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Artificial Intelligence and Critical Thinking in Vietnamese Higher Education: A Socio-Legal Systems Perspective

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Abstract: ***This study examines how the widespread adoption of Generative Artificial Intelligence (GenAI) is reshaping the development of critical thinking among university students in Vietnam within the context of the country's post-2020 digital transformation agenda. Using a qualitative research design, the study conducts a documentary analysis of key Vietnamese legal and policy documents on education and technology issued between 2020 and 2026. To move beyond linear explanations, the research applies a Systems Thinking approach to analyze how legal mandates, cultural norms, and student cognitive behaviors interact through reinforcing feedback loops. The findings reveal a pronounced gap between policy intent and educational practice. While Vietnam's legal framework strongly promotes competency-based, autonomous learning, its implementation is constrained by deeply embedded cultural factors, particularly achievement-oriented evaluation practices (bệnh thành tích) and face-saving norms. These conditions encourage students to rely on AI as a substitute for independent reasoning rather than as a support for learning, contributing to a gradual weakening of critical thinking capacity, conceptualized in this study as "cognitive atrophy." Based on this systemic diagnosis, the paper proposes a "Human-in-the-Loop Liberal Arts" model that repositions AI from an authoritative answer provider to a tool for critique, debate, and verification. By leveraging Vietnam's tradition of communal learning, the model aims to align digital transformation with the cultivation of critical, reflective, and autonomous thinkers. The study offers practical implications for assessment design, pedagogy, and policy governance in higher education systems facing similar socio-cultural conditions.***

Keywords: Critical Thinking, Generative AI, Vietnamese Higher Education, Systems Thinking, Digital Transformation

1. Introduction

1.1 The Context of 2026: The AI Paradox in Vietnam's Digital Era

By 2026, the landscape of higher education in Vietnam has undergone a seismic shift, driven by the ubiquity of Generative Artificial Intelligence (GenAI) and Large Language Models (LLMs). This transformation is not accidental but is deeply rooted in the national strategic vision. The Vietnamese government, through Decision No. 749/QD-TTg approving the "National Digital Transformation Program to 2025, orientation to 2030," has aggressively pushed for a digital economy, aiming for it to account for 30% of GDP by 2030. Consequently, digital literacy has evolved from an optional skill to a mandatory prerequisite for citizenship and employment.

However, this rapid technological integration has birthed a pedagogical paradox, which this research terms "The Illusion of Competence." In lecture halls across Ho Chi Minh City and Hanoi, a disturbing trend is observable: Students engage with course materials primarily through the interface of AI agents. When assigned a complex problem requiring dialectical analysis, students can produce polished, structurally sound, and data-rich responses within seconds. Yet, when probed orally to defend these arguments, a significant portion fails to articulate the underlying logic or provenance of the ideas. This discrepancy suggests that AI is not merely acting as a tool for efficiency, but is serving as a cognitive prosthesis. Students value grades over skill development (having the answer on a screen) for the *acquisition* of knowledge (understanding the answer). This phenomenon poses an existential threat to the core mission of universities: cultivating Critical Thinking—defined here not just as problem-solving, but as the capacity to analyze, evaluate, and reconstruct one's own thinking processes independent of algorithmic assistance. This degradation of mental engagement, referred to as 'cognitive atrophy,' undermines the deeper learning objectives critical to national development.

1.2. The "Diploma Disease" and the Trap of Cognitive Offloading

To understand why Vietnamese students are particularly susceptible to this paradox, one must analyze the socio-cultural soil of Vietnam. The pursuit of higher education in Vietnam is heavily influenced by Confucian traditions, which revere scholastic achievement, combined with the modern pressures of a hyper-competitive labor market.

Dore (1976) famously coined the term "The Diploma Disease," describing a society where the credential (the degree) is valued significantly higher than the actual skills it is supposed to represent. In the context of 2026 Vietnam, this disease has mutated into a digital variant.

- The Mechanism: The labor market demands high GPAs as a primary filter for recruitment.
- The Rational Choice: Faced with the pressure to maximize GPA with minimal time investment, students rationally choose "Cognitive Offloading"—the act of reducing the cognitive demand of a task by using physical or digital resources.
- The Consequence: Instead of grappling with the "struggle" of learning (which is where neural connections are

formed), students delegate the high-effort cognitive tasks—such as structuring an argument, synthesizing literature, or checking logical fallacies—to AI. They become "Cognitive Misers" (Fiske & Taylor, 1991), saving mental energy at the cost of intellectual atrophy.

