

# ASCILITE 2024

## Navigating the Terrain:

*Emerging Frontiers in Learning Spaces, Pedagogies, and Technologies*

### The Future of Feedback: Exploring the Use of Generative AI in Formative Assessment

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Research shows that feedback practices significantly impact key student outcomes, including performance, engagement, and satisfaction (Esmaeeli, Shandiz, Shojaei, Fazli & Ahmadi 2023). Feedback is a crucial component of learning in Higher Education (HE) and plays a vital role in developing critical thinking, improving retention, and enhancing student engagement. The importance of timely dialogic feedback in enhancing student engagement and potentially improving retention is well understood (Advance HE 2020). However, academic staff are increasingly time-poor, with reduced opportunities to provide regular in-depth quality feedback outside of that given for summative assessment (Henderson, Ryan & Phillips 2019).

Early experimentations with using Generative AI (GenAI) such as ChatGPT to provide feedback for formative assessment recognises that students will learn and work in an AI-enabled world beyond their university studies (Bowditch 2023). GenAI can be leveraged inside and outside the classroom to achieve positive student engagement and improved skill development thereby affording them the skills and knowledge necessary to succeed (Hooda et al. 2022). Engaging with GenAI for feedback purposes offers an opportunity to increase equitable access to feedback across the student cohort, to support and further develop their critical skills and learning outcomes. As Verhoeven and Rana (2023) note, "AI disruption may present an opportunity to shift the focus from assessment *of* learning to assessment *for* learning". Utilising GenAI for feedback purposes can provide rapid, personalised learning support, and aid with planning, drafting, and revising student work. However, this adoption of GenAI for feedback must be driven and developed by the educator, keeping the human in the loop to ensure quality (Atchley, Pannell, Wofford, Hopkins & Atchley).

Our project draws on the principles of feedback literacy, current research on using AI as learning tool (Verhoeven & Rana 2023b; Tubino & Adachi 2022) and emphasises student-centred learning through dialogic feedback practices. The project draws on scholarship from Mollick and Mollick's seven approaches to student use of AI (2023), Perkins, Furze, Roe and MacVaugh's framework for ethical integration of AI in assessment (2024), and emerging work from Liu, Brightman, and Miller on GenAI and feedback (2023).

This presentation addresses the conference theme of *Technology*, providing an overview and reflection on staff development and adoption of GenAI for feedback processes for the benefit of student learning. We will showcase four use cases of the use of GenAI to design and implement feedback creation for undergraduate formative assessment across the three Colleges at the University of Newcastle. All cases engage innovation in Technology Enhanced Learning (TEL) practice in developing GenAI tools to support student learning via feedback. The presentation addresses the benefits and challenges of each approach.

Recognising the value of feedback in student learning, this PechaKucha is aimed at a diverse audience in HE. Our presentation will demonstrate applicability and adaptability to a range of disciplines as we explore the impact new and emerging GenAI technologies can have on HE. We will introduce the possibilities of using GenAI for feedback purposes, and encourage staff to consider experimenting with and adopting their own innovative TEL practices.

*Keywords:* GenAI, feedback, formative assessment, assessment for learning, dialogic feedback

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