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Time, emotions and moral judgements: how university students position GenAI within their study

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ABSTRACT

The emergence of Generative AI (GenAI) in higher education has prompted considerable discussion within the research community. Despite their centrality, students' perspectives remain underexplored. We investigated how students position GenAI in relation to their studies, conducting focus groups with 79 students across four Australian universities. Taking a sociotechnical stance and employing reflexive thematic analysis, we identified three primary themes: (1) studying with and without GenAI; (2) mixing messages and assumptions; and (3) 'coming from me': self-trust and resistance to dependency. Crossing these themes were axial threads of time, emotions, and moral judgement. Our findings illuminate a complex, dynamic and uncertain landscape of relationships in which students prioritise their developing values and moral positions over institutional messaging. Amongst diverse and changing practices, students generally conveyed a sense that their educational work should come from, and be owned by, themselves. This concept of ownership could productively inform academic integrity discussions. Institutions may need to move beyond rules and restrictions, to foster environments where students can develop nuanced relationships with GenAI whilst maintaining academic autonomy. This research demonstrates the value of centring student voices in shaping scholarly practice and policy, particularly in contexts of significant technological change.

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Introduction

Generative artificial intelligence's (GenAI) presence in the higher education sector appears substantive, pervasive and irreversible. While students are clearly important to any discussion of how the sector engages with GenAI, their perspectives have been often overlooked (Jensen et al., 2024). Indeed, a 2024 review suggests limited empirical

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research as only fourteen studies engaged with students as participants and only half of these studies elicited what students themselves thought about or did with respect to GenAI (McGrath et al., 2024). Moreover, these studies often reflected predominant discourses of artificial intelligence in the higher education literature (McGrath et al., 2024), reflecting general tendencies to talk optimistically about future possibilities (*'utopia-just-around-the-corner'*) or pessimistically about detrimental effects (*'dystopia-is-now'*) (Bearman & Ajjawi, 2023). By exploring how students position their interactions with GenAI within the complex and dynamic mosaic of their study, we can gain more nuanced insights into how students are navigating a rapidly changing technological landscape.

What is currently known about how students engage with GenAI? Students, like the rest of us, are in a landscape with widespread prevalence of easily accessed GenAI applications such as ChatGPT or Midjourney (Wu et al., 2024). GenAI has been rapidly incorporated into feedback tools, translation aids, and writing assistants, which are increasingly embedded in platforms such as word processors (Godwin-Jones, 2022). Empirical studies suggest that, broadly speaking, students are highly engaged with GenAI. For example, 2555 students surveyed in the UK (Johnston et al., 2024) reported that they used GenAI to plan, summarise text, code and reference, expressing mixed but mostly supportive views about how much these kinds of technology should be used to complete assessment tasks. Strzelecki and ElArabawy (2024) employed the Unified Theory of Acceptance and Use of Technology (UTAUT) in a sample of 543 Polish and Egyptian students, which suggest that positive experiences of ChatGPT's performance fostered an intention to use it into the future. Finally, Ghimire et al.'s (2024) study of semi-structured interviews with 20 Nepalese students described perceived opportunities such as accessing information, saving time, and engagement but also reported perceived risks, such as the loss of creativity and writing skills, and the potential for cheating.

There are a range of qualitative studies that add nuance to this picture. Chan and Hu (2023) surveyed 399 Hong Kong students regarding their use and perceptions of GenAI. The authors note mixed views: 'Students recognised the potential for personalised learning support, writing and brainstorming assistance, and research and analysis capabilities. However, concerns about accuracy, privacy, ethical issues, and the impact on personal development, career prospects, and societal values were also expressed' (Chan & Hu, 2023, p. 1). This simultaneous excitement and fear is also found in Sevnarayan and Potter's (2024) qualitative case study, with 'contrasting views' between worry and being 'all for it' (Sevnarayan & Potter, 2024, p. 8), with students mindful of academic integrity requirements. Finally, a study of student agency categorised students as resistant, receptive, resourceful and reflective with respect to sanctioned use of GenAI (Yang et al., 2024). Together these studies illustrate the diversity of student perspective and experience, and their ever-present concerns about academic integrity.

