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From Privacy Concerns to Governance Gaps: University Students' Perceptions of AI Risks and Ethics

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Abstract: This study aims to raise university students' awareness of AI-related risks and to develop their capacity to identify the legal, ethical, and societal implications of AI use in real-world settings by using a qualitative and learning-embedded design. Fifty-four undergraduate students in northern Taiwan participated in a two-hour instructional session on AI information security and ethics, followed by guided online searching, reflective writing, and peer sharing on Padlet. Findings indicate that students primarily interpret AI risks through experience-near harms, with privacy erosion, personal data breaches, and cybercrime. Legal issues were mentioned less frequently and were largely limited to broad references to privacy law, portrait rights, and copyright. Participants described AI's consequences as interconnected socio-technical effects that reshape cognition, equity, labor structures, and educational interaction. Although AI was recognized for efficiency and instructional support, students emphasized that risks intensify when deployment outpaces ethical reflection, governance, and human oversight. To sum up, this study highlights a gap between students' intuitive ethical concerns and their understanding of legal and governance frameworks, underscoring the need for context-sensitive, practice-oriented AI education that strengthens governance literacy and responsible judgment.

Keywords: AI, information security, AI ethics, privacy, higher education

1. Introduction

Contemporary concerns about artificial intelligence (AI) and privacy often reflect deeper anxieties about data use and its real-world consequences, such as discrimination, surveillance, and service denial driven by algorithmic inference (Elliott & Soifer, 2022). Prior studies have identified key risks in AI, including algorithmic bias, security threats, and ethical issues related to privacy, transparency, intellectual property, and equity (Hillis et al., 2025; Li & Huang, 2025). In educational contexts, major challenges center on ethical data use, trustworthy algorithms, and fairness, underscoring the need for context-sensitive policies and professional development (Ifenthaler et al., 2024; Rafiq et al., 2025). However, AI ethics instruction remains fragmented and overly theoretical, limiting its applicability to real-world decision-making. Accordingly, this study aims to enhance university students' awareness of AI-related risks and strengthen their capacity to evaluate the legal, ethical, and societal implications of AI use in practice. To achieve the goal, this study answered the following research questions (RQ):
RQ1: What are the risks and legal issues arising from the use of AI?
RQ2: What are the consequences of AI on individuals and society?

2. Method

A total of 54 university students in northern Taiwan were recruited through convenience sampling from a required AI-related course aligned with the institution's focus on AI-enabled education. The sample included 15 males and 39 females (26 freshmen, 11 sophomores, 7 juniors, and 10 seniors), with most participants from the College of Education (n = 38) and others from various departments (n = 16).

Participants attended a two-hour lesson on information security and AI ethics. Students were asked to respond to two guiding questions: (1) the risks and legal issues associated with AI and (2) the impacts of AI on individuals and society. They then posted their findings and reflections on Padlet, a multimedia-enabled online platform that supports real-time interaction. Selected entries were subsequently discussed in a whole-class session to facilitate shared reflection and discussion.

This study adopted a thematic analysis with one coder to explore participants' experiences and perspectives base on the two guiding questions. Within these, four corresponding codes were identified: (1) data privacy and security in everyday contexts, (2) data privacy and security in educational settings, (3) ethical issues in general contexts, and (4) ethical issues in education.

3. Results

3.1 Risks and Legal Issues of AI: Data Privacy and Security

Participants' perceptions of AI risks were primarily anchored in everyday data practices, with privacy (54%) and personal data breaches (41%) emerging as the most salient concerns. They also noted downstream harms, such as fraud (20%), bias (19%), and misinformation (19%). Legal awareness was limited, with privacy law (15%) and copyright-related issues (11%) most mentioned.

In education, concerns were less about data privacy and more about academic integrity, including dishonesty (7%), reduced teaching quality (6%), and overreliance on AI (4%). Legal issues were rarely identified, suggesting limited awareness of data governance in academic contexts.

3.2 Individual and Societal Consequences of AI: Ethical Issues

Participants identified several ethical concerns of AI in everyday contexts. Privacy and data security risks were most prominent, including excessive data collection, misuse, and surveillance, which may lead to fraud and manipulation of public opinion (P19). AI-generated misinformation and deepfakes were also seen as undermining judgment and eroding social trust (P7, P39). In addition, algorithmic bias was perceived as reinforcing existing inequalities in areas such as hiring and finance (P24, P38). Finally, AI-driven automation was viewed as reshaping the labor market, creating both job displacement and new opportunities while raising concerns about economic inequality (P7, P9).

In educational contexts, concerns centered on learning and interaction. Participants noted that overreliance on AI may weaken critical thinking and independent reasoning (P6). It may also reduce meaningful interaction with teachers and peers, affecting creativity and responsibility for learning (P22). Although AI can support personalized learning and improve teaching efficiency, participants raised concerns about academic integrity and the loss of human-centered engagement in education (P29).

4. Discussion and Conclusion

Participants emphasized practical, experience-near risks, indicating that AI is understood through everyday vulnerabilities and immediate consequences. Their focus on downstream harms reflects a consequence-oriented perspective, while moderate attention to accountability suggests uncertainty about responsibility. Limited emphasis on education-specific issues and transparency may stem from a proximity effect, prioritizing more immediate risks. Legally, participants mainly referred to data protection and content misuse, with relatively few explicit legal references, indicating limited legal literacy and unclear perceptions of enforcement. This aligns with the current state of AI governance, where policies and ethical guidelines are more salient than enforceable regulations. Overall, participants viewed AI as an interconnected socio-technical force shaping individuals and society. While recognizing its benefits, participants expressed concerns that unchecked AI may undermine human capacities, social trust, and institutional fairness, highlighting the need for integrated responses across design, policy, and education.

Practically, AI ethics and security teaching should be more practice-oriented by using brief cases, guided reflections, and structured discussions to help students translate everyday AI use into responsible judgment. Universities should also move beyond policy statements by providing clear guidance on acceptable AI use, data protection expectations, reporting channels, and responsibility attribution when harm occurs. Finally, AI tool adoption should prioritize human-centered safeguards to reduce overreliance and support safer decision-making in education and daily life.

Nonetheless, this study has several limitations. First, all participants were drawn from a single required class at one university, which may limit the generalizability of the findings. Future research could include more diverse samples across institutions and disciplines or adopt longitudinal designs to capture changes over time. Second, data were collected through Padlet reflective posts after a short instructional session. While this approach captures immediate reactions and supports broad participation, reflections may vary in depth and may not fully reveal students' underlying reasoning. Future research could incorporate follow-up interviews or longitudinal reflections to capture more sustained and nuanced ethical and legal reasoning. Third, this study relies on a single data source, students' reflections, without triangulation from behavioral evidence, pre-/post-measures, or instructor observations. This limits claims about learning outcomes beyond self-report. Future studies could adopt mixed methods by combining reflective data with assessments, task-based evidence, and observational measures to strengthen validity.

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