic development of students, in line with the spirit of the Independent Curriculum and the Pancasila Student Profile (Kemendikbudristek, 2022). The importance of integrating digital literacy and AI as an integral part of the curriculum, not only as a separate subject but as a tool for solving problems and being creative in various fields.

2) School Policy

Focus on the overall well-being of students (whole school approach), which includes physical, mental, emotional and social dimensions (Angelica, 2025). Investment in digital infrastructure and equitable internet access in efforts to develop data privacy policies and ethics of AI use in the school environment. Encourage data-driven decision-making by utilizing AI to analyze student data (e.g., attendance, participation, performance) to identify unmet needs and design appropriate interventions.

3) Teaching Strategy

Encourage differentiation of teaching based on student’s needs, learning styles, and motivation level (Brookfield, 2015), with AI support to provide personalized materials and activities. Teachers must continue developing competencies in utilizing AI as a teaching assistant to provide faster feedback, personalize tasks, and reduce administrative burdens. Focus on developing 21st-century skills such as critical thinking, collaboration, communication, and creativity that can be enhanced through AI-integrated projects.

CONCLUSION

Implementing Maslow's hierarchy of needs theory in education shows that gradually fulfilling students' basic needs is crucial to creating a conducive and inclusive learning environment. In the era of digital transformation and the use of AI technology, this approach increases motivation and learning engagement and supports students' overall physical, emotional and psychological health. AI acts as an innovative tool for personalizing learning and ethical and contextual early intervention to strengthen the justice and quality of education. This approach is in line with the Golden Generation of Indonesia with a global character

Further research can empirically explore the effectiveness of AI integration in applying Maslow's theory at various levels of education, especially in Indonesia's cultural and social diversity. In addition, it is also necessary to develop an educational model that is more adaptive and responsive to changes in student needs in the digital era, including aspects of data security and the ethics of using AI in education

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