

COMMUNICATION

Gamifying Academic Integrity: An Inclusive, Interactive Model for Teaching Ethical Academic Practice in Higher Education

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ABSTRACT

Academic integrity remains a key challenge in higher education. At Teesside University, increasing cases of plagiarism, collusion, and contract cheating highlighted the need for more engaging and educationally grounded interventions. In response, the English Language Centre (ELC) designed and delivered a two-part initiative integrating gamification and inclusive pedagogy to reframe integrity as a participatory academic literacy rather than a compliance exercise. The programme combined a large interactive lecture introducing core integrity principles with a practical workshop developing paraphrasing, quoting, and summarising skills. Kahoot! was embedded throughout as a gamified learning tool that fostered participation, inclusivity, and real-time feedback. Across 26 Embedded Academic Literacies (EAL) sessions, the initiative engaged 620 students from all five Schools. Anonymous feedback showed that over 90% of participants found the sessions useful and reported increased understanding, frequently describing them as “informative,” “interactive,” “engaging,” and “fun.” Participants also demonstrated a 25% reduction in average similarity scores compared with previous cohorts, indicating measurable improvement in integrity-related practices. Staff observed that engagement and responsiveness declined when institutional access to Kahoot! was temporarily lost, reinforcing its pedagogical value. This short communication presents a case study of this innovation, drawing on routine anonymous feedback and staff reflections to illustrate how gamification can enhance academic integrity education in inclusive, diverse settings. The findings suggest that framing integrity as an

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interactive literacy, supported by game-based participation, can increase engagement, confidence, and ethical academic practice across disciplines.

Keywords: Academic Integrity; Gamification; Inclusive Education; Academic Literacies; Engagement

1. Introduction

Academic integrity is both a principle and a practice, yet it is often one of the least effectively taught aspects of higher education.

Universities typically rely on regulatory handbooks, induction talks, and online resources, which convey rules but do little to support the development of ethical academic practices. At Teesside University, this problem was compounded by a sharp increase in misconduct cases, raising urgent questions about how best to prepare students, particularly those joining at undergraduate and postgraduate entry points, to engage with academic work responsibly and confidently.

Research shows that students often misunderstand plagiarism, collusion, and authorship not out of malice but because they are unfamiliar with academic conventions or unsure how to apply them^[1, 2]. For international students, conceptions of authorship may differ significantly from those in the UK, while home students from widening participation backgrounds may never have received explicit instruction in paraphrasing or referencing^[3]. Lea and Street's (2006) academic literacy model reminds us that integrity is not a set of technical rules but a way of participating in disciplinary communities of practice, requiring explicit and contextualised teaching^[4].

Recognising this, the English Language Centre (ELC) at Teesside University led the development of an innovative initiative in academic integrity education that reframed integrity not as a punitive compliance issue but as an academic literacy to be cultivated through interactive, inclusive, and participatory pedagogy. The initiative drew on principles of gamification, active learning, inclusive pedagogy, and feedback literacy, situating Kahoot! as both a catalyst for engagement and a platform for formative feedback. Consistent with recent scholarship on digital pedagogy and game-based learning, technology-enhanced, low-stakes, and interactive formats have been shown to promote higher engagement, more equitable participation, and deeper learning gains in higher education contexts^[5-8].

These approaches extend beyond motivation to foster inclusion and psychological safety by enabling all learners, including those less confident or linguistically diverse, to participate actively^[5]. Sailer et al.^[6] highlight that meaningful gamification encourages sustained, purpose-driven engagement rather than superficial competition, supporting autonomy and mastery. Likewise, Ar^[7] and Pelizarri^[8] emphasise that well-designed digital pedagogies can create participatory, culturally responsive learning spaces where students engage collaboratively and ethically. Together, this body of evidence underscores the pedagogical value of gamified, feedback-rich learning environments in promoting academic integrity as a shared, inclusive, and transformative educational practice.

2. The Teaching Context

Teesside University is a post-92 institution in the North-East of England with a strong commitment to widening participation and internationalisation. Its student body is diverse, with large cohorts from South and East Asia, Africa, and the Middle East, alongside home students from local and regional communities. This diversity-enriched learning also meant students arrived with widely varying understandings of academic integrity.

Departments across the university reported a sharp rise in misconduct cases, with plagiarism and collusion particularly prevalent in first-year study. Staff noted that existing integrity education, delivered via short induction talks or online resources, was insufficiently engaging and failed to equip students with practical strategies to avoid misconduct. In response, the ELC was tasked with designing a new intervention.

