

# Managing Academic Integrity in the AI Era: A Project Management Lens on Academic Integrity

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## Abstract

This study investigates how AI-integrity initiatives are put into practice in higher education by focusing on IT project management, governance, and the delivery of educational technology. It explores the development of the Egg & Basket Quiz prototype as an example of technology-based learning intervention, while also addressing gaps in institutional policy and integrity. The research uses a mixed methods design to collect both quantitative and qualitative data from 25 students and 3 faculty members. The results reveal that AI is frequently used, with 72% of participants using it weekly. There is also uncertainty about institutional rules, which points to project risks related to governance, ethical compliance, and stakeholder involvement. The study is framed as a project of organizational change and digital transformation, based on PMBOK principles for managing risks and stakeholders, the Technology Acceptance Model (TAM) for user engagement, and insights from academic integrity literature. The findings show that adopting AI-integrity requires careful planning, leadership, stakeholder involvement, risk management, and step-by-step solution development, which are all key elements of IT project management. This research offers a project-management perspective on implementing ethical AI-integrity initiatives in higher education.

## Keywords

AI in education, academic integrity, IT project management, governance and risk, educational technology

## Introduction

The use of AI in higher education is growing, which raises questions about integrity as well as opportunities for innovation. This research is now contextualized as an IT project management issue where universities must plan, resource, and deliver AI-integrity solutions, despite its initial positioning as an educational technology study. This study adopted a project-management framing, viewing:

- AI-integrity policy implementation as a governance and stakeholder management project.
- Deployment of digital educational tools, Introducing the Egg & Basket Quiz as a technology-enabled learning delivery project.
- Enhancement of AI literacy as a structured change initiative, requiring planning, communication, milestones, and stakeholder buy-in.

The research fills a gap that puts academic integrity at risk because high AI use is not yet accompanied by strategic policy or pedagogical frameworks. This study shows how project managers can drive ethical AI adoption through governance, risk control, and digital solution delivery by utilizing PMBOK practices and TAM principles. (Dafoe, 2018; Ghosh, 2025; Unesco, 2022)

## Literature Review

Previous research on AI and academic integrity focuses mainly on educational and ethical elements (Alsharefeen & Al Sayari, 2025) with limited exploration from a project management perspective. Theoretical integration is enhanced using:

- PMBOK Governance & Stakeholder Management – framing AI policy deployment as project leadership (scope, risk, stakeholder engagement)(Sims & Kramer, 2015).
- Technology Acceptance Model – informing design of the Egg & Basket Quiz to improve adoption(Davis, 1989).
- Ethical Decision-Making) – supporting interpretation of student AI behaviour(Panzl & McMahan, 1989).
- Academic Integrity Principles – guiding policy implications(Bretag, 2018)

By demonstrating how AI-integrity systems must be strategically managed like a digital transformation project, including governance, uncertainty management, resource allocation, training delivery, and stakeholder alignment, this study fills the identified gap.

## Methodology

To better understand how academic integrity in the AI era can be managed as an IT project within tertiary education environments, the study used a mixed-methods exploratory design. To position these as organizational change, risk governance, and technology-enabled project delivery challenges, the study examined stakeholder perceptions, integrity practices, and preparedness to implement AI-integrity management initiatives. Semi-structured interviews and an online survey were used to collect data.(Institute, 2021)

Three academic staff members and twenty-five postgraduate students enrolled in various University of Technology's doing different master's program as well as the bachelor's program received the online survey. Participation was anonymous and voluntary. The frequency of using AI tools, the perceived clarity of institutional policies, and academic integrity-related decision-making behaviours were all recorded in the survey. For instance, 72% of student respondents said they used AI tools at least once a week, and 58% weren't sure if this use complied with school rules(Creswell & Creswell, 2017). Few examples of a survey quote were:

I use ChatGPT to come up with ideas, but I'm not sure what is allowed and which all practices count as malpractices.

When I started using Gen AI for academic purposes, Even I forgets about the simple things which I can do myself. Blindly I am depending on these AI chatbots for solving simple problems.

Semi-structured interviews were conducted with three faculty members to understand institutional perspectives. This explored readiness to adopt tools such as the Egg & Basket Game model, approaches to AI literacy training, and the challenges of policy enforcement. One academic noted "Academic staff members frequently voice concerns about AI in casual settings, but there isn't a formal system in place to convert these concerns into curriculum or policy alignment."

The data was analysed thematically and mapped against key areas from the PMBOK framework(Institute, 2021), including risk management, stakeholder engagement, change management, and governance. This enabled positioning of academic integrity management as a project implementation challenge within educational technology delivery.

### Table I

#### Survey Participants Summary

Participant Group	Number	Key Characteristics
Postgraduate Students	25	Frequent AI users, varied policy awareness.

(mostly from MITPM)

Academic Staff	3	Participating in integrity enforcement and supervision.
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Table 1 summarises the profile of participants involved in this study, including postgraduate students and faculty members. It provides an overview of the sample size, key characteristics, and relevant engagement with AI tools. This context supports interpretation of survey and interview findings in relation to AI-integrity behaviours and educational technology adoption.

