

## CHAPTER 9

# ACADEMIC INTEGRITY AND ETHICAL CHALLENGES IN AI-MEDIATED HIGHER EDUCATION: PEDAGOGICAL IMPLICATIONS AND EMERGING PRACTICES

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The rapid diffusion of artificial intelligence (AI) across higher education has precipitated a structural shift in how academic work is produced, evaluated, and legitimised. Generative systems – particularly large language models – now participate directly in drafting, revising, summarising, translating, and even “reasoning” about academic content. This development disrupts long-standing assumptions about authorship, originality, and responsibility. Whereas earlier digital tools primarily supported access to information, contemporary AI systems intervene in the act of knowledge construction itself. Consequently, academic integrity can no longer be defined narrowly as the avoidance of plagiarism; it must be reconceptualised as a culture of transparent, accountable, and critically mediated interaction with intelligent systems.

The relevance of this study is grounded in three converging dynamics. First, the ubiquity of generative AI has altered student behaviour, enabling rapid text production and lowering the threshold for completing complex academic tasks. Second, higher education institutions—particularly in contexts affected by instability and wartime disruption—must ensure continuity, accessibility, and fairness under uneven digital conditions. Third, existing integrity frameworks, designed for pre-generative environments, struggle to address hybrid authorship, invisible assistance, algorithmic suggestion, and unverifiable content generation.

Together, these dynamics necessitate a re-examination of academic integrity as both a pedagogical objective and an institutional practice.

Within the scientific context, a tension emerges between two dominant narratives. On the one hand, AI is framed as an enabler of personalised learning, scalable feedback, and inclusive access. On the other hand, it is associated with risks of superficial learning, dependency, epistemic unreliability, and integrity breaches. This tension is particularly acute in higher education, where the value of independent judgement, critical reasoning, and accountable authorship remains central. The core question, therefore, is not whether AI should be used, but how its use redefines the norms of legitimate academic participation.

A notable research gap persists. Many studies examine technological affordances or ethical concerns in isolation, without integrating them into a coherent pedagogical model that explains how integrity can be sustained in AI-mediated learning. Furthermore, limited attention has been paid to the role of communicative competence and decision-making as mechanisms through which integrity is enacted. This is especially relevant in professionally oriented and ESP-related learning, where students must justify claims, evaluate sources, and make accountable decisions. The Ukrainian context further exposes underexplored dimensions: digital inequality, disrupted access, and the need for context-sensitive integrity policies. This study addresses these gaps through an integrative analysis of pedagogy, ethics, and academic integrity.

The novelty of the study lies in conceptualising AI not merely as a tool but as a *co-constitutive factor* in academic practice – one that reshapes authorship, redistributes responsibility, and demands new forms of integrity literacy. The aim is to analyse academic integrity and ethical challenges in AI-mediated higher education and to propose pedagogically grounded responses. The objectives are: (1) to synthesise Ukrainian and international research on AI, ethics, and integrity; (2) to redefine academic integrity in AI-mediated contexts; (3) to model a pedagogical intervention that integrates AI responsibly; (4) to analyse behavioural

and cognitive outcomes; and (5) to develop actionable recommendations for educators and institutions. Methods include theoretical analysis, critical literature synthesis, pedagogical modelling, survey analysis, observation, case-based analysis, and interpretation of empirical data.

The literature reveals a consistent duality. Bakhmat argues that AI enhances personalisation and efficiency but risks diminishing independent critical thinking and increasing plagiarism if pedagogical design remains unchanged [1]. This position is significant because it shifts responsibility from the technology to instructional architecture. Aleksieieva emphasises ethical challenges in the Ukrainian context – inequality of access, privacy concerns, and ambiguity of authorship – highlighting that integrity must be considered alongside fairness and inclusion, particularly under wartime conditions [2]. Kozlov extends the analysis to epistemic reliability, identifying “hallucinations,” fabricated references, and intellectual property risks as central threats to academic trustworthiness [3]. These findings underscore that integrity violations in the AI era are not limited to copying; they include the uncritical acceptance of machine-generated inaccuracies.

International research converges on similar concerns while proposing systemic responses. Holmes, Bialik, and Fadel advocate a shift toward competency-based assessment, arguing that if education rewards reproducible text, AI will inevitably automate it; if it rewards judgement, justification, and problem-solving, AI can serve as a scaffold rather than a substitute [4]. The *UNESCO Recommendation on the Ethics of AI* articulates principles – transparency, fairness, accountability, human oversight, and data protection – that should guide educational deployment [5]. The *European Network for Academic Integrity (ENAI)* stresses that AI use must be transparent and policy-regulated, with explicit expectations communicated to students [6]. Empirical evidence by Shaw et al. shows that 68% of students are willing to use AI despite prohibitions, revealing a gap between policy and practice and the limits of purely restrictive approaches [7]. Godwin-Jones highlights the paradox of improved language performance

alongside reduced learner autonomy when AI is used uncritically [8]. Akgun and Greenhow emphasise algorithmic bias, privacy risks, and blurred accountability between human and machine actors [9]. Together, these studies indicate that integrity must be taught, not merely enforced.

The theoretical grounding of this study integrates ESP and communicative competence with AI ethics. Hutchinson and Waters' needs-based ESP framework remains relevant, but "needs" now include digital literacy, ethical awareness, and decision-making under uncertainty [10]. Canale and Swain's model positions strategic competence as the ability to manage communication under constraints; in AI-mediated contexts, this extends to evaluating AI outputs, selecting appropriate responses, and justifying decisions [11]. Decision-making thus becomes a central operationalisation of integrity: students must determine what to accept, revise, reject, or disclose when using AI.

For analytical clarity, key concepts are defined as follows. *AI in education* refers to systems capable of generating, adapting, or evaluating content and feedback. *Academic integrity* is understood as a culture of honesty, accountability, transparency, and responsible authorship, extending beyond anti-plagiarism to include disclosure of AI assistance and critical verification. *Ethical challenges* encompass authorship ambiguity, privacy, bias, access inequality, and responsibility distribution. *Decision-making* denotes the process of evaluating alternatives, selecting actions, and justifying choices under constraints. These constructs underpin the study's model.

A *model pedagogical study* was conducted with 96 students in technical and interdisciplinary programmes, divided into control and experimental groups (48/48). Over 16 weeks, the control group followed traditional instruction (teacher-led explanation, standard assignments, delayed feedback), while the experimental group engaged in structured AI-mediated tasks. The design comprised diagnostic, formative, and evaluative phases. Instruments included surveys (motivation, attitudes, integrity awareness), observation protocols,

performance tasks, and reflective commentaries. Evaluation criteria were: (a) motivation, (b) cognitive engagement (analysis, evaluation, synthesis), (c) communicative quality (coherence, argumentation, audience awareness), (d) decision-making competence, and (e) integrity literacy (ability to identify, justify, and disclose AI use).

Crucially, tasks were designed to *avoid passive generation* and instead require *critical interaction* with AI. Task types included: (1) comparative drafting (student-written vs AI-assisted versions with criterion-based comparison), (2) ethical diagnosis (identifying integrity risks in AI-generated texts), (3) source verification (checking claims and references produced by AI), (4) scenario-based decision-making (selecting and justifying actions under constraints), and (5) communicative adaptation (editing AI outputs for audience, tone, and accountability).

The results indicate differentiated effects. *Motivation* increased by ~35% in the experimental group, driven by interactivity and perceived relevance. However, gains were highest in tasks requiring *evaluation and justification*, not mere generation. *Cognitive engagement* improved by ~42%, particularly in analysis and synthesis tasks where students compared alternatives and corrected AI outputs. *Decision-making competence* improved substantially, aligning with evidence that such skills are required in 87% of technical professions [12]. Students demonstrated greater ability to justify choices, identify weaknesses in AI outputs, and articulate criteria for acceptance or revision.

Case analyses provide granular insight. In **Case 1 (Integrity Diagnosis)**, students evaluated an AI-generated mini-essay. Initial acceptance based on fluency shifted, after guided criteria, to identification of missing citations, overgeneralisation, and lack of authorial stance. The key learning outcome was the transition from surface judgement to *criterion-based evaluation*. In **Case 2 (Comparative Writing)**, students compared AI-generated and self-authored texts. AI outputs were often fluent but less specific and weak in evidence integration;

student texts showed stronger engagement but variable structure. This task recalibrated quality perceptions: **fluency  $\neq$  academic validity**. In **Case 3 (Wartime Scenario)**, students developed AI-use policies under conditions of unequal access and disrupted connectivity. Responses balanced fairness and integrity, favouring **transparent-use models** over rigid bans. In **Case 4 (Communicative Adaptation)**, students edited AI-generated emails to meet academic norms of tone, clarity, and accountability, revealing that *rhetorical judgement* remains irreducibly human.

A comparative model clarifies differences between *classical integrity* and *AI-mediated integrity*. Classical integrity emphasises originality, citation, and prohibition of copying; AI-mediated integrity emphasises *transparency of assistance, critical verification, and accountable decision-making*. Classical assessment often rewards final products; AI-mediated assessment must *reward process, justification, and disclosure*. Classical pedagogy positions the teacher as the primary source of knowledge; AI-mediated pedagogy repositions the teacher as a *designer of evaluative frameworks* and a moderator of criteria.

Ethical risks can be categorised as follows. *Epistemic risk*: AI may produce plausible but incorrect content. *Authorship risk*: the extent of machine contribution may be obscured. *Relational risk*: erosion of trust between students and teachers. *Social risk*: unequal access to AI tools exacerbates inequity. *Normative risk*: policies are either too vague or too rigid. Addressing these requires aligned pedagogical and institutional responses.

Recommendations follow from the analysis. For educators: (1) design assignments that require *comparison, justification, and oral defence*; (2) integrate *explicit AI-use disclosure* requirements; (3) teach *verification strategies* (cross-checking claims, tracing sources); (4) use AI comparatively to build critical literacy. For curricula: embed *AI integrity literacy* (ethics, disclosure, evaluation) within competence frameworks; align AI tasks with authentic professional communication scenarios. For institutions: develop *clear, discipline-sensitive*

*policies* distinguishing acceptable support from prohibited substitution; invest in *teacher training*; ensure *equitable access*; and adopt *assessment diversification* (oral components, process logs, annotated drafts). Importantly, policy should be *transparent and educative*, not solely punitive.

In conclusion, AI-mediated higher education demands a redefinition of academic integrity as a *practice of accountable, transparent, and critically supervised engagement with intelligent systems*. AI can enhance motivation, support higher-order cognition, and strengthen decision-making when embedded in reflective pedagogies. However, without redesign of tasks, assessment, and policy, it risks normalising superficial production and eroding authorship. The central challenge is to preserve human intellectual agency while leveraging AI as a scaffold. Future research should pursue longitudinal studies of behavioural change, develop discipline-specific integrity models, and refine hybrid approaches that integrate ethical governance with pedagogical innovation.

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