The challenge was compounded by Teesside's widening participation context. Many home students were first-generation entrants unfamiliar with academic discourse and hesitant to seek support, while international students faced disciplinary expectations shaped by different cultural assumptions. For instance, those from collectivist traditions some-

times struggled to reconcile the UK emphasis on individual authorship with the collaborative practices valued elsewhere. Misunderstandings about integrity thus reflected not only deliberate misconduct but gaps in academic literacy and awareness.

At the same time, Teesside's international outlook created a strong rationale for developing an inclusive, comprehensive model of integrity education. With students from diverse cultural and linguistic backgrounds, integrity support needed to be a core element of induction and transition, not an afterthought. Generic online tutorials had failed to engage students meaningfully, so the new initiative sought to recognise learner diversity, foreground varied literacies, and build capacity for ethical academic practice from the outset. By embedding the initiative into induction week and reinforcing it within modules, the ELC aimed to make integrity education visible, interactive, and sustainable across the student journey.

3. Rationale and Description of the Innovation

The immediate driver for the innovation at Teesside University was institutional urgency: academic misconduct cases were rising sharply, and departments were seeking a proactive, educational response rather than relying on punitive measures after the fact. Yet while the intervention responded to an immediate problem, its rationale was also deeply pedagogical, rooted in established theories of learning, literacies, and engagement. In developing the initiative, the ELC deliberately positioned academic integrity not as a matter of compliance, but as a set of practices and values that could be learned, rehearsed, and internalised through active, inclusive, and interactive teaching.

The first and most significant framework underpinning the design was the academic literacy model^[4, 9]. Unlike "study skills" models that treat literacy as a technical skillset or "academic socialisation" models that assume students will absorb conventions informally, the academic literacy perspective views integrity as a negotiated practice embedded in disciplinary discourse. From this perspective, plagiarism or collusion is often not evidence of dishonesty but of students' struggles to navigate new literacy practices^[3]. Integrity education, therefore, cannot consist of abstract warnings or

policy documents alone; students must be given explicit, contextualised opportunities to practice citation, authorship, and responsible use of sources. By framing the intervention through academic literacies, the ELC sought to normalise integrity as part of learning to "write into" the academy rather than as a compliance burden.

Building on this, the initiative was informed by theories of student engagement^[10, 11]. Engagement is widely understood as multidimensional, comprising cognitive, affective, and behavioural components. Integrity education too often focuses only on cognitive understanding; students are told what constitutes plagiarism while neglecting affective and behavioural engagement. Yet without affective investment (motivation, interest, belonging) and behavioural participation (active practice, contribution), cognitive understanding remains superficial. Kahoot! was therefore chosen because it could engage all three dimensions: the immediacy of interactive quizzes captured behavioural participation, instant feedback supported cognitive processing, and the playful, low-stakes format fostered positive affective responses. In this sense, Kahoot! was not just a delivery tool but a pedagogical strategy to ensure engagement at multiple levels.

A third theoretical foundation was gamification, particularly research on the motivational and pedagogical effects of game-like elements^[12, 13]. Gamification has been shown to increase student persistence, enhance motivation, and transform student perceptions of "dry" or intimidating topics by embedding them in playful contexts. Academic integrity, often associated with punitive lectures, was precisely the kind of topic that risked alienating students. Embedding Kahoot! quizzes into both the lecture and workshop created what Nicholson^[13] terms "meaningful gamification": a use of game elements that not only entertained but also supported learning outcomes. By harnessing competition, instant feedback, and visibility of group responses, Kahoot! turned compliance-driven instruction into a memorable, energised, and participatory experience. Contemporary studies similarly report sustained motivation and improved learning outcomes when digital game-based platforms are used in higher education^[6, 8].

The initiative was a two-part intervention developed and delivered by the ELC at Teesside University, designed to align with institutional priorities and sound pedagogical principles. Its structure was refined through collabo-

ration with School representatives, ensuring that the content resonated with diverse disciplinary contexts. This piloting phase proved essential, enabling the ELC to collect cross-disciplinary feedback, adapt materials accordingly, and embed a culture of consultation and co-creation within institutional teaching practices. In this way, both the process and the product of the intervention reflected innovation, positioning academic integrity not only as a topic of instruction but as a shared, participatory endeavour.