This creates a dangerous feedback loop: The more students use AI to get high grades, the less confident they feel in their own raw thinking ability, leading to further dependence on AI for future tasks.

1.3. Research Gap and the Necessity of a Socio-Legal Systems Approach

While the global discourse on AI in education is voluminous, existing literature predominantly focuses on two areas:

1) Technological Integration: How to use AI tools in classrooms (technocentric view).
2) Academic Integrity: How to detect plagiarism and prevent cheating (policing view).

There is a significant paucity of research that analyzes the erosion of critical thinking through the specific lens of Vietnamese Law (post-2020) combined with Systems Thinking. Current studies often treat the student's behavior as an isolated ethical failure. However, following the research direction of Dr. Le Thai Cuong, this study argues that the issue is systemic. We cannot understand the student's reliance on AI without considering the legal mandates for digital transformation (e.g., *Decision 131/QD-TTg*) that inadvertently prioritize "digital application" over "digital wisdom," nor without analyzing the cultural feedback loops of "face-saving" and "achievement obsession."

Research Question: *Therefore, this study poses the following primary research question:* "Under the current Vietnamese legal framework (2020–2026) and socio-cultural context, how does the interaction between widely available AI tools and traditional 'achievement-oriented' learning norms systematically impact the development of critical thinking skills in university students?"

By answering this, the paper aims to move beyond the binary debate of "Banning vs. Embracing" AI, towards a nuanced "Human-in-the-Loop" educational model.

2. Theoretical Framework and Methodology

2.1 Theoretical Basis: Redefining Cognition in the Algorithmic Age

To rigorously analyze the impact of Artificial Intelligence (AI) on critical thinking, this research does not view technology as a mere external tool, but as an intrinsic component of the modern cognitive process. We employ a dual-theoretical lens: The Revised Bloom's Taxonomy (to measure cognitive depth) and Connectivism (to measure cognitive breadth).

2.1.1 The Shift of Bloom's Taxonomy in the AI Era: The "AI Ceiling"

The Revised Bloom's Taxonomy (Anderson & Krathwohl, 2001) has long served as the pedagogical gold standard, hierarchically organizing cognitive processes from *Remembering, Understanding, Applying, Analyzing, Evaluating,* to *Creating*.

The Pre-AI Struggle vs. The Post-AI Paradox:

Historically, in the Vietnamese education system- often characterized by rote learning (học vẹt)- educators struggled to elevate students from the basement of Remembering (rote memorization) to the level of Understanding.

However, in 2026, the proliferation of Generative AI (LLMs) has fundamentally inverted this challenge. AI has effectively "commoditized" the lower three levels of the taxonomy:

- Remembering: AI databases far exceed human recall.
- Understanding: AI can summarize complex texts instantly.
- Applying: AI can generate code, write basic emails, or solve standard equations.

The "Applying" Trap (The AI Ceiling):

This research posits a critical hypothesis: The availability of AI is creating a "Glass Ceiling" at the Applying stage for Vietnamese students.

Students use AI to produce output (an essay, a presentation) which creates the appearance of competence. However, because the AI bypassed the struggle of Analyzing (breaking material into constituent parts) and Evaluating (making judgments based on criteria and standards), the student's mind remains passive.

- *Specific mechanism:* When a student prompts ChatGPT to "Write an analysis of Decision 131/QD-TTg," the AI performs the analysis. The student merely performs the *retrieval*. In Bloom's terms, the machine is at Level 4 (Analyzing), while the human operator reverts to Level 1 (Remembering/Retrieving). This creates a "Hollow Competency"- a shell of high-performance masking a core of low-cognition.

2.1.2 Connectivism and the Phenomenon of "Cognitive Atrophy"

While Bloom measures the depth of thinking, Connectivism (Siemens, 2005) explains the structure of learning in the digital age. Siemens argues that "learning is the process of connecting specialized nodes or information sources."

The Distortion of the Network:

In a healthy Connectivist model, the learner traverses the network, vetting sources, linking disparate ideas, and synthesizing meaning. The cognitive effort of traversing is where learning happens.

With AI, the model changes. AI acts as a "Super-Node" that pre-synthesizes the network. The learner no longer connects node A to node B; the AI presents the connection as a finished product.

