



OPINION PIECE

# AI, affective development, and the 'third space' of learning

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## ABSTRACT

This article explores the emotional dimensions of students' engagement with assessment feedback and examines how generative artificial intelligence (GenAI), particularly large language models (LLMs), may support learners' affective development. Although feedback is often framed as a cognitive tool for improvement, it is also an emotional experience shaped by anxiety, uncertainty, and defensiveness, influencing how learners interpret and act on it. Drawing on Homi Bhabha's concept of the 'third space', feedback is conceptualised as a negotiated site between educator intent and learner interpretation. Within this space, learners construct understanding through prior experiences and emotional responses. The article argues that LLMs can mediate this process by making feedback more accessible, actionable, and emotionally manageable, supporting feedback literacy. It also considers risks, including over-reliance on GenAI, reduced interpretive skills, and diminished academic precision. Their value lies in enhancing equitable engagement with feedback rather than replacing academic judgement or educator expertise in higher education.

**KEYWORDS:** affective development, artificial intelligence, third space, feedback literacy.

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## Introduction

For many learners, assessment feedback is not a neutral input; it is an emotional encounter. Comments intended to guide improvement can instead trigger anxiety, defensiveness, or disengagement. This is particularly evident in intensive learning environments such as STEM

disciplines, where performance is often closely tied to grading structures. In such contexts, learners may develop an external locus of control (Rotter, 1966), interpreting grades as primary indicators of capability and validation. When feedback does not align with expectations, it can create a dissonance between self-perception and evaluated performance.

This dissonance is not merely cognitive; it is shaped by the emotional response to feedback and is affective in nature. Such emotional responses, such as stress or anxiety, can interrupt the processes required to interpret and act on feedback. As a result, feedback is often underutilised (Carless & Boud, 2018), not because it lacks value, but because it is experienced differently and often perceived as difficult to engage with.

### **Feedback as a site of affective development**

If feedback is inherently emotional, it also represents a powerful site for affective development. Moments of discomfort, uncertainty, or challenge can support the development of resilience, self-regulation, and feedback literacy, provided learners are appropriately supported in navigating them. Although feedback may be delivered through a range of modalities, including visual, spoken and audio-recorded forms, the discussion presented here is concerned specifically with written feedback, as this remains a predominant mechanism through which students engage with evaluative commentary on their work.

In STEM disciplines, feedback often tends to privilege the cognitive domain, focusing on the content produced by the learner in a structured and ostensibly objective manner (Nelson & Schunn, 2009). This article argues that feedback should be reconsidered not only as a cognitive intervention but as a space for reflection and affective development. Such a reconceptualisation requires a shift in how feedback is designed and mediated. It is not sufficient for feedback to be accurate or detailed; it must also be interpretable, actionable, and psychologically safe for learners to meaningfully engage with, particularly given the emotionally weighted ways in which feedback is often received.

At the same time, this expectation must be situated within the realities of contemporary higher education. Increasing cohort sizes, multiple assessment points, time constraints and significant workload pressures (Henderson et al., 2019) constrain the extent to which feedback can consistently meet these ideals. A tension therefore emerges between the



aspiration for high-quality, affectively attuned feedback and the structural conditions under which it is produced.

### **The third space of feedback**

This tension can be understood through the concept of the 'third space' (Bhabha, 2012). While originally developed within postcolonial theory, the notion of a third space offers a useful lens for understanding feedback as a site of negotiation rather than transmission. In this space, meaning is not simply delivered from educator to learner but is actively constructed through a process of interpretation. Feedback exists not only as written commentary but as something shaped by the learner's lived experiences, expectations, and emotional responses.

From this perspective, the challenge of feedback is not solely about what is said, but how it is received, interpreted, and reconstructed. The gap between educator intent and learner understanding can be seen as a third space, in which meaning is negotiated and where learning either progresses or stalls.

### **LLMs as mediators of the third space**

This article identifies potential in emerging tools, particularly large language models (LLMs), which offer new possibilities in this space. The use of LLMs in assessment and feedback remains contested within higher education, with ongoing concerns relating to ethics, accountability, transparency, and fairness (Atherton et al., 2024; Williamson, 2026). However, rather than positioning LLMs as replacements for academic judgement, they can be understood as mediators operating within this third space.

LLMs such as ChatGPT, Copilot, and Claude can act as intermediaries between educator feedback and student understanding. Their role is not to alter the substance of feedback, but to support how it is received, interpreted, and acted upon. In doing so, they may help make feedback more accessible while preserving its academic integrity.

An additional consideration is the potential for such tools to support more equitable engagement with feedback. Access to on-demand, non-judgemental interpretation may be particularly valuable in contexts where learners' experiences of feedback are shaped by intersectional factors such as race, gender, ethnicity, and socioeconomic background (Kleemola et al., 2025; Nichols & Stahl, 2019). Moreover, academic feedback practices are



often rooted in dominant disciplinary and cultural conventions, which may not be equally accessible to all learners, particularly where these conventions fall outside learners' prior educational, cultural, or linguistic experiences. In this sense, LLMs may provide a mediating layer that supports more inclusive engagement with feedback, although this potential must be approached critically.