In this study, we employ a sociotechnical frame and emphasise the mutual and dynamic constitution of relationships between people, their contexts and digital artefacts, including artificial intelligence (Johnson & Verdicchio, 2017). Alongside this framing, we follow a relational epistemology, holding that knowledge and knowing is not something only within individuals but produced through dynamic engagement with others (Thayer-Bacon, 1997); we also extend this engagement to non-human actors including

technologies (Barad, 2007; Latour, 2005). We therefore regard any GenAI-student interaction as grounded in a particular time and place, co-produced and dynamically entangled with students themselves, and their current studies and past histories (Bearman & Ajjawi, 2023). This ‘eschews often unanswerable questions such as “is this AI accurate?”’ (Bearman & Ajjawi, 2024, p. 2), to consider what is co-produced within a particular moment in time, where, as Fawns (2022, p. 711) describes, ‘outcomes are contingent on complex relations’.

In this paper, we explore how student understand their interactions with GenAI, in relation to their educational lifeworlds. Thus, this paper is guided by the research question: *How do university students position GenAI in relation to their studies?*

Materials and methods

This qualitative study forms part of a larger research effort from four large Australian universities investigating uses of GenAI in higher education. Qualitative research, grounded in participants’ perspectives and their meaning-making processes (Merriam, 2009), is particularly beneficial for exploratory studies as it enables the researcher to delve into complex issues and develop theories (Creswell, 2012). This approach allows for flexible and open insights into complex and relatively unknown topics, such as recent technological advances (Kember & Ginns, 2012).

As an exploratory, qualitative study, our aim is not to represent entire groups or sub-groups, but to illuminate diverse perspectives of learners in the study – some of which may not be widely shared – to highlight the breadth of ways students make sense of GenAI (Merriam, 2009). To this end, we employed focus group conversations with students to elicit their ways of talking about GenAI as learners and selected reflexive thematic analysis (Braun & Clarke, 2021) to present results that illuminate variation reported by participants in the study. Human ethics committee approval was granted by Monash University Human Ethics Committee, application number 41500. All participating institutions provided organisational consent.

Participants and data collection

Students were recruited from four universities that shared a similar AI approach where subject convenors decided on AI use (ban, allow, or allow with restrictions). Following promotion through emails, flyers, or notices on learning management systems, 79 students from four Australian universities consented and participated in focus groups. Our recruitment messages emphasised that students did not need to be regular users of AI but the sample included all coursework students, seeking roughly equal representation from each institution. The general strategy was of variation by mixing disciplines and enrolment types insofar as possible within any particular focus group.

Table 1 presents participant demographic information to provide context and show that the students in the study are a more heterogenous than homogenous group.

Students participated in an online, 50-minute focus group – the online mode was selected to enable students from multiple campuses to participate. Participants joined focus groups with students from their same institution to reduce variation in terminology across universities (e.g., course versus program, coordinator versus convenor) and allow

Table 1. Participant demographics.

Demographic	Participant number
University of origin	
University A (research intensive)	18
University B (Australian Technology Network)	19
University C (research intensive)	20
University D (Australian Technology Network)	22
Disciplines	
Business, Economics, and Law	19
Health	5
Humanities	28
Science	27
Course level	
Undergraduate	40
Postgraduate	35
Prefer not to say	4
Domestic/International	
Domestic	45
International	34
Pronouns	
She/her	52
He/him	24
They/them	2
Prefer not to say	1
Age	
18–24	46
Above 24	29
Prefer not to say	4

for the option of institutional reporting. We kept the focus groups small to aid discussion but chose to run many of them; there were 20 focus groups, with an average of four participants and in two instances, only one attendee. Participants selected their pseudonyms, as employed in the results section along with university and focus group number; this demonstrates the breadth of reporting.

The focus group protocols focused on several dimensions, including students' descriptions of AI platforms in their study, their views on student-AI interaction and relationships, trust and emotions, and beliefs about change (to universities and students) and in the future (workforce). Both protocols involved students writing into a Padlet (a commercial online structured whiteboard visible to all participants) and talking aloud. Since the intent was to surface a range of perceptions, beliefs, and experiences, Padlet allowed the facilitator to get information (for example, how often the student might use GenAI) that could then be used to direct the conversation efficiently, and offered an alternative opportunity for students who were less inclined to speak to be heard.

To generate data, five authors conducted the focus groups. In all but three groups, focus groups were conducted in pairs that allowed one person to facilitate the discussion while the other observed and addressed any technology issues. The pairs reflected together and started taking notes following each focus group. The five authors all ran the focus groups across multiple university groups and shared the work as equally as schedules would allow.