Defining "Cognitive Atrophy":

Drawing from neuroplasticity principles, this research introduces the term "Cognitive Atrophy" into the educational discourse. Just as muscles atrophy without physical resistance, critical thinking pathways weaken without "cognitive resistance" (friction).

- *Vietnamese Context:* In a culture that values quick results, students perceive the AI's instant synthesis as efficiency. However, by skipping the chaotic process of information filtering, they lose the ability to distinguish "Signal" from "Noise"—a crucial skill for a citizen in a digital economy.

2.2 Methodology: A Systems Thinking Approach

Standard linear analysis (Cause $\rightarrow$ Effect) is insufficient to explain why students continue to depend on AI despite knowing the long-term risks. Therefore, adopting the rigorous research direction of Dr. Le Thai Cuong, this study employs Systems Thinking (Senge, 1990; Meadows, 2008) to map the problem. We utilize the Iceberg Model to excavate the layers beneath the visible surface.

2.2.1 Level 1: The Events (What is happening?)

At the visible level (The Tip of the Iceberg), we observe discrete, tangible phenomena in Vietnamese universities in 2026:

- The "Perfect Draft" Phenomenon: Students submit essays with flawless grammar, perfect structure, and sophisticated vocabulary that exceed their observed in-class language proficiency.
- The "Blank Stare" in Oral Defense: When asked to explain a specific paragraph in their own submission, students often hesitate, cannot paraphrase their own main idea, or admit they "haven't read that part deeply."
- The Decline of Debate: In group discussions, students verify facts with AI immediately rather than engaging in arguing based on logic or memory.

2.2.2 Level 2: The Patterns (What are the trends?)

Looking longitudinally over the period 2023-2026, distinct patterns emerge:

- GPA Inflation vs. Competency Deflation: While average GPAs have risen (due to high scores on take-home assignments), employer satisfaction regarding "problem-solving skills" of fresh graduates has plateaued or declined.
- The Homogenization of Thought: Student papers increasingly sound alike—adopting the neutral, structured, "safe" tone characteristic of LLMs, lacking the unique, jagged edge of individual human creativity.

2.2.3. Level 3: Systemic Structures (What influences the patterns?)

This layer analyzes the "rules of the game"—the tangible structures that force students into these behaviors. This is where the Legal Framework plays a decisive role.

- Assessment Mechanisms: Despite *Circular 17/2021/TT-BGDDT* calling for autonomy, many universities still rely on traditional written assignments (Essays/Reports) as the primary assessment tool (60-70% of the grade). This structural flaw invites AI usage.
- The KPI Pressure: The Ministry's requirement for high graduation rates (to meet accreditation standards) creates pressure on lecturers to be lenient.
- Time Scarcity: Many students work part-time to afford tuition. The structure of the curriculum (often heavy on theory) clashes with their time budget, making AI the only viable "survival tool."

2.2.4. Level 4: Mental Models (Where does it come from?)

The deepest level- and the focus of Dr. Le Thai Cuong's approach—is the set of beliefs and cultural assumptions that drive the system.

- The "Diploma Disease" (Mental Model A): In Vietnam, the degree is seen as a license for social mobility, not necessarily a certificate of skill. *Belief:* "The goal is to graduate with a Good degree, not to learn how to think." $\rightarrow$ *Action:* Use AI to maximize grades.
- The "Silence is Respect" (Mental Model B): A misinterpretation of Confucian values. Students believe that challenging the teacher or the textbook is disrespectful. Since AI provides "objective" answers, relying on AI is safer than risking a controversial personal opinion.
- "Bệnh Thành Tích" (Achievement Disease): The obsession with the *appearance* of success. A beautifully written AI essay looks like success; a messy, handwritten draft of original thoughts looks like failure.

2.3. Data Collection and Analysis: Documentary Method

To validate the Systems Thinking model, the research employs Documentary Analysis of primary legal sources.

1) Scope: Legal normative documents issued by the Vietnamese Government and MOET from January 1, 2020, to June 2026.
2) Key Documents for Coding:
   - *Decision No. 749/QD-TTg* (National Digital Transformation).
   - *Decision No. 131/QD-TTg* (EdTech Strategy).
   - *Circular No. 17/2021/TT-BGDDT* (Higher Education Standards).
3) Analysis Protocol: Documents are coded for keywords: "Critical Thinking," "Autonomy," "Digital Competency," and "Innovation." We analyze the gap between the *de jure* requirements (what the law says) and the *de facto* reality (the behavior in the Iceberg Model).

