



Developing a leadership model for sustaining human engagement and learning motivation in the context of effective AI integration in Vietnamese schools

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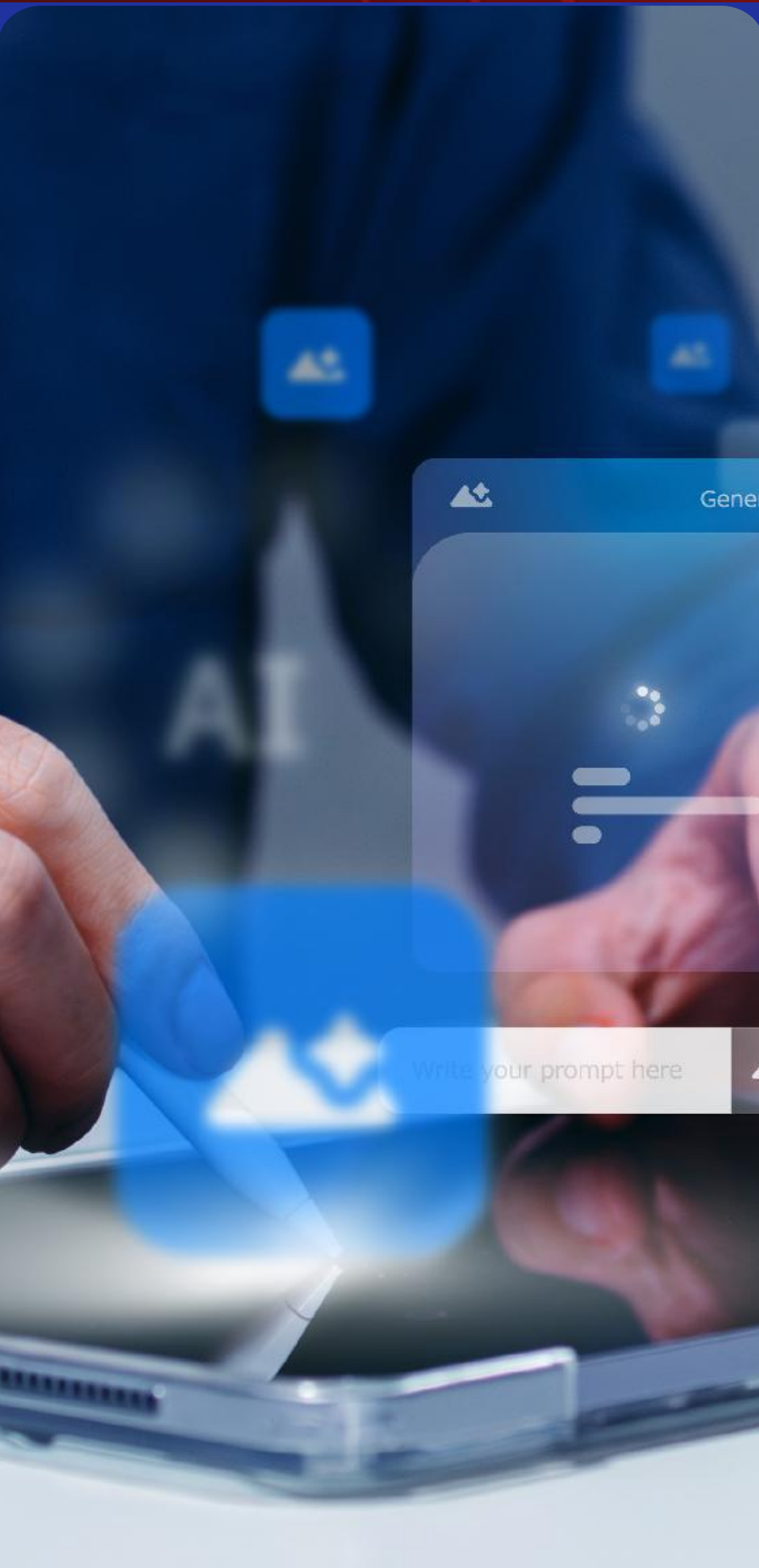
1. INTRODUCTION

Artificial Intelligence, particularly **generative artificial intelligence (GenAI)**, is transforming general education in Vietnam.

