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# From Apprehension to Application: Integrating Generative AI Ethically Through Authentic Assessment and Targeted Literacy Development

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**Research Domains**

Learning, teaching and assessment (LTA)

**Abstract**

The integration of Artificial Intelligence (AI) in education raises significant concerns regarding academic integrity, AI literacy, and the development of critical evaluative skills. This study explores how postgraduate students (N=15) in a UK Master's programme navigated and integrated teacher, peer, self, and AI-generated feedback within a portfolio-based assessment framework, supported by workshops on feedback and AI literacy. Using a multi-method qualitative design, data were collected through Likert scales, reflective accounts, and interviews. Findings reveal a clear hierarchy of perceived value, with teacher feedback most appreciated for contextual depth, while AI-generated feedback was considered least useful due to its generic and overly positive nature. Students demonstrated agency by triangulating feedback and applying evaluative judgement. Structured reflection was pivotal in promoting metacognition and processing feedback. The portfolio approach facilitated authentic, agentic and ethical AI use, suggesting that AI, when critically engaged with and pedagogically supported, can supplement learning while upholding academic integrity.

**Full paper**

The increasing presence of Artificial Intelligence (AI) in education has sparked intense debates regarding its impacts on academic integrity, the need for enhanced AI literacy among students and staff, and the potential effects on the development of crucial skills like academic judgment and critical thinking (Zhan and Yan, 2025; Yan, Zhan and Boud, 2025). While portfolio assessment has been proposed to foster authentic learning through iteration and 'landing spaces' for formative feedback, empirical investigations and those exploring the comparative value and integration of diverse formative feedback sources, in particular AI-generated feedback, within this process remain underexplored. This study followed a progressively focused qualitative approach to investigate how students in a UK

higher Master's degree education setting (N=15) orchestrated their learning and perceived, evaluated, and utilised, teacher, peer, self-assessment, and generative AI, within a *portfolio assessment framework* supported by workshops on peer feedback and AI literacy.

Using a multi-method approach, the study collected data via Likert scales, reflective accounts, and interviews. Findings indicate a distinct hierarchy of perceived usefulness: teacher feedback was most valued for its personalised detail and contextual evaluative expertise, followed closely by structured reflection prompted by coversheets, then self-assessment using examples, peer feedback, and lastly AI-generated feedback. Despite receiving training in prompting skills, participants reported that while AI offered immediacy, it was often generic, surface-level and positively biased, requiring significant critical evaluation and triangulation before it could be integrated.

Students demonstrated agency by actively orchestrating learning from these feedback sources, using triangulation, evaluative judgement and reflection to determine action to take. Participants identified these as crucial skills to navigate learning from the varied sources. Significantly, structured reflection through coversheets aided metacognition and feedback processing. The workshops proved effective in helping learners develop specific AI literacy skills (prompting, critical assessment, ethical awareness) and shifted perceptions of AI from being viewed primarily as a means of misconduct towards a perception of AI as a supplementary learning tool that could offer useful, timely support.

Overall, this study informs the effective integration of multiple feedback sources in higher education assessment design through a portfolio approach. Learners felt this approach was a secure and valid form of assessment that supported deep and agentic learning while facilitating ethical use of AI. Notably, the portfolio's emphasis on iterative development, process documentation, and embedded reflective tasks was perceived by students as a robust mechanism for deep learning and upholding academic integrity. This structured approach not only made learning visible but also acted as a deterrent to misconduct, fostering a sense of ownership and authentic engagement, even when integrating AI tools.

The findings further underscore the enduring importance of expert teacher feedback, highlight the pedagogical potential of structured reflection in the learning process, and emphasise the necessity of explicitly cultivating student feedback literacy, evaluative judgment, and specific AI competencies. Findings suggest AI is best positioned as a supplementary tool requiring critical engagement, supported by targeted training and clear institutional guidelines, to enhance learning and further bolster academic integrity in the generative AI era.