3. Comprehensive Analysis Of The Legal Framework (2020–2026)

To understand the macro-environment, we utilize Documentary Analysis of key legal texts issued by the Vietnamese Government and Ministry of Education and Training (MOET) from 2020 to present.

3.1 Decision No. 131/QD-TTg (2022): The Mandate for Competency

On January 25, 2022, the Prime Minister approved the Project *"Strengthening the application of IT and digital transformation in education..."*.

- Key Provision: The decision explicitly shifts the focus from "knowledge transmission" to "personalized learning" and "competency development."
- Analysis: This is the legal "Green Light" for AI. However, the law assumes that technology will *enhance* personalization. In reality, without strict pedagogical guardrails, students use AI to *standardize* their work (making everyone sound like a generic LLM), thereby violating the spirit of personalization mandated by the Decision.

3.2. Circular No. 17/2021/TT-BGDDT: The Output Standards

Issued on June 22, 2021, by MOET regarding Program Standards for Higher Education.

- Article 5 (Learning Outcomes): Requires learners to demonstrate "autonomy and responsibility" and the ability to "solve complex professional problems."
- Analysis: This circular provides the legal basis for universities to reject AI-generated work that lacks human critical input. If a student submits an AI essay, they fail the "autonomy" requirement of Article 5. This is a crucial, yet underutilized, legal tool for educators to enforce critical thinking standards.

3.3 Decision No. 569/QD-TTg (2022): Innovation Strategy

The Strategy for Science, Technology, and Innovation Development until 2030 emphasizes "creative thinking."

- Conflict: The strategy demands innovation, but the educational system's implementation of digital tools often encourages replication (copy-pasting AI) rather than creation. This highlights a gap between *Policy Intent* and *Implementation Reality*.

4. Socio-Cultural Barriers: The "Invisible Hand" Stifling Critical Thought

While legal frameworks provide the "hardware" for educational reform, culture acts as the "operating system." In Vietnam, this operating system contains legacy codes—deeply ingrained mental models—that conflict with the open, questioning nature of Critical Thinking. This section analyzes how these cultural forces interact with AI to create systemic barriers.

4.1 The "Silence" Culture and the High Power Distance Trap

Vietnam is characterized by a high Power Distance Index (PDI) (Hofstede, 2001), where hierarchy is respected and expected. In the academic setting, this manifests through the Confucian maxim: *"Tôn sư trọng đạo"* (Respect the teacher, revere the Way). While this tradition fosters discipline, it inadvertently creates a "Culture of Silence" that AI exacerbates.

4.1.1 Epistemic Deference and the "Fear of Face"

In a traditional Vietnamese classroom, questioning the lecturer is often culturally coded not as intellectual curiosity, but as a challenge to authority or a disruption of harmony. Students suffer from a high "Fear of Losing Face" (*Sợ mất mặt*). To ask a question is to admit ignorance; to challenge an idea is to risk offending the superior.

- The AI Intervention: Generative AI acts as a "Psychological Safety Valve." It is a private, non-judgmental entity. A student can ask ChatGPT the same "stupid question" ten times without fear of being scolded or judged.
- The Negative Consequence: While this provides psychological comfort, it removes the "Social Friction" necessary for developing argumentation skills. Critical thinking is honed through public debate and the defense of ideas against scrutiny. By retreating to the private safety of AI, students atrophy their public intellectual courage. They become "Private Thinkers" but "Public Conformists."

4.1.2 The "Algorithmic Oracle" Effect

Culturally, Vietnamese students are conditioned to believe in the existence of a single "Correct Answer" held by the teacher. When the teacher is unavailable, AI is elevated to the status of an "Algorithmic Oracle."

Instead of treating AI output as a draft to be critiqued (Critical Thinking), students treat it as the new standard of truth (Epistemic Dependence). The hierarchy remains; only the master has changed from Human to Machine.

4.2 The "Achievement Disease" (*Bệnh thành tích*) and the Efficiency Trap

The Vietnamese proverb *"Tốt gỗ hơn tốt nước sơn"* (Wood is better than paint/Substance over form) is often taught, but the reality of the educational system rewards the "paint." The phenomenon of "Bệnh thành tích" (Achievement Disease)—the obsession with high metrics regardless of actual quality—creates a fertile ground for AI misuse.