AI is increasingly used for:

- Personalized learning
- Lesson design and learning materials
- Feedback and assessment
- Learning data analysis
- Early identification of learning difficulties
- Administrative automation
- Data-driven decision-making

AI is no longer used merely as a technical support tool.





1. INTRODUCTION

Without appropriate leadership, AI may be adopted superficially, with greater attention given to administrative efficiency than to meaningful improvements in teaching and learning.

The challenge is not only how schools use AI, but how schools lead and govern AI use.



1. INTRODUCTION

Current research on AI and educational leadership remains fragmented.

There is a need for an integrated leadership model connecting:

Leadership Approaches



Leadership Mechanisms



AI Integration Domains



Educational Outcomes



1. INTRODUCTION

This study focuses on three main tasks:

01

Analyze the role of AI in enhancing educational effectiveness across areas

02

Identify the opportunities and challenges that AI integration presents for school leadership;

03

Propose a leadership model for the effective integration of AI in general education by synthesizing appropriate leadership approaches



2. RESEARC H METHOD

The study employs a combination of **three methods**:

- Focused Literature Review
- Synthesizing findings by theme
- Developing a conceptual model.

The literature was selected purposively, drawing on **full-text studies directly** related to AI and educational leadership published between 2024 and 2026.



2. RESEARC H METHOD

Analysis process:

- Reading and extracting information.
- Conceptualizing the content.
- Comparing studies.
- Synthesizing to build a model.

The content is coded into five groups:

- AI application domains
- Opportunities
- Challenges
- Leadership approaches
- Ethics and governance

3. RESEARCH RESULTS

3.1. The role of AI in promoting educational effectiveness

- Early identification & intervention
- Personalized learning
- Administrative efficiency
- Teacher professional learning



School leaders need to **convert technological possibilities into organizational capacity** by establishing procedures for data use, feedback mechanisms, professional learning opportunities, ethical guidelines, and meaningful teacher participation.

3.2. Opportunities created by AI for leadership and educational effectiveness in General Education

Opportunity	Coding	Manifestation in general education	Required leadership response
Data informed decision making	Leaders use data to identify students at risk.	Analysis of achievement, attendance, learning behaviors, and participation may help identify students requiring additional support.	Establish verified procedures for data analysis, combine AI based evidence with teacher judgment, and protect student data.
Personalized learning	AI supports individualized learning.	Students may receive tasks, feedback, resources, and learning pathways more closely aligned with their abilities and needs.	Align AI with instructional goals, support teachers in designing learning activities, and monitor the quality of AI generated content.
Accessibility	AI improves access for students with diverse needs.	AI may support students with disabilities, language difficulties, disadvantaged backgrounds, or additional learning needs.	Ensure equitable access to devices, platforms, and resources, while applying inclusive design principles.



3.2. Opportunities created by AI for leadership and educational effectiveness in General Education

Opportunity	Coding	Manifestation in general education	Required leadership response
Administrative relief	AI reduces administrative workload for teachers and leaders.	AI may assist with document drafting, report synthesis, scheduling, basic information management, and routine communication.	Clearly distinguish tasks that may be automated from those requiring human interaction, and avoid using AI primarily as a mechanism of control.
Teacher professional learning	AI supports professional development and learning networks.	AI may assist with lesson design, professional feedback, resource recommendations, and analysis of professional learning needs.	Provide AI literacy development, establish communities of practice, promote teacher leadership, and encourage experience sharing.
Proactive inclusion	Leadership anticipates needs rather than responding only after problems emerge.	Schools may identify barriers to learning, access difficulties, and risks of students being left behind at an earlier stage.	Combine learning analytics with social justice oriented leadership, while ensuring that AI is not used to label or exclude students.