Sixteen hours and 40 min of focus group recordings were transcribed by the authors, and the Padlet data were incorporated into the transcripts. The final dataset comprised over 150,000 words. Pseudonyms (selected by participants) were used.

Analysis

We adopted thematic analysis as ‘a theoretically flexible’, inductive method for ‘developing, analysing and interpreting patterns across a qualitative dataset’ (Braun & Clarke, 2021, p. 4). When approached reflexively (per Braun & Clarke, 2021), thematic analysis is useful in that it allows for non-linearity, iteration, and messiness in the process of analysis itself. Accordingly, authors re-read transcripts of the focus groups they had transcribed to become familiar with the data and started to attach labels to texts. This was followed by many team meetings focused on discussing the data, clarifying understandings, naming assumptions, and identifying potential themes and topics. We were sensitised through this process by our core sociotechnical framing, as outlined in the introduction, although we did not use these ideas as analytical devices. Through these team meetings, we started to organise data as ‘clusters of pertinent similar meaning’ (ibid, p. 69). In doing so, we drew on our ‘reflective and thoughtful engagement with [the students’] data and ... reflexive and thoughtful engagement with the analytic process’ as a collective (Braun & Clarke, 2019, p. 594). Two authors then analysed all transcripts so that they were divided into these clusters.

The team drew on several of these clusters that pertained specifically to our research question. Drawing on Braun and Clarke’s (2019, p. 593) definition of a theme, we generated themes that were ‘underpinned by a central meaning-based concept’ and then decided on informative theme names that collectively worked to convey how students positioned themselves in relation to GenAI. In the process, authors referred beyond the original clusters to the full transcripts. These themes are presented in the analysis. In addition, we identified axial threads aligning with our original clusters that ran through all the themes (what might be called axial codes) with the purpose of making the ‘links between categories visible’ (Charmaz, 2014, p. 148). We have foregrounded these threads across each of the theme descriptions.

Results

Students described interacting with GenAI with respect to their studies in varied, nuanced, and sophisticated ways. All participants had knowledge of GenAI and while we were not seeking comparative insights into particular groups of students, we were struck by the consonance across institutions and demographics. There seemed to be no particular pattern across university, age, gender or discipline.

As we explore below, students’ seemingly straightforward reports of *how* and *for what* were often combined with emotional reactions and moral grappling about what GenAI use means for learning and being a student. As such, our analysis takes the form of three thematic categories each of which also references the three axial threads – *time*, *moral judgements* and *emotions* – which consistently weave across all the findings.

We start our reportage with a descriptive foundation, *studying with and without GenAI*, which explores how students talked about GenAI interactions (why, when, and for what). This theme describes the mundane moments that form the relationship between the student, GenAI and their study. As we interpret, even this mundanity is threaded through with students wrestling with *time*, *moral judgements* and *emotions*. The next theme, *mixing messages and assumptions*, builds on this by portraying the

Table 2. Overview of thematic categories and axial threads.

	Time	Moral judgements	Emotions
Studying with and without GenAI	Unstable value positions associated with time taken and time lost working with GenAI	Positioning some uses of GenAI as bad.	Sensations including relief or guilt associated with use of GenAI.
Mixing messages and assumptions	Time spent interpreting perceived institutional messages	Leaning into own moral judgements as well as assumptions in the face of uncertainty	Emotionality, particularly anxiety around breaching academic integrity rules
'Coming from me': trusting self and resisting dependency	Dependency could compound over time, in an uncertain future	Working with AI was inseparable from constant moral judgements about what it meant for the self as student	The concerns about dependency and the constant moral judgements were inseparable from students' emotions.

diverse views around what the students perceived or assumed were institutional messages about GenAI. However, as we outline in the third theme, '*Coming from me*': *trusting self and resisting dependency*, students had much clearer views about their own values with respect to interacting with GenAI. They had both convergent ideas about what mattered for learning but also divergent views about what using or misusing GenAI meant for them. Table 2 illustrates both our thematic categories and axial threads.

Studying with and without GenAI

Participants reported diverse ways of engaging with GenAI, which took place across all stages of study. Students described how they interacted with GenAI to simplify, to summarise, and to create outputs, including images or job applications. Some positioned it as providing valuable, alternate insights. One student claimed that they used it for: 'anything and everything' while other students chose to avoid it. With respect to the latter, Naina said:

when you use ChatGPT, for instance, everything it writes sounds the same. And that kind of kills the writer's voice, and there are people who really value their writer's voice ... I have never used ChatGPT. I have no interest in using ChatGPT, because I really like what I write. (Naina, UniD FG8)

These students who avoided using GenAI had many different kinds of disciplinary backgrounds, and we could not infer associations with any particular demographic profile.