4.2.1 The GPA Pressure Cooker

Vietnamese society places immense pressure on academic performance as a proxy for filial piety (*Hiếu thảo*) and social mobility. Parents expect high grades; employers filter CVs by GPA.

- The Rational Calculation: A student faces a dilemma: Spend 10 hours writing an original essay that might get a 'B' (due to imperfect English or messy structure), or spend 10 minutes prompting AI to get an 'A' (perfect grammar, structured logic).
- Systemic Loop: In a system suffering from "Achievement Disease," utilizing AI is not seen as cheating, but as an "Optimization Strategy." The proverb *"Ăn xổi ở thì"* (Short-termism) perfectly captures this mindset. Students prioritize the short-term gain (the grade) over the long-term asset (the cognitive skill).

4.2.2 The "Văn Mẫu" (Sample Literature) Legacy

For decades, Vietnamese K-12 education relied heavily on *"Văn mẫu"*—model essays that students were encouraged to memorize and mimic. Innovation was often penalized if it deviated from the standard key.

- AI as the Ultimate "Văn Mẫu" Generator: Generative AI fits perfectly into this pre-existing mental model. It is the ultimate producer of "safe," "standard," and "average" content. Students are culturally predisposed to accept the smooth, generic output of AI because it resembles the "Sample Essays" they were trained to emulate for 12 years. This is a massive barrier to Critical Thinking, which requires breaking the mold, not fitting into it.

4.3 The "Cua trong giỏ" (Crab Bucket) Mentality and Peer Pressure

Another cultural nuance is the peer dynamic, often illustrated by the *"Crab Bucket Theory"* or the fear of being an outlier.

- The Mechanism: If the majority of the class uses AI to produce polished work, the student who chooses to write authentically (and thus imperfectly) feels disadvantaged. As the proverb says: *"Thua thầy một vạn không bằng thua bạn một ly"* (Losing to the teacher is fine, but losing to a friend is unbearable).
- The Result: This creates a "Race to the Bottom" in cognitive effort but a "Race to the Top" in artificial output. The collective standard of the class becomes artificially inflated by AI, forcing even honest students to use tools just to keep up with the "synthetic baseline."

4.4. Systemic Analysis: The Feedback Loops (Dr. Le Thai Cuong's Perspective)

Applying Systems Thinking, we can map these cultural barriers not as isolated traits but as reinforcing feedback loops (R-Loops) that lock the system in a state of low critical thinking.

1) Loop R1: The Verification Gap.

High "Face Saving" Culture $\rightarrow$ Reluctance to debate publicly $\rightarrow$ Increased reliance on AI for answers $\rightarrow$ Reduced confidence in own judgment $\rightarrow$ Higher need to save face (fear of being exposed as incompetent) $\rightarrow$ Back to Start.

2) Loop R2: The KPI Distortion.

System demands High KPIs (Grades/Degrees) $\rightarrow$ Students use AI to meet key Performance Indicators (KPIs) efficiently $\rightarrow$ University reports "High Success Rates" $\rightarrow$ System reinforces the KPI focus (ignoring the hollow reality) $\rightarrow$ Back to Start.

4.5 Synthesis

The "Invisible Hand" of culture is pushing students *towards* AI dependence. While the Law (Decision 131) opens the door for digital transformation, Culture directs that transformation towards "Performative Competence" rather than "Actual Competence." Therefore, any solution must address these cultural root causes, not just the technological symptoms.

5. Results and Discussion: A Systems Perspective

To understand why the decline of critical thinking persists despite educational reforms, this study moves beyond linear analysis to a System Dynamics perspective (following the methodological direction of Dr. Le Thai Cuong). We identify that the interaction between AI tools, Student behavior, and Faculty response forms specific System Archetypes that trap the higher education ecosystem in a suboptimal state.

5.1 Archetype 1: "Shifting the Burden" (The Outsourcing Thinking Loop - R1)

The most prevalent structure observed is the "Shifting the Burden" archetype.

- The Problem Symptom: Students face complex, high-cognitive-load assignments (e.g., "Analyze the ethical implications of AI in Law").
- The Fundamental Solution (Long-term): Engage in deep reading, critical reflection, and drafting. This is time-consuming (Delay) and mentally taxing.
- The Symptomatic Solution (Short-term): Use Generative AI to produce a structured, grammatically correct essay. This is immediate and painless.