3.3. Challenges of integrating AI into general education

Challenge	Coding	Consequence absent appropriate leadership	Model's response direction
Insufficient training	Leaders/teachers lack AI competence.	AI use stays superficial and unverified; people grow apprehensive or resistant.	Build AI literacy, ongoing training, mentoring, communities of practice.
Limited infrastructure	Lack of devices, connectivity, platforms.	Widens the gap between well-resourced and disadvantaged schools; AI becomes hard to sustain.	Assess conditions on the ground, prioritize infrastructure investment, ensure equitable access.
Policy ambiguity	No clear AI policy.	Schools struggle with AI use, lacking rules on data, copyright, assessment, accountability.	Develop school-level AI rules aligned with system-level policy, with clear guidance for teachers and students.
Data bias	Algorithmic or data bias.	AI can reproduce existing inequality, label students unfairly, or generate skewed recommendations.	Audit data, keep a human in the loop, use transparent criteria, assess equity impact.



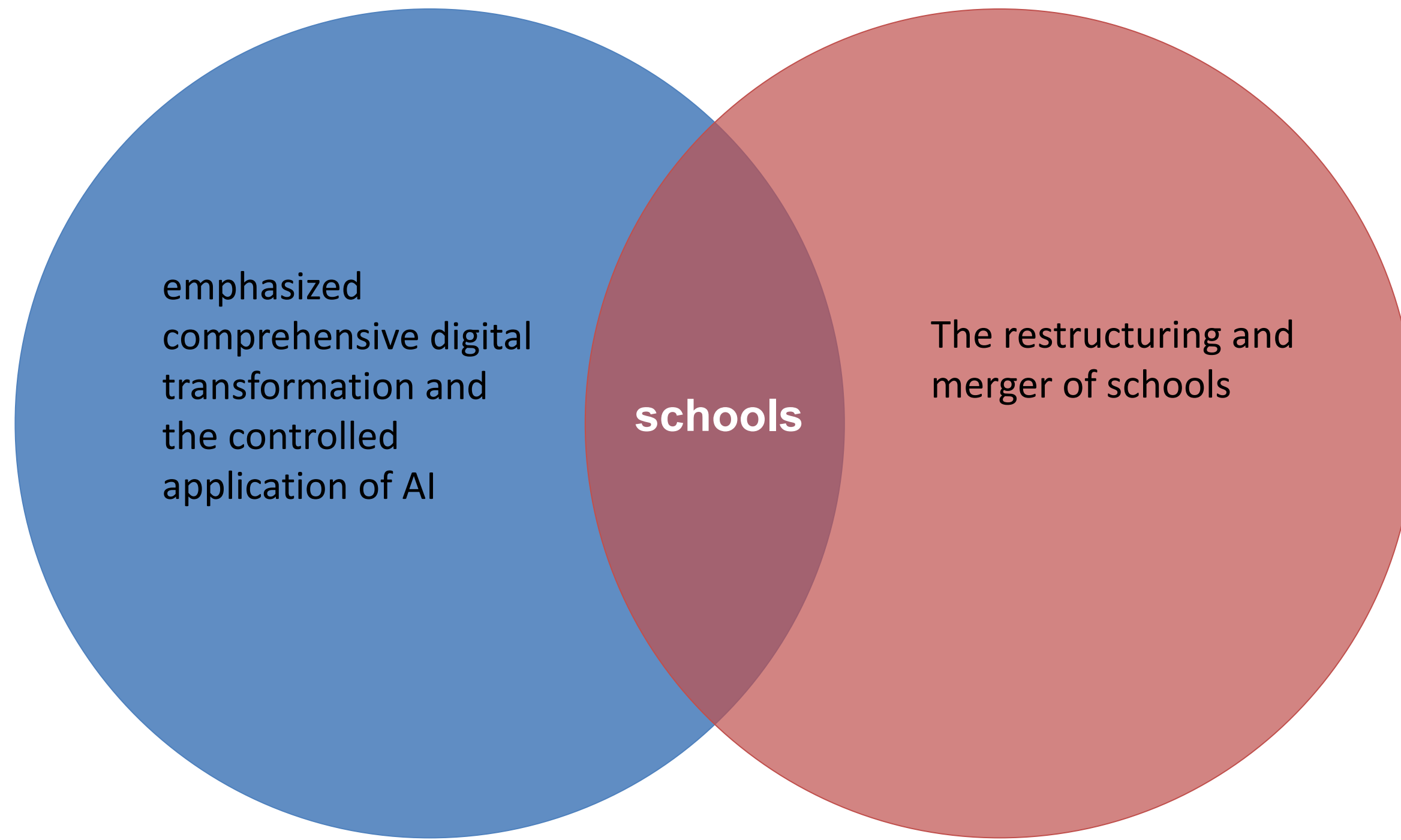
3.3. Challenges of integrating AI into general education