For those who did study with GenAI, engagement ranged from the simple to the complex. Students reported discrete interactions (e.g., 'Can you help me do this, you know, this bit of code?' (Nat, UniD FG8)). However, there were many accounts of complex sequences involving multiple technologies, as Mia explains:

I think ChatGPT just gives you a direction for a very broad topic ... For example, I asked for something like the Lehman Brother crisis. Then I will go and YouTube to further like, really, really understand the incident. Then I would write it down myself. But will go back to ChatGPT to help me to summarise it, or like, let's say, beautify it. (Mia, UniC FG2)

Students described mixing together different activities and technologies, where it seemed possible to forget, or not notice, that GenAI was present. For example, Jane said

I think I've been using AI without realising it in PowerPoint. On the side, it comes up with design ideas for you. And I actually didn't even realise that it was AI making them ... (Jane, UniC FG4)

Students positioned GenAI in many different and, potentially, oppositional ways GenAI within their study. For some, GenAI was a faster, better alternative to search engines or similar. This introduces the first of our axial themes, *time*, through which students conveyed considerations of time taken to do things, time perceived as saved, gained or lost through more – or less – efficient practices. Students' expressions of time were often value-laden, and yet these expressions of value were unstable and variable. For example, GenAI interactions could be simultaneously positioned as a mechanistic efficiency tool and also described in humanising or anthropomorphising terms.

Me, personally, GenAI has, like, helped me cut down time on research so much. It does feel like, you know, having, like, a personal assistant who just does all the grunt work. And then I can focus more on the more analysis side of things. Which GenAI currently does not have the scaling and capacity for. So, for me, it's like huge for *saving time*. (Riley, UniD FG9) [Italics ours]

Indeed, it was possible to see a GenAI chatbot as standing in for human relations by, conversely, positioning human and social relations as primarily functional.

It's [GenAI is] the greatest, quickest support, so I don't have to go look for my tutor, I don't have to go look for my friends, it can give me an explanation of what the question is talking about, and I could try different iterations of it until it makes sense to me. (Qms, UniD FG5)

Assessment figured heavily in student accounts of GenAI in their studies. Students described varied forms of interaction between themselves, GenAI, and assessment tasks and instructions. Many spoke of GenAI interactions contributing to assessable outputs such as written tasks or presentations. A number of participants talked of working with GenAI to simplify assessment instructions or to break down tasks. There were frequent references to other students using GenAI to 'write the whole assignment' but no participants declared this about themselves. Here, the second axial thread, *moral judgements*, is highlighted as students clearly positioned certain types of uses of GenAI as problematic, naïve or 'bad'. For example, Alan said:

So actually, in some group assignment and if with some lazy student, I would say they would just use Generative AI, you know, like ChatGP, to generate all their assignments, and that is pretty, that is pretty obvious. And sometimes other group members have to rewrite a whole report and do all the things all over again. And it was kind of annoying. (Alan, UniB FG14)

Our third axial thread of *emotions* – or the ways students felt about their own or others' interactions with GenAI – intersects with these time pressures and moral judgements. Belle suggested:

If I'm stressed out and I want to get something done, and generative AI helps me I feel relief. During assignments, I feel relieved. Most of the time relief, I guess. And satisfaction, because I got my work done faster. (Belle, UniA FG20)

But in addition to these positive sensations, there were negative ones, such as frustration when GenAI 'miss[ed] the point' (Ella, UniA FG10) or failed to meet expectations of quality or accuracy or speed.

We have described how students and GenAI interact in the context of their study, including relations between themselves, peers, learning activities and assessment tasks and how these were threaded through with concerns about *time*, *moral judgements* and *emotionality*. Next, we consider how institutional efforts to guide students about GenAI influenced these relationships.

Mixing messages and assumptions

Students reported considerable institutional prescription about how and when to work with GenAI, but across participants' accounts, there was significant uncertainty, guesswork and assumptions around the acceptability of using GenAI, particularly within assessment. Overall, the messages provided were interpreted by students across all universities in multiple, often conflicting, ways. Some students were scared about working with GenAI whilst others felt emboldened. This theme encompasses both how students described contradictory guidance as well as their own contradictory responses.