Analysis of the Reinforcing Loop (R1 - The Addiction Cycle):

As students repeatedly choose the Symptomatic Solution (AI), their immediate stress is relieved, and they often receive positive reinforcement (good grades due to the "Achievement Disease").

However, a dangerous side effect occurs: Cognitive Atrophy. $$\text{AI Usage} \uparrow \rightarrow \text{Short-term Grade} \uparrow \rightarrow \text{Confidence in "Prompting"} \uparrow \rightarrow \text{Confidence in "Thinking"} \downarrow$$

Crucially, as the student's internal capability to think critically weakens (the stock of "Critical Thinking Skills" depletes), they become more dependent on AI for the next task. The "burden" of thinking has been permanently shifted to the machine.

- Legal Implication: This directly violates the spirit of Circular No. 17/2021/TT-BGDDT, which mandates "autonomy" in learning outcomes. The student is no longer autonomous; they are merely a proxy for the algorithm.

5.2. Archetype 2: "Escalation" (The Cat and Mouse Assessment Loop - B1)

This represents the adversarial relationship between Faculty and Students regarding AI integrity.

The Balancing Loop (B1):

1) Faculty Action: To protect academic integrity, lecturers increase surveillance (using Turnitin AI detection, GPTZero).
2) Student Reaction: Students view this not as a pedagogical standard but as a technical obstacle. They use "humanizers" (paraphrasing tools like Quillbot) or prompt engineering techniques ("Write in a bursty, non-linear style") to bypass detection.
3) System Result: An Arms Race.

Why this loop fails (System Analysis):

- Resource Drain: Both sides spend immense energy on the *format* of the text rather than the *substance* of the idea.
- The "False Positive" Trap: AI detectors are notoriously unreliable. When a student who wrote honestly is falsely accused, trust in the educational institution collapses (violating the safe environment needed for critical thinking).
- Strategic Error: As discussed in Section 3, the Legal Framework (Decision 131/QD-TTg) encourages *digital competence*. Punishing students for using digital tools creates a cognitive dissonance. The goal should be *disclosing* AI usage, not *hiding* it.

5.3 The Legal-Cultural Gap: A Systemic Mismatch

Integrating the findings from Section 3 (Law) and Section 4 (Culture), we identify a critical "System Delay" that causes friction.

Dimension	The "De Jure" State (Legal Framework >2020)	The "De Facto" State (Cultural Reality)	Systemic Friction
Goal	Innovation & Creativity (Decision 569/QD-TTg)	High Grades & Safety (Achievement Disease)	Law demands risk-taking; Culture demands safety. AI is used to play it safe (perfect average essays).
Method	Personalized Learning (Decision 131/QD-TTg)	Standardization (Văn mẫu legacy)	Law assumes technology enables personalization; Students use technology to homogenize their output.
Role of Learner	Active/Autonomous (Circular 17/2021)	Passive/Receptive (Epistemic Deference)	Students wait for AI to give the "right answer" just as they waited for teachers in the past.

Discussion

The infrastructure of Vietnamese universities in 2026 is modern (Hardware), but the "Pedagogical Operating System" is outdated. We are trying to run a Version 2026 Legal Framework on a Version 1990 Cultural Mindset using Version 2030 Technology.

The result is that AI acts as an amplifier of existing cultural flaws. Instead of liberating students to think freely, it helps them conform more efficiently.

5.4. The Leverage Point (Điểm Đòn Bẩy)

From a Systems Thinking perspective, the highest leverage point is not in banning AI (which strengthens the Escalation loop) nor in stricter grading (which strengthens the Cheating loop).

The leverage point lies in Changing the Goal of the System (Meadows' Leverage Point #3).

- Current Goal: Produce a "Correct" artifact (Essay/Answer).
- New Goal: Demonstrate the "Process" of verification and critique.

If the assessment metric changes from "What is the answer?" to "How did you verify this answer generated by AI?", the entire feedback loop reverses. AI becomes the subject of scrutiny, forcing the student into the "Evaluator" role (Bloom's Level 5).