Challenge	Coding	Consequence absent appropriate leadership	Model's response direction
Digital divide	Digital gap between schools or student groups.	Disadvantaged students struggle to access AI, deepening learning inequality.	Social-justice-oriented leadership, device support, open resources, non-technology alternatives.
Teacher resistance	Fear of being replaced, lack of trust.	Teachers disengage; AI rollout feels imposed and doesn't stick.	Distributed leadership, real teacher empowerment, and honest communication that AI supports rather than replaces them.
Ethical uncertainty	Not enough capacity for ethica decision-making.	Risks to privacy, surveillance, transparency, accountability, and community trust.	Ethical AI leadership, PEAIL, data governance, auditing, explainability, protecting student data.
Cognitive offloading	Too much leadership thinking handed to AI.	Professional judgment erodes, communication feels less authentic, over-reliance on algorithmic suggestions sets in.	Draw a clear line between tasks AI can support and tasks humans must keep; build in reflection and multi-source verification.





3.4. *The context of effective AI integration in Vietnamese schools*



Lack of:

1. Resources
2. Leadership
3. Motivation
4. Effective coordination

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3.5. A Leadership model for effective AI integration in general education

Leadership style	Role in the model	Corresponding leadership mechanism	Sources
Transformational leadership	Shared vision, ethical practice, motivation, social-justice goals.	Build an AI vision, inspire innovation, keep AI pointed at educational improvement.	Tsirantonaki (2026); Ghamrawi et al. (2025); Raptis & Psyras (2026)
Distributed leadership	Collaborative decision-making, teacher/community participation.	Set up school AI teams or councils; bring teachers, subject groups, parents, and students into decision-making.	Tsirantonaki (2026); Virella & Lamb (2026); Mifsud et al. (2026); Lipsou et al. (2026)
Adaptive leadership	Fits a fast-changing AI landscape that calls for experimentation, flexibility, and reflection.	Pilot initiatives, gather feedback, adjust policy, scale up under control.	Tsirantonaki (2026); Virella & Lamb (2026); Renta-Davids et al. (2025)



3.5. A Leadership model for effective AI integration in general education

Leadership style	Role in the model	Corresponding leadership mechanism	Sources
Social-justice-oriented leadership	Keeps AI pointed at equity, access, and participation.	Assess equity impact, prioritize disadvantaged groups, ensure access and inclusive design.	Tsirantonaki (2026); Nantaburom & Wetcho (2026); Sider & Morvan (2025)
Ethical leadership	Protects privacy, transparency, equity, and accountability.	Data governance, bias checks, human-in-the-loop, school AI-use rules.	Ho (2026); Lipsou et al. (2026); Renta-Davids et al. (2025)
Instructional leadership	Ties AI to curriculum, teaching, assessment, and professional development.	Point AI toward improving instruction, teacher training, learning analysis, and pedagogical feedback.	Kumar & Sarkar (2026); Ghamrawi et al. (2025); Raptis & Psyrras (2026)

3.5. A Leadership model for effective AI integration in general education

Leadership style	Role in the model	Corresponding leadership mechanism	Sources
Human-centered leadership	AI supports people rather than replacing their professional judgment.	Protect teacher agency, trust, educational relationships, professional well-being, and humane communication.	Rasheed (2026); Renta-Davids et al. (2025); Ghamrawi et al. (2026); Ho (2026)
Transactional/technocratic leadership	Seen as limited — prone to reducing AI to an administrative tool rather than a transformative, inclusive one.	Needs checking by ethics, equity, and participatory mechanisms; shouldn't be the dominant logic in AI integration.	Tsirantonaki (2026); Kumar & Sarkar (2026); Lipsou et al. (2026)



3.5. A Leadership model for effective AI integration in general education

Model layer	Content	Function in effective AI integration
Layer 1. Leadership style	Transformational, distributed, adaptive, ethical, instructional, human-centered, and social-justice-oriented leadership.	Provides the value foundation and decision-making approach for the whole AI-integration process.
Layer 2. Leadership mechanism	Building an AI vision; developing AI literacy; selecting and vetting tools; delegating authority; data governance; professional development; communities of practice; ethical review.	Turns leadership style into concrete action inside the school.
Layer 3. AI-integration domain	Teaching, assessment, feedback, administrative management, strategic decision-making, inclusive education, teacher professional development.	Determines where AI gets used, for what purpose, to what degree, and within what limits.