Universities were generally positioned as holding very strict rules about academic integrity. Many students also felt it was the university's role to guide them on how to use GenAI safely and effectively. One student commented on their desire for:

Having more guidance, understanding about ... how do you work with it ... We have to learn how to use it as an effective tool ... (Nat, UniD FG8)

Another student wanted clear rules about the appropriate use of GenAI but was disappointed by their absence:

... just have some kind of concrete policy in place that you can look at and go like, right, this is okay. This isn't. Thank you. And it's like, even if it's something I would personally disagree with, at least it's set in stone, and nobody's gonna get tripped up ... But it turns out [the policy is] not [there]. (Kris, UniD FG7)

Rather, as Qms noted:

... we're in this very grey area where nobody knows what's really happening. ... (Qms, UniD FG5)

Some students also reported considerable *time* invested as a consequence of working around these uncertain and ambiguous rules about the use of GenAI, such as re-typing sentences rather than copy and pasting.

This mixed positioning of universities as both powerful but insufficient seemed to prompt students to lean into their own *moral judgements* about their use of GenAI but with heightened *emotionality* due to potential institutional consequences. For example, Howard noted that while generally, there was no conflict between their own moral judgement about their GenAI use, there was also:

... A bit of guilt and fear because I am often using in a way that I don't think is a breach of my true academic integrity but it technically does and I haven't reported my use, so if I get caught it will be met with harsh consequences. (Howard, UniB FG16)

Many were anxious to avoid being accused of plagiarism, sometimes conflating this with restricted interactions with GenAI. Students reported practices that they believed would keep them safe from accusations of using AI by their institutions.

At [my institution], what we've noticed is that there's like plagiarism or AI checkers, and they pretty much scan your work, and they determine whether you've used AI or not. I just, to be safe, usually go get a free one online. (Elodie, UniA FG10)

However, we note that none of the institutions had any such 'AI checkers' in place.

This theme indicates how students' views of their institutions, often based on assumptions or guesswork, influenced how they interacted with GenAI. Once again, these interactions were inseparable from our axial threads. There was strong *emotionality*, particularly with respect to the anxiety around breaching academic integrity, and we interpret the students as invoking both assumptions and *moral judgements* to help decipher the often vague institutional landscape. On occasion, this deciphering required considerable investment of *time*.

We now turn from this mixed and contradictory positioning of institutional messages, to consider how students were articulating the relationship between themselves and the new technology.

'Coming from me' – trusting self and resisting dependency

In students' accounts, almost all grappled with how much to trust GenAI and with the appropriateness of their relationship with GenAI. Many distrusted GenAI outputs, but this concern went beyond frustrations with inaccuracy. Rather, there was a sense that *doing the right thing* went beyond institutional rules, and was a matter for the students themselves. They needed to trust their own processes. Thus, to refer to our axial threads, students were constantly investing their *emotions* as part of making *moral judgements* about their GenAI interactions beyond what the institution dictated. Some fretted that moments of inappropriate use could compound over *time*, leaving the student with an unhealthy dependency.

While students generally wanted agency, and some resisted dependency, these were not polar opposites but rather appeared to be negotiated individually and, in some cases, moment-by-moment. For example, Mam stated they wanted ownership over their work:

I guess you need to have a little bit of ego in there. You have to be like. No, my thoughts are better, you know *it comes from me*. ... It's my work, and if it's not *coming from me*, if it's just somebody else, you know, but collecting information for me, then it's not really me. (Mam, UniC FG3) [italics ours]

This was not a matter of the *correct* way to work with GenAI, but of the *right* way. And for many, GenAI interactions appeared to always entail a values-based position or a moral judgement about themselves as students. As Sunny stated:

Someone can make a whole assignment using AI and just say, oh, I used AI, but like, they really shouldn't, because like as a student, you should actually do your own work and not just rely solely on AI. (Sunny, UniB FG14)

These positions were often articulated in relation to values, disciplinary context, and what it means to be a student:

Kind of feels like it devalues the work that I do as a student. I .. because it feels like. It feels like cheating. It. I'm probably a reactionary. It's very funny, because I myself as a software engineer know the basics of machine learning, it never really clicked with me. But I don't

like where AI is going, especially because I think it leads a lot of people to think that what it says is true. (Naina, UniD FG8)

Sometimes, the right thing, or what students should do, seemed to be more prudentially calculated in terms of reward and punishment, but was ultimately understood in relation to the perceived purpose of education:

If I had a friend saying [using AI for the assignment], I'd say, be careful like, you got to make sure that you're represented in it? Does that make sense? Otherwise, yeah, you're getting into trouble. And that's a waste of time studying. (Norman, UniA FG12)

Many emphasised that students themselves were responsible for GenAI's impact on their learning and education. For example, Arthur suggested that GenAI neither inherently improved nor worsened growth and development; instead, it depended on students' intent and application:

I wouldn't say that it [GenAI] makes you a better student but it gives you a resource that can make you a better student ... [and] I would say ... it doesn't make you worse ... it's only maybe because it depends on how good of a student can you be using it. (Arthur, UniD FG6)

Daniel attributed himself with even more agency, positioning GenAI as a mere tool, subordinate to the student:

... It's the way that you use it that helps you to have better ideas or be more creative, or see opportunities that you may not have seen before. ... (Daniel, UniD FG8)

Others grappled with what dependency meant for them. Some students like Freud (UniC FG4) reflected that long-term use 'could be counterproductive for your education' and could 'make you lazy'. David said:

I feel a tad guilty every time I use it. I feel like it's like when I use it. I'm like thinking to myself like what's going to happen when, like the exams come up, and I don't know the stuff that's being assessed, because I have been too dependent on AI. And I've asked AI to do stuff for me. So every time I use it, it's just at the back of my mind. It's just like, should I really be using it? And then I just get kind of worried like what's gonna happen in the future. (David, UniD FG7)

David's words bring together the complexity of what students are facing in a time of GenAI: how they are grappling with understanding what it means to learn when they don't quite know what the future will hold.

Discussion

Students described their diverse experiences with GenAI as variable, complex and often ambiguous and contradictory. We interpreted three key dynamics associated with our thematic categories: the relationship between the student, GenAI and their study practices; the relationship between the student, GenAI and institutional requirements; and finally the relationship between the students, GenAI and their own values. The axial threads illuminated commonalities across all themes: the *time* spent or gained through working with (or working around) GenAI; associated *emotions* such as relief or guilt or fear; and *moral judgements* about the right way to study and the right way to be a student in a time of GenAI.

Student responses were diverse and very thoughtful, and this aligns with previous work (Chan & Hu, 2023; Johnston et al., 2024; Yang et al., 2024). We were struck by how frequently, and across all demographics, students looked beyond simple uses of the technology, contemplating if it was ‘meaningful, useful or even harmful’ (Bearman & Ajjawi, 2024, p. 2). This is heartening. Against the hyperbole – both doom and excitement (Jensen et al., 2024) – students’ accounts across thematic categories took both GenAI and their study seriously. They could find GenAI transformational, choose not to engage with it at all, or something in the middle, but in so doing they grappled with questions of what learning and knowing might mean in relation to GenAI. Indeed, this was not dissimilar to the debates within the academic literature, by academics (Butson & Spronken-Smith, 2024). The high level of *emotionality* – expressed as worry, fear, excitement – reflects the depth of the students’ engagement with these deeper questions. These type of deep responses suggests that what we call GenAI interactions might well be better thought of as ‘intra-actions’ – to call on Barad’s (2007) conceptualisation – reflecting that one can only engage with the technological ‘other’ through engaging self as well.

The literature suggests that students perceive themselves as holding agency over GenAI. In particular, Yang et al. (2024) report that students agentially positioned GenAI in multiple ways: as ‘learning companions’ (p. 826), ‘learning facilitators’ (p. 826) and as a ‘useless tool’ (p. 825). In our study too, we noted students made these types of claims, and for the most part positioned themselves as possessing agency over AI. Our sociotechnical framing of GenAI (Bearman & Ajjawi, 2024; Johnson & Verdicchio, 2017), however, brings a different perspective to the idea of student agency. When viewed as part of a broader situated sociotechnical system, potentially contradictory positions of agency emerged moment by moment. For example, in our account, some students were concerned about the potential *loss* of their agency that might result over time from interacting with GenAI due to their future diminished capability.

The axial thread of *time* encapsulates how students viewed time as a resource that could be invested, saved, or wasted when working with GenAI. In line with studies of AI in the workplace, our participants discussed how unexpected challenges could mean that AI-supported practices were not always more efficient (Kusta et al., 2024; Lebovitz, 2019). Participants often framed experiences in terms of time gained or lost, or as too fast (i.e., due to taking short cuts around learning) or slow (taking too much time to check GenAI outputs or to learn how to use GenAI effectively). Where Sallai et al. (2024) found that students rarely used GenAI to deepen learning, and mostly used it to try to improve productivity or ‘speed up’ learning tasks, our participants painted a more complex picture, expanding on the ambiguous relationship to time described by Ghimire et al. (2024). While some of our participants talked about the efficiency of GenAI tools, others were acutely concerned about speeding up, worrying that a quick fix now may lead to problems later.

Students made frequent *moral judgements* about whether a particular way of working with GenAI was acceptable or unacceptable. Students positioned the institutions as emphasising the technical or formal side of things but struggled with understanding what this entailed. They talked of institutional guidance as ‘vague’ or ‘lagging’ or in contradictory terms. While they were very aware of the potential for breaching academic integrity – this took two forms. One type of breach was with respect to the formal

policy and the other was with respect to their own moral compass. Students themselves knew that they needed to resist dependency. They seemed less concerned with breaching policy than transgressing their own, internal sense of integrity.

A major implication of this work is that educators may need to rethink how academic integrity is characterised when working with GenAI. The sector has, largely, responded through what Barnhardt (2016) might call inventory measures or measures of misconduct; series of rules that describe what can and cannot be done. Our study suggests that students' own moral compasses are, often, already aligned to an understanding that the work must *come from them* – that the students must own what they produce. We acknowledge that ownership is a tacit notion and not well suited to formal rules. In our analysis, students' sense of ownership of their work was dynamic, negotiated moment-by-moment, and at times contradictory. It could be that students felt that it was important that they contributed the ideas or that they did the *learning*. It might be that they resisted becoming dependent on GenAI or that they felt that they were over-reliant on it. A potential direction for further research could involve exploring the relationship between a student's capacity to provide a persuasive rationale for the ideas, sources or claims within submitted work, and the extent to which that work can be said to be owned by that student. In a confusing world, a simpler rule of thumb such as owning the work may be more helpful than detailed and potentially confusing instructions around particular tasks. However, the extent to which students took ownership of their position on what was appropriate also varied, with some developing clear moral positions that were distinct from institutional policy, and others deferring to educators and institutions to tell them what was right. At a time when students are struggling to understand what such ownership of practices, processes and positions might look like, there is an onus on institutions and educators to engaging in continuing conversation that goes beyond what is acceptable to what is meaningful for students and their futures.

Limitations

The value in our data is in the presentation of rich and complex experiences. While the focus group format effectively enabled us to consult a greater range of student perspectives within the time and resources available, a trade-off with this format is that the experiences of individual participants are invariably represented in less detail than an alternative approach (for example, exclusively one-to-one interviews) would offer. Relatedly, focus groups also tend to involve some risk of unequal social dynamics colouring the data (for example, when groups involve one or two dominant speakers). Though our analytic approach was informed by theory, our sociotechnical position was held loosely, with the emphasis placed on a more inductive reading of the data. While this approach has the merit of allowing the data to speak for itself (to some degree), an alternative approach would be to draw more explicitly on theory, which would invariably produce a different view of the data, and thence, a different set of findings.

Future work

As we have emphasised, we could not infer any particular demographic associations with particular sets of responses. However, future work could usefully try and establish if there

are any demographic or comparative insights into particular emotional configurations. This would allow institutions to identify, which students might benefit from more support, particularly with respect to emotional distress.

Conclusions

Despite considerable commentary about how students might be interacting with GenAI, there has been limited research reporting students' engagement with GenAI in their own words. This multi-institutional, cross-disciplinary study took a sociotechnical perspective, revealing a complex, dynamic and uncertain landscape. In determining what constituted appropriate study and assessment practices with GenAI, students generally positioned their developing values and moral compasses above institutional messaging. There was an overall sense that their work should come from, and be owned by, them and this sense of ownership may present a useful heuristic for discussions of academic integrity. At the same time, the guesswork and assumptions underpinning students responses highlight the need for better institutional guidance for students to integrate GenAI into their learning practices. This role goes beyond clarifying rules and restrictions to creating supportive environments where students can engage meaningfully and constructively with GenAI in their study, both respect to institutional requirements and their own values. A related conclusion can be made about research into these issues: that it benefits from listening to, and engaging with, students' sophisticated, diverse and thoughtful responses in relation to engaging with GenAI in their studies.

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