### Table 2.

#### *Theoretical Framework alignment*

Framework	Applied to study analysis
Academic Integrity Theory(Bretag, 2018)	Used to analyse ethical norms and the risk of doing things wrong.
PMBOK Governance & Risk Management(Institute, 2021)	Mapped integrity initiatives as project processes.
Technology Acceptance Model (TAM)(Silva, 2015)	Justified technology-enabled learning tools Hence introducing, The Egg & Basket Quiz

Table 2 presents the theoretical frameworks applied in this study to guide analysis, design, and interpretation. It aligns each framework with specific aspects of AI-integrity implementation, including policy, technology adoption, and project management processes. This mapping provides a structured lens for understanding the intervention and connecting empirical findings to relevant theory.

### **Methodological Positioning in the Framework of Project Management**

The research conceptualises AI-integrity implementation within tertiary institutions as a project management challenge, involving:

- Stakeholder engagement: Aligning student and faculty expectations.
- Risk management: Mitigating AI misuse.
- Training and resource planning: Building AI literacy capability.
- Policy rollout as controlled project delivery: Aligning institutional governance with digital ethics initiatives.

### **Technology-Enabled Learning Intervention and Strategic Suggestions (Egg & Basket Quiz Model)**

Based on empirical findings and the prototype-stage mixed-methods data collected from student and faculty stakeholders, this study identifies a need for strategic and project-managed interventions to strengthen academic integrity within AI-enabled learning environments. The recommendations reflect project governance principles, aligning with educational technology deployment, stakeholder engagement, and risk mitigation processes typically used in IT project management.(Kerzner, 2025; Prensky, 2003).

### **Recommendations for a Holistic AI-Integrity Framework**

Institutions should take a proactive approach involving pedagogy, technology delivery, and governance to handle this organizational change project successfully. Important project-related suggestions consist of:

- Policy Development (Governance & Scope Management): Establish clear disclosure policies supported by standardised templates as formal deliverables. These should promote transparency, informed consent, and alignment with institutional AI-integrity objectives.
- Assessment Redesign (Quality and Risk Management): Implement resilient, multimodal, and process-driven assessment formats (e.g., oral defences, reflective journals, in-class writing), reducing dependency on output-heavy tasks vulnerable to AI misuse.
- AI Integrity Literacy (Training & Capability Development): Integrate AI-integrity training into academic programmes for both students and staff. This includes understanding *how*, *when*, and *why* AI should be used in a manner that maintains academic standards and supports informed decision-making.
- Faculty Development (Stakeholder Engagement & Change Management): Deliver structured professional development to support pedagogical adaptation in response to AI integration. This strengthens stakeholder readiness and reduces resistance to digital transformation.

### **Technology-Assisted Prototype Approach: The Egg and Basket Quiz**

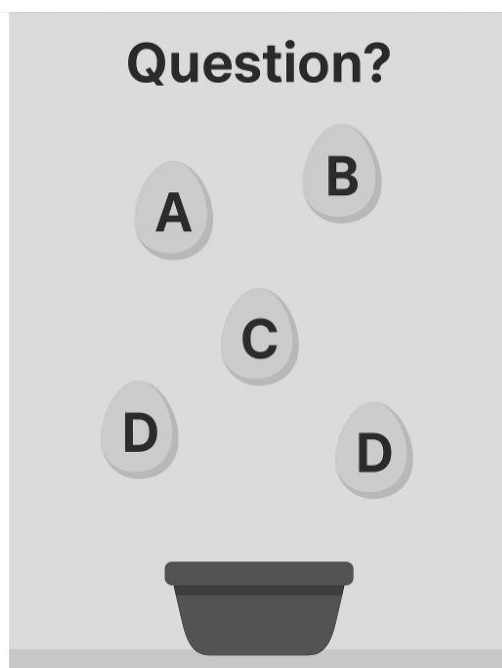
The paper presents the Egg & Basket Quiz as a prototype educational technology intervention to operationalize the recommendations and close the integrity gap. It facilitates scenario-based learning and moral decision-making and was created using iterative design concepts in line with Agile IT project management.

- Mechanism: Participants operate a digital “basket” to catch “eggs” (example: - AI-related ethical questions), simulating risk-based decision-making under time constraints.
- Feedback: Immediate, policy-aligned responses function as a live monitoring and control mechanism, enabling real-time learning and behaviour adaptation.
- Objective: The model promotes critical thinking and ethical cognition through rapid decision-making, reflecting how project managers navigate integrity risks during technology implementation.

In line with the Solution Design and Pilot Phase of an educational IT project, this gamified learning concept functions as a technology-enabled solution prototype. (Venkatesh et al., 2003)

#### **Figure 1**

*The ‘Egg & Basket’ game model*



## **Recommended features of the technology enabled tool**

### **Pedagogical Features**

- Scenario-based questions simulating real academic decision-making situations.
- Policy-linked explanations to clarify acceptable and non-acceptable AI use in context.
- Reflective prompts encouraging learners to evaluate their choices and ethical implications.
- Designed to reinforce institutional integrity standards while being student-centred.

### **Gameplay Design**

- Adaptive difficulty levels to match learner proficiency and promote progressive learning.
- Multiple feedback modes (immediate, delayed, reflective) to suit different learning preferences.
- Randomisation of question scenarios to reduce predictability and encourage critical thinking.
- Accessibility options ensuring inclusivity (e.g., screen-reader compatibility, timing controls).

### **Academic Integrity Design Principles**

- Transparency features, including optional disclosure input fields for learners to express how they might use AI in solving tasks.
- Positive reinforcement, such as bonus points for demonstrating correct ethical practice.
- Gentle consequences (soft penalisation with recovery options), aligning with educational, not punitive, goals.
- Encourages self-correction and accountability, reflecting constructive approaches favoured in New Zealand higher education.

### **Assessment and Monitoring**

- Instructor dashboard to allow project managers and teaching staff to monitor progress, risk patterns, and engagement.
- Optional pre- and post-quiz integrity micro-assessments to measure changes in awareness.
- Learner summary reports for self-tracking and potential reflection assessment tasks.

### **Technical Delivery Features**

- Privacy-first architecture, complying with IT governance and data minimisation principles.
- Modular and easy content update mechanisms, supporting iterative PM lifecycle updates.
- NZ English default contextualised for local higher education norms.
- Multilingual support, promoting wider accessibility and adaptability for international learners.

## **Discussion**

The findings of this study indicate that students frequently use AI tools in their academic work, yet uncertainty regarding acceptable practices persists, with 72% reporting weekly use and 58% unsure about institutional rules. This represents a governance and risk challenge for institutions, positioning AI-integrity management as a structured project initiative requiring risk identification, stakeholder engagement, and strategic planning. Applying Academic Integrity Theory highlights the importance of transparency, accountability, and fairness, which can be operationalised through structured project deliverables.

The Egg & Basket Quiz is a technologically enabled educational tool that was created using Agile methodology and iterative project management principles. The tool serves as an example of how digital interventions can be implemented as an IT project, where the project lifecycle consists of prototyping, user testing, and iterative refining. User engagement is explained by the Technology Acceptance Model

(TAM), which supports the strategic integration of the gamified tool within the curriculum by increasing adoption rates due to high perceived utility and ease of use. Features like scenario-based inquiries, feedback loops, and reflective prompts are designed using PMBOK domains including risk management, stakeholder involvement, quality management, and scope definition.(Luckin & Holmes, 2016)

The study proposes a set of project-aligned recommended features for the Egg & Basket Quiz, translating pedagogical and ethical requirements into deliverables:

- Pedagogical: Scenario-based questions, policy-linked explanations, and reflection prompts for ethical decision-making.
- Gameplay: Adaptive difficulty, randomized question order, multiple feedback modes, and accessibility options to maximise engagement.
- Academic Integrity Design: Encouraging disclosure, awarding bonus points for ethical behaviour, and soft consequences to foster accountability.
- Assessment and Monitoring: Instructor dashboards, pre/post micro-quizzes, and learner summaries as project control mechanisms.
- Technical: Privacy-first architecture, modular content updates, NZ English defaults, and multilingual support for scalable implementation.

These features reflect PM practices such as deliverable definition, iterative testing, quality control, and stakeholder-focused training, ensuring that AI-integrity interventions are feasible, measurable, and sustainable.

Universities may systematically manage risk, uncertainty, and stakeholder resistance by framing AI-integrity programs as IT projects. Academic integrity can be improved by formal project management techniques while preserving educational flexibility, as demonstrated by the integration of pedagogical interventions with governance and assessment frameworks(Selwyn, 2021)

## Conclusion

This study reframes AI-integrity challenges as project management problems within higher education, highlighting the delivery of technology-enabled learning tools, policy interventions, and AI literacy initiatives as organisational change projects. The Egg & Basket Quiz serves as a prototype project deliverable, demonstrating how gamified, scenario-based learning can be integrated into curricula to strengthen integrity. Recommendations and features are mapped to PMBOK domains, ensuring governance, risk mitigation, stakeholder alignment, and iterative development are embedded in delivery.(Turner & Müller, 2003; Zawacki-Richter et al., 2019)

Institutions can proactively handle adoption issues, integrate ethical decision-making, and guarantee congruence between pedagogy, technology, and policy by coordinating integrity interventions with project management principles. The suggested aspects of the tool pedagogical, gameplay, integrity, assessment, and technical offer quantifiable deliverables and KPIs that facilitate assessment and ongoing development. While PMBOK directs systematic planning, scope definition, risk management, and stakeholder involvement, TAM informs user adoption tactics.

The limited sample size (25 students, 3 professors) and the intervention's prototype stage are among its drawbacks. To evaluate scalability, future study should broaden stakeholder involvement, incorporate longitudinal evaluation, and pilot the Egg & Basket Quiz across several courses. Organizational preparedness will also be strengthened by coordinating future deployment with official project lifecycle documentation, milestone tracking, and change management procedures.

This study demonstrates that effective AI-integrity implementation is best approached as a project-managed educational technology initiative, where structured governance, iterative development, and strategic stakeholder engagement enable ethical, sustainable AI adoption in higher education.(Jobin et al., 2019)

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