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Ambivalence and emotion in the age of AI: how students navigate ChatGPT in higher education

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ABSTRACT

This article investigates how university students navigate the emotional, ethical, and pedagogical complexities of engaging with Generative Artificial Intelligence (GenAI) tools – particularly ChatGPT – within higher education. While much of the existing literature emphasises issues of functionality, academic integrity, or policy regulation, our study shifts the focus to students' views and emotions. Drawing on qualitative data from focus groups with undergraduate students at a large public university in Cyprus, we explore how students experience and make sense of ChatGPT in ways that reflect curiosity, excitement, anxiety, mistrust, and ethical uncertainty. We argue that understanding student engagement with GenAI requires moving beyond instrumentalist frameworks. To this end, we adapt the Technology Acceptance Model (TAM) by incorporating emotional and relational dimensions, offering a more comprehensive view of how AI is perceived and used in academic life. Our findings emphasise the importance of pedagogical and institutional strategies that attend to the emotional and ethical dynamics of GenAI integration in higher education.

KEYWORDS

Higher education; emotions; AI; student views; ChatGPT; LLMs; qualitative study

Introduction

In a speech at the opening of the Leverhulme Centre for the Future of Intelligence at the University of Cambridge in 2016, the late Stephen Hawking warned that the creation of artificial intelligence (AI) would be “either the best, or the worst thing, ever to happen to humanity” (Hern, 2016). Six years later, the emergence and rapid adoption of Large Language Models (LLMs) such as OpenAI's ChatGPT and Google's Bard (now Gemini) has triggered a paradigm shift in education, inaugurating a new era of human-machine relations and sparking far-reaching debates across educational research and practice (Ilieva et al., 2023; Sallam, 2023). Generative Artificial Intelligence (GenAI) – deep-learning models capable of producing high-quality content that mimics human language and reasoning – has raised urgent questions regarding its pedagogical value, ethical implications, and institutional consequences. These debates unfold not merely at the level of academic policy and procedure but cut across epistemic, relational, and emotional dimensions of educational life.

The current literature on GenAI in education tends to fall along a few dominant lines of inquiry. First, there is the instrumentalist approach that assesses AI's functional impact on learning processes, focusing on performance outcomes, assessment integrity, and task efficiency (e.g. Lim et al., 2023; Rahman & Watanobe, 2023; Uzun, 2023). Second, a growing body of research explores regulatory concerns, including institutional policies around plagiarism, authorship, and academic honesty (e.g. Chiu, 2024; Stokel-Walker, 2023). Third, some studies have begun to consider pedagogical and curricular innovations, asking how educators might adapt to or incorporate LLMs into teaching (e.g. Naumova, 2023; Su & Yang, 2023). However, what remains underexplored are the relational and emotional transformations sparked by LLMs, that is, the ways in which AI tools reshape not only educational practices but also the emotional and social landscapes of learning. GenAI does not merely intervene in how learning is performed; it mediates how students

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relate to knowledge, to themselves, and to others, including peers, instructors, and institutional authority. This study responds to that gap by centring students' lived experiences and emotional engagements with ChatGPT.

Using Hawking's analogy, public discourse on GenAI in education often oscillates between two extremes: on one end, enthusiastic advocacy for AI's potential to empower learning; on the other, anxiety over its risks to academic integrity and critical thinking. The classroom has become a microcosm of this tension, where controversies abound: Is ChatGPT a tool for plagiarism or a new form of learning? Does it enhance or impair understanding? What constitutes legitimate versus illegitimate use? Could LLMs eventually become co-authors or co-creators of knowledge (Stokel-Walker, 2023)? While these questions are compelling, they tend to frame the debate in binary terms that flatten the complex realities of students' encounters with AI. Rather than accepting these dichotomies, this article interrogates how students negotiate, feel through, and make sense of their everyday uses of ChatGPT in situated educational contexts.

In particular, our study adopts a qualitative approach, using focus groups with undergraduate students to explore their views and emotions regarding AI tools such as ChatGPT. Although students were invited to discuss any LLMs they were familiar with, ChatGPT was the main tool mentioned and discussed in detail, reflecting its widespread visibility and cultural dominance in 2023. This focus allows us to examine in depth how students experience, interpret, and emotionally relate to ChatGPT as both a technological actor and a symbol of educational change. Our case study was conducted with an interdisciplinary group of undergraduate students at the University of Cyprus, the country's largest public university. The study took place in 2023, during which the freely accessible version of ChatGPT was based on the GPT-3.5 architecture. Given this version's known limitations in reasoning and output coherence compared to GPT-4, we recognise that students' perceptions may have been shaped by the constraints of the technology available to them – an important contextual factor in interpreting our findings.

This study contributes to a growing yet still emergent area of research that takes students' emotional and ethical perspectives on LLMs seriously (Cai et al., 2023; Foroughi et al., 2023; Liu & Ma, 2024; Strzelecki, 2024). These studies tend to focus on themes such as user satisfaction, trust in AI, or self-reported learning impact. While this is a welcome development, there is still limited attention to the emotional complexity, relational entanglements, and ethical ambivalences that characterise student engagement with AI in practice. Theoretically, then, we argue that understanding how students engage with AI cannot be reduced to questions of efficacy or behavioural intention alone. It also requires attention to how students feel, make meaning, and situate themselves in relation to AI and their educational environment. If we are to grapple with the moral, pedagogical, and policy implications of LLMs, we must begin with the everyday perspectives and emotional investments of students who are already integrating these tools – consciously or unconsciously – into their academic lives (Cai et al., 2023; Rospigliosi, 2023).

We argue that GenAI warrants special scholarly attention because it represents a qualitative leap from earlier educational technologies. Unlike prior tools – such as learning management systems, search engines, or even adaptive learning platforms – GenAI systems like ChatGPT are capable of producing original, human-like outputs, engaging in conversational dialogue, and simulating reasoning processes. This capacity to generate content autonomously, rather than simply retrieve or organise information, introduces new epistemic and relational dynamics in the learning process. Students are no longer just consumers of information but co-navigators of a space where the boundaries between human authorship, machine output, and collaborative knowledge-making blur. As a result, students' views and emotions towards GenAI – ranging from excitement and curiosity to anxiety, mistrust, or ethical unease – cannot be fully understood through frameworks developed for earlier educational technologies. GenAI reshapes not only how tasks are performed but also how students relate to knowledge, authority, and each other, thus calling for renewed conceptual and empirical inquiry.

The paper is structured as follows. We first situate our study within existing research on students' perspectives on AI in higher education. We then present our conceptual framework, which adapts the Technology Acceptance Model (TAM) to include emotional and ethical dimensions often overlooked in adoption studies. This is followed by a description of our methodology, then our analysis and discussion of findings. We conclude with reflections on how LLMs compel a fundamental rethinking of educational relations and responsibilities, offering implications for educators, policymakers, and researchers alike.

Literature review

Our review of existing literature on students' perspectives on the use of ChatGPT and other LLMs between 2022 and early 2024 has revealed four important characteristics: this research is (a) scattered, (b) primarily quantitative, (c) normatively positive, and (d) geographically concentrated. Below, we briefly synthesise these characteristics and identify gaps in the literature that our study seeks to address.

To begin with, the research landscape on students' views, attitudes, and uses of generative AI is highly fragmented. This fragmentation can be attributed to the sudden surge of interest following the public release of ChatGPT in late 2022, combined with the pressures of rapid academic publishing and the interdisciplinary nature of the topic (see Hanami et al., 2023; Rawat & Meena, 2014). We encountered more than 20 peer-reviewed studies, most of which appeared in 2023 and claimed to be among the first to explore student perspectives on LLMs. These studies rarely built upon one another and often drew from disconnected disciplinary frameworks, resulting in a body of work that is simultaneously prolific and scattered. For example, while many papers aimed to investigate the perceived usefulness of ChatGPT for academic achievement (Foroughi et al., 2023; see also Venkatesh et al., 2003), they typically did so in isolation from broader theoretical debates or prior insights. Many were narrowly focused on a specific course or subject domain (e.g. Shoufan, 2023), reinforcing the fragmented nature of the field.

Second, the majority of this literature adopts a quantitative approach. Scholars have employed methods such as structural equation modelling, partial least squares (PLS), and fuzzy-set qualitative comparative analysis (fsQCA) to examine variables such as ease of use, perceived usefulness, and behavioural intention (Cai et al., 2023; Foroughi et al., 2023; Liu & Ma, 2024). For instance, Abdaljaleel et al. (2024) identify factors such as social influence and low perceived risk as predictors of positive attitudes towards ChatGPT. While such studies offer important descriptive insights, they often treat students' perspectives as discrete, measurable attitudes rather than embedded, evolving responses shaped by social interaction, emotion, and cultural context. As a result, the emotional, ethical, and meaning-making dimensions of student engagement with GenAI remain underexplored. Moreover, quantitative approaches tend to present students' responses as homogenous or generalisable, leaving little room for the ambivalences, contradictions, and uncertainties that often characterise real-world encounters with emerging technologies.

Third, a normatively positive orientation underpins much of the existing research. Students are frequently positioned as rational technology users who accept or reject AI tools based on perceived utility. While this may reflect real enthusiasm, it also obscures more complex or critical responses. In some cases, this positivity is structurally embedded in research design. For example, Chiu (2024) conducted workshops that prompted students to explore how generative AI could improve higher education, potentially predisposing participants towards optimistic framings. Similarly, Cai et al. (2023) excluded students who had not previously used ChatGPT, and Ngo (2023) selected only participants with academic experience using it. These approaches, while useful in measuring acceptance, risk flattening the emotional and ethical ambivalences that many students express, including feelings of uncertainty, guilt, anxiety, and dependence.