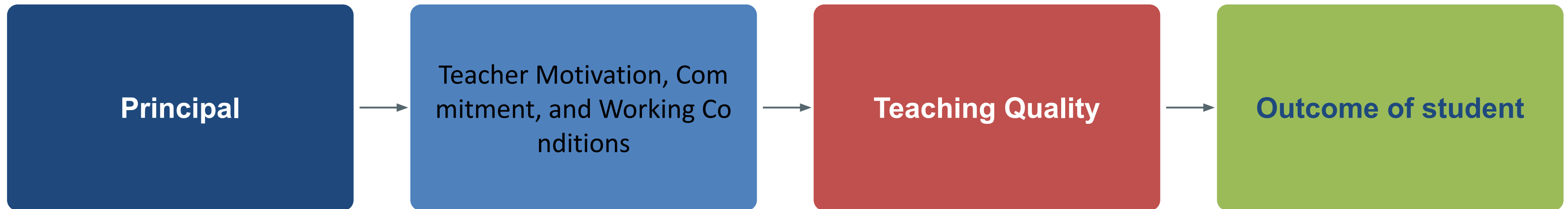


3.5. A Leadership model for effective AI integration in general education

Model layer	Content	Function in effective AI integration
Layer 4. Outcomes of effective AI integration	Better teaching, personalization, wider access, data-driven decisions, reasonable workload reduction, stronger teacher agency, more trust, less ethical risk.	Judges AI's effectiveness by educational value, not by how much technology gets used.
Overarching principles	AI ethics, equity, transparency, accountability, human-in-the-loop, protection of student data, preserving teachers' professional judgment.	Acts as the filter every AI activity in the school has to pass through.



Indirect Leadership Influence: Through Teacher Motivation, Commitment, and Working Conditions



A real but moderate effect

However, it is a key factor in most school improvement efforts.

Indirect influence

Through teacher motivation, commitment, and working conditions

Shared Leadership

Leadership is distributed among multiple people with greater influence rather than concentrated in a single individual

Teachers are ready to change when they believe in five things— and leadership must address each one

Belief	The question teachers are asking	Leadership's response
Need for change	<i>"Why do we need to change?"</i>	→ Digital data, quality, and teaching conditions
Fit	<i>"Is this approach right?"</i>	→ Rationale for the chosen approach and experiences from elsewhere
Confidence in ability	<i>"Can I do this?"</i>	→ Training, time, and support
Leadership support	<i>"Is leadership truly committed?"</i>	→ The principal is present, leads by example, and keeps commitments
Benefits	<i>"What's in it for me?"</i>	→ Professional opportunities, better classrooms, and stability

Source: Armenakis & Harris (2009), *Journal of Change Management*.

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CONCLUSION

AI integration in general education creates significant opportunities for personalized learning, teacher support, administrative workload reduction, and improved data informed decision making.

AI, however, does not in itself produce educational innovation.



CONCLUSION

For Vietnamese general education, the model points to several priorities, including strengthening AI related leadership capacity among educational managers, developing teachers' AI literacy and AI ethics literacy, establishing school level regulations for AI use, and creating mechanisms for secure data governance.

Three Priorities: Supporting Middle Leaders, Taking a Steady, Data-Driven Approach, and Preserving Tradition While Building for the Future

1

Investing in Middle Leaders

Subject-group leaders and vice principals serve as a bridge between overall strategic directions and classroom practice. Reduce their administrative paperwork and invest in strengthening their capacity and effectiveness.

2

Data Integrity Over Speed

Always prioritize genuine quality over superficial innovation

3

Preserving Tradition to Build a New Culture

Honoring Tradition, Building Shared Values, and Harmonizing Practices: The Foundation for Sustainable Quality.





THANK YOU