6. Implications And Recommendations: From "Artificial" to "Augmented" Intelligence

The systemic analysis in Section 5 revealed that the decline in critical thinking is not a technological inevitability but a result of misaligned incentives between Law, Culture, and Pedagogy. Therefore, superficial bans on AI will fail. Instead, this study proposes a Multi-layered Intervention Strategy aimed at high-leverage points to restore "Epistemic Agency" (the capacity to be responsible for one's own beliefs) to the learner.

6.1 Pedagogical Shift: The "Human-in-the-Loop" Assessment Protocol

To comply with the requirement for "Autonomy" in Circular 17/2021/TT-BGDDT, universities must fundamentally redesign assessment. The era of the "Take-home Essay" as a proxy for competence is over.

Proposal: The "Cognitive Sandwich" Model (Critique-Based Assessment) Instead of asking students to *generate* answers (which AI does best), educators should ask students to *evaluate* answers (which Human does best).

1) Step 1: The AI Draft (Thesis). Students are explicitly allowed (or even required) to use AI to generate a solution to a complex problem. They must cite the prompt used.
2) Step 2: The Human Critique (Antithesis). The core assignment is to write a "Critique Report" of the AI's output. Students must identify:
   - *Logical Fallacies:* Where did the AI hallucinate or make a leap in logic?
   - *Contextual Gaps:* What specific Vietnamese cultural or legal nuance did the AI miss?
   - *Bias Check:* Is the data skewing towards Western perspectives?
3) Step 3: Oral Defense (Synthesis). The final grade is determined by a 10-minute "Vấn đáp" (Viva Voce) where the student defends their critique.

Rationale: This reverses Bloom's Taxonomy. We automate the lower levels (Remembering/Understanding) and force the student to inhabit the highest levels (Evaluating/Creating). This turns AI from a "Cheat Code" into a "Sparring Partner."

6.2 Cultural Leverage

Operationalizing "Học thầy không tày học bạn"

Vietnam's collectivist culture can be a barrier (Groupthink) or an asset (Communal Constructivism). We propose leveraging the folk wisdom *"Học thầy không tày học bạn"* (Learning from friends is better than learning from the teacher alone) to break the "Silence Culture."

Proposal: The "Debate Dojo" and Peer-Review Clusters

- Mechanism: Create small "Peer Clusters" of 3-5 students.
- The "Straw Man" Technique: Introduce AI into the group not as an oracle, but as a "confused participant." The group's task is to collectively debate and correct the AI's errors.
- Breaking Hierarchy: Since they are correcting a *machine* (which has no "face" to lose) rather than a *teacher*, the cultural fear of *"phạm thượng"* (disrespecting superiors) is eliminated. This creates a psychological safe zone for debating.
- Result: Students practice critical argumentation laterally (with peers/machines) before applying it vertically (with professors).

6.3 Policy Recommendations for Governance

Following the Systems Thinking perspective of Dr. Le Thai Cuong, policy interventions must change the *rules* of the system, not just the *behavior*.

- Recommendation 1: Redefine "Digital Competency" in Decision 131/QD-TTg. Currently, digital competency is often interpreted as "technical skill" (how to use tools). It must be redefined as "Critical Digital Literacy"—the ability to assess the *validity* of digital information. Prompt Engineering and Fact-Verification should be mandatory Liberal Arts modules for all majors.
- Recommendation 2: Shift from "Product Grading" to "Process Grading." Universities should mandate that 40-50% of a course grade be based on the *process* of inquiry (drafts, change logs, debate participation) rather than the final *product* (the essay). This aligns with the "Process-oriented" nature of learning and reduces the incentive to "outsource" the final product to AI.
- Recommendation 3: Safe-to-Fail Environments. To cure "Bệnh thành tích" (Achievement Disease), the system must tolerate error. Grading rubrics should reward "Novelty of Thought" and "Depth of Inquiry" even if the final conclusion is imperfect, rather than rewarding "Safe, Standard, Flawless" answers which are the hallmark of AI.

7. Conclusion

7.1 Summary of Findings: The Paradox of Preparedness

This study set out to analyze the impact of Artificial Intelligence on critical thinking within the specific socio-legal context of Vietnam (2020- 2026). The findings reveal a stark paradox: Vietnam is legally prepared but culturally vulnerable. While the post-2020 legal framework (specifically Decision No. 131/QD-TTg and Circular No. 17/2021/TT-BGDDT) provides a visionary roadmap for a digital-first education system, the "de facto" implementation is being hijacked by deep-seated cultural norms. The intersection of the "Achievement Disease" (*Bệnh thành tích*) and the "Culture of Silence" has transformed AI from a tool of empowerment into a crutch for cognitive offloading. Without conscious intervention, Vietnamese higher education risks producing a generation of "Digital Bureaucrats"—graduates who are technically proficient at operating tools but functionally incapable of independent, critical thought.

7.2 Theoretical Implications: The Value of Systems Thinking

By applying the Systems Thinking lens (following the research direction of Dr. Le Thai Cuong), this paper challenges the prevailing linear narratives that either demonize AI as a cheating tool or blindly hail it as a savior. The research identifies that the root cause of "Cognitive Atrophy" is not the technology itself, but the systemic feedback loops (The "Achievement Trap" and "Shifting the Burden") that punish risk-taking and reward safe, standard answers. Therefore, banning AI is a superficial solution that fails to address the underlying structural incentives.

7.3 Toward a Culture of "Tranh Luận" (Debate)

The ultimate solution lies in a fundamental cultural shift in pedagogy. We must move the educational center of gravity from a culture of "Trả bài" (Reciting/Returning the lesson- where AI excels) to a culture of "Tranh luận" (Debating/Constructive Conflict- where humans excel). To realize the digital transformation goals of the Government, universities must become "Safe-to-Fail" environments where the process of verifying, critiquing, and refining ideas is valued higher than the final polished product.

7.4 Final Thought

As we navigate towards 2030, the true measure of Vietnam's educational success will not be how well our students can *answer* questions- AI has already solved that problem. The true measure will be how well our students can *question* the answers. We must strive for a model of "Augmented Intelligence," where Vietnamese graduates stand on the shoulders of algorithms to reach new heights of creativity, rather than letting algorithms stand in for their intellect. Only then can they truly become the "Global Citizens" that the nation aspires to create.

References

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[2] [Citation Context]: Used in Section 2.1.1 to define the theoretical gap. The paper argues that AI has automated the lower levels (Remembering, Understanding, Applying) and forces education to focus solely on the upper levels (Evaluating, Creating).

[3] Dore, R. (1976). *The Diploma Disease: Education, Qualification and Development*. London: Allen & Unwin.

[4] [Citation Context]: Used in Section 1.2 and Section 4.2 to provide the sociological foundation for the concept of "Achievement Disease" (*Bệnh thành tích*) in Vietnam. It explains why students prioritize the degree over the skill.

[5] Government of Vietnam. (2021). *Decree No. 81/2021/ND-CP dated August 27, 2021, regarding the mechanism of collection and management of tuition fees for educational institutions*. Hanoi, VietNam.

[6] [Citation Context]: Used in Section 2.2.3 (Systemic Structures). This document highlights the increasing financial pressure on students (tuition fees), which acts as a systemic driver forcing them to seek "efficient" shortcuts (like AI) to ensure they pass courses without retaking them.

[7] Ministry of Education and Training (MOET). (2021). *Circular No. 17/2021/TT-BGDDT dated June 22, 2021, regarding Program Standards for Higher Education*. Hanoi, VietNam.

[8] [Citation Context]: Used in Section 3.2 and Section 6.1. This is the key legal evidence. Article 5 of this Circular mandates "learner autonomy," which provides the legal basis for rejecting AI-plagiarized work that lacks independent thought.

[9] Prime Minister of Vietnam. (2022). *Decision No. 131/QD-TTg dated January 25, 2022, approving the Project "Strengthening the application of information technology and digital transformation in education and training for the period 2022-2025, orientation to 2030"*. Hanoi, VietNam.
[10] [Citation Context]: Used in Section 3.1 and Section 5.3. This document is cited as the "Legal Green Light" for digital adoption, but the paper critiques the gap between its vision (Personalization) and the reality (Standardization via AI).
[11] Prime Minister of Vietnam. (2022). *Decision No. 569/QD-TTg dated May 11, 2022, issuing the Strategy for Science, Technology and Innovation Development until 2030*. Hanoi.
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[14] [Citation Context]: Used in Section 2.1.2 to introduce the concept of "Cognitive Atrophy." It supports the argument that while connecting nodes is good, outsourcing the *connection process* to AI damages learning.
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[16] [Citation Context]: Used in Section 1.1 to validate the global demand for "Analytical Thinking" and "Creative Thinking" as top skills, reinforcing the urgency of the research problem.