This article considers this potential through two complementary lenses. First, how educators might use LLMs to translate feedback into forms that are equitable, student-centred, and emotionally attuned. Second, how learners might use LLMs to reinterpret feedback in ways that reduce emotional barriers and support actionable engagement.

### **Translating feedback through LLMs**

A common challenge in feedback practice is that markers identify problems or limitations without clearly guiding improvement (Carless & Boud, 2018; Nicol & Macfarlane-Dick, 2006; Winstone et al., 2017). LLMs offer potential here by scaffolding feedback into structured, actionable guidance, enabling learners to translate critique into improvement. The specificity of such guidance depends on the contextual information available to the model. Where educators provide assessment criteria, assignment briefs, or disciplinary frameworks within the prompt, LLMs may elaborate feedback in ways that align more closely with the theoretical grounding of the assessment. For example, the feedback:

At present, references to established leadership models are limited and described vaguely, which leads to assumptions rather than clearly supported arguments

Might be elaborated as:

You have begun to engage with relevant leadership concepts, which provides a useful foundation. To strengthen your work, try to refer more explicitly to theories such as servant leadership, transactional and transformational leadership, and explain them more clearly. This will help ensure your arguments are well-supported rather than based on general assumptions.

Where only the original feedback is provided by a learner, an LLM may still support interpretation without introducing additional theoretical content:



Your marker is suggesting that you need to explain leadership theories in more detail and use them more directly to support your arguments. Rather than mentioning theories briefly, aim to explain how they relate to your discussion and use evidence from the literature to justify your points.

Such translations do not remove critique, but reframe it in a way that is more accessible and actionable. LLMs can further scaffold this process by: breaking feedback into manageable steps, prioritising areas for revision and providing examples of improved work. In doing so, they support learners in navigating the third space between feedback and understanding.

### **Learners navigating the third space**

Importantly, LLMs also enable learners to actively participate in this interpretive process. By engaging with GenAI through structured prompts, learners can clarify meaning, explore examples, and reframe feedback in less emotionally triggering ways. In doing so, they are better positioned to navigate the affective dimensions of feedback, including feelings of uncertainty, anxiety, or defensiveness, which might otherwise inhibit engagement.

This shifts the learner's role from passive recipient to active interpreter. Rather than experiencing feedback as a fixed judgement, learners engage with it as a resource that can be unpacked, questioned, and applied. Such engagement supports the development of feedback literacy, as learners begin to make sense of feedback not only cognitively, but also in relation to their emotional responses.

The accessibility of such tools may also act as a form of empowerment, enabling learners to engage in the meaning-making of feedback on their own terms. This may be particularly significant in contexts where learners' prior experiences, confidence, or positionality shape how feedback is received and interpreted. In this sense, LLMs can support more equitable engagement with feedback by providing a consistent, non-judgmental space for interpretation.

Within this framework, the third space becomes not only a site of mediation between educator intent and learner interpretation, but also a site of agency, reflection, and affective development.



## Risks and considerations

While the use of LLMs in feedback presents significant opportunities, it is not without risk. One concern is the over-sanitisation of feedback, where academic precision may be diminished if tone is prioritised over substance. There is also a risk that increased reliance on GenAI may erode the learners' ability to independently interpret feedback, limiting the development of feedback literacy and resilience in everyday situations.

Additionally, LLMs may introduce subtle distortions in meaning, as they generate responses based on patterns rather than true understanding. Finally, while GenAI may promise efficiency, it can also create a workload paradox, requiring educators to review and refine outputs and potentially increasing pressure to produce highly polished feedback.

## Conclusion: designing the space between

As higher education continues to explore the role of GenAI, the technology's potential extends beyond efficiency and automation. One of its most promising applications lies in addressing a longstanding challenge: supporting learners to meaningfully engage with feedback while navigating the emotional responses that can inhibit this process.

By conceptualising feedback as a third space between educator intent and learner interpretation, LLMs can be understood not as replacements for academic judgement, but as tools that support the negotiation of meaning within this space. When used thoughtfully, they offer a way to make feedback not only more accessible but more actionable and developmentally meaningful. In doing so, feedback becomes more than a post-assessment artefact; it becomes a structured opportunity for both cognitive and affective growth.

## Disclosure statement

The author used the following generative AI tools in the preparation of this manuscript: ChatGPT and Grammarly. The tasks performed by ChatGPT include: refining the clarity, structure, and academic tone of certain sections of the manuscript. In addition, Grammarly was used for spell checking and grammatical editing. The author has complied with the journal's principles of AI use.



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