The first component consisted of a one-hour interactive lecture for large cohorts, introducing the principles and values of academic integrity as integral to membership in the academic community. It addressed key forms of misconduct, plagiarism, collusion, duplication, misrepresentation, and contract cheating, while emphasising their academic, professional, and reputational implications. Engagement was enhanced through Kahoot! quizzes featuring multiple-choice and scenario-based questions that challenged students to distinguish between acceptable and unacceptable practices. Instant feedback transformed what could have been a compliance session into an interactive learning experience. The second component, a one-hour practical workshop, allowed students to develop integrity skills through guided practice in quoting, paraphrasing, and summarising. Activities incorporated model examples, highlighted frequent errors, and used further Kahoot! exercises to test the application and stimulate discussion. By combining gamification with dialogic teaching, the intervention fostered active participation, critical thinking, and a deeper, more reflective understanding of academic integrity.

Including Kahoot! in both lecture and workshop formats represented a strategic use of technology to enhance

engagement, inclusion, and feedback. It was not simply about entertainment but about creating what Nicol^[14] describes as “dialogic spaces” where students could test ideas, receive feedback, and reflect in a low-stakes environment. For Teesside’s widening participation and international cohorts, this was especially valuable as students who might have felt intimidated or silent in traditional lectures could participate anonymously and equally, reshaping classroom dynamics.

4. Reflection

The implementation of the innovation revealed significant strengths and measurable impacts, supported by both quantitative and qualitative evidence (see **Table 1**). Across the 26 EAL sessions delivered, 620 students participated. Of those who completed the online feedback survey, 94% (n = 282) agreed or strongly agreed that the sessions increased their knowledge, 96% (n = 288) found them useful, and 94% (n = 281) said they would recommend them to peers. Student feedback consistently described the sessions as “informative,” “interactive,” “engaging,” and “fun,” confirming that the approach successfully transformed academic integrity from a compliance topic into an accessible and memorable learning experience. Learners also suggested that the sessions be delivered earlier in their studies or made compulsory across all programmes to ensure equitable support and prevent confusion or misunderstanding about integrity expectations. These comments underscore the view that academic integrity is not peripheral but foundational to academic success and well-being, and that early, structured provision can reduce both academic and emotional risks associated with misconduct.

Table 1. Summary of Delivery and Feedback Indicators.

Indicator	Description/Measure	Key Outcome
Delivery scale	26 Embedded Academic Literacies (EAL) sessions across all five Schools	620 students participated
Knowledge gain	Students agreeing or strongly agreeing that sessions increased their knowledge	94% (n = 282)
Usefulness	Students finding sessions useful or very useful	96% (n = 288)
Peer recommendation	Students indicating they would recommend sessions to peers	94% (n = 281)
Qualitative feedback	Common terms in student comments	“Informative,” “interactive,” “engaging,” “fun”
Academic performance indicator	Change in average Turnitin similarity scores compared with previous cohorts	25% reduction

Quantitative indicators reinforced these perceptions. Participants demonstrated a 25% reduction in average similarity scores compared with previous cohorts, reflecting improved application of paraphrasing, summarising, and citation practices. Staff corroborated these findings, reporting fewer misconduct panels and improved written performance among students who attended. The positive outcomes also extended to pedagogical practice: academics who observed the sessions highlighted Kahoot! as a key driver of engagement, inclusivity, and real-time feedback. When institutional access to Kahoot! was temporarily interrupted, staff noted a marked decline in student participation and responsiveness, further substantiating the tool's role in promoting active learning. Collectively, this evidence demonstrates that the innovation not only enhanced students' understanding and practice of academic integrity but also modelled effective, inclusive teaching methods that staff could adapt within their own disciplines.

The growing reputation of the intervention further underlined its institutional value. In the year following its launch, the ELC received increasing requests from Schools to integrate the sessions into their programmes. Delivery expanded to five times the initial rate, reflecting both demand and recognition. The innovation was no longer seen as supplementary but as an essential element of academic induction and transition at Teesside.

Taken together, the combination of strong feedback, measurable academic improvement, and growing institutional adoption indicates that the innovation achieved substantial impact and established a foundation for a sustainable, university-wide model of integrity education.

5. Limitations

While the initiative produced encouraging outcomes, several challenges and limitations remained. The competitive element of Kahoot! was not universally motivating, and reliance on quiz-based interaction risked oversimplifying complex issues, underscoring the need for sustained discussion and critical reflection. Furthermore, when there was a temporary loss of Kahoot! access, staff observed immediate declines in student responsiveness, reduced willingness to volunteer answers, and slower feedback loops. This highlighted a dependency on gamified, low-stakes interactivity

and reaffirmed the practical need for reliable access to such tools.

Beyond these operational challenges, broader limitations also warrant acknowledgment. As this paper reports a pedagogical initiative rather than a controlled empirical study, it lacks formal sampling procedures and control measures. Feedback was gathered anonymously and voluntarily, introducing potential response bias, while quantitative indicators, such as reductions in similarity scores, should be interpreted as indicative rather than causal. Finally, the findings are drawn from a single-institution context, which constrains their generalisability. Recognising these boundaries ensures cautious interpretation and provides a valuable foundation for future, systematic, and multi-institutional research.

6. Future Pedagogical Directions

The success of the academic integrity innovation at Teesside University highlights the need for its continued development and embedding across the institution. Student and staff feedback confirmed that the intervention was not only engaging and informative but also transformative in shaping perceptions of integrity. Students emphasised that the sessions would be most valuable if delivered at the start of their studies, while academics noted how the interactive format fostered participation, inclusivity, and engagement. These insights make clear that integrity education must move beyond an optional or peripheral activity to become a core, visible, and compulsory element of university life.

The first priority is institutional embedding. Transition pedagogy^[15] stresses that the early weeks of study are critical for shaping student identity and success. Delivering integrity education during this period would ensure students begin with a strong foundation, preventing confusion from escalating into misconduct. Embedding sessions within programme structures, rather than as standalone extras, would reinforce their legitimacy and signal that academic integrity is central to university values.

A second direction is disciplinary contextualisation. While the pilot demonstrated the value of tailoring examples to different Schools, there remains scope for closer collaboration with academics to integrate integrity teach-

ing into subject-specific curricula. Academic literacy research^[4,5] shows that students learn conventions most effectively when contextualised within disciplinary practice. By co-developing resources with subject specialists, such as case studies for Health, lab reports for Engineering, or business plans for Management, future iterations can achieve deeper relevance to students' academic and professional pathways.

A third imperative is sustainability. Rapid growth in demand for the sessions demonstrated institutional value but also raised questions about scalability. Long-term success requires robust structures to support staff capacity and resource sharing. A central repository of Kahoot! quizzes, activities, and workshop materials would promote consistency, reduce duplication, and provide staff with adaptable tools. Professional development in interactive and inclusive pedagogy could further embed the initiative's principles across teaching practice. To mitigate risk from platform dependency, institutional procurement of a dedicated Kahoot! licence has been requested; this will stabilise access to the engagement and feedback affordances that proved critical during delivery.

Finally, the initiative should continue evolving as part of a broader pedagogy of feedback and reflection. Kahoot! effectively surfaces understanding and misconceptions, but its greatest value lies in the dialogue that follows. Embedding reflective activities, encouraging students to analyse and apply feedback, would strengthen feedback literacy^[16] and help transfer integrity practices across their academic work. Future developments could also connect integrity education with wider themes of academic identity, ethical reasoning, and professional conduct, ensuring the initiative supports not only compliance but the development of reflective, responsible graduates.

In sum, this innovation demonstrates that academic integrity education can and should be interactive, inclusive, and central to the student experience. The task now is to build on this foundation: embedding provision across programmes, tailoring it to disciplinary contexts, sustaining delivery through institutional support, and deepening its connection to broader pedagogical goals. By doing so, the university can ensure the initiative remains impactful and forward-looking, fostering a culture of integrity that supports

student success in higher education and beyond.

7. Conclusions

This case study demonstrates that academic integrity education can be both engaging and inclusive when reframed through interactive, game-enabled pedagogy. By integrating Kahoot! within a two-part model of lectures and workshops, the initiative at Teesside University transformed integrity from a compliance topic into a participatory literacy practice. Quantitative and qualitative evidence confirmed enhanced student understanding, reduced similarity scores, and increased institutional adoption, underscoring the approach's pedagogical and cultural impact.

The findings support the institutional embedding of integrity education at induction, continued disciplinary contextualisation, and sustainable access to gamified platforms that promote inclusion and real-time feedback. More broadly, the model offers a transferable framework for higher education providers seeking to embed integrity as a shared value and interactive learning process. Future research should extend evaluation across institutions and explore long-term effects on student learning, engagement, and ethical development, ensuring that gamification continues to evolve as a meaningful, reflective, and scalable approach to fostering academic integrity.

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Conceptualization, A.B. and E.P.; resources, A.B.; writing-original draft preparation, A.B.; review and editing, E.P. Both authors have read and agreed to the published version of the manuscript.

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Institutional Review Board Statement

Not applicable. This article reports a pedagogical case study using routine, anonymous service feedback; no human-subject research was conducted.

Informed Consent Statement

Not applicable. Student and staff comments were gathered anonymously for quality enhancement, not as research data.

Data Availability Statement

Aggregated, anonymised feedback summaries and example materials are available from the corresponding author upon reasonable request.

Conflicts of Interest

The authors declare no conflict of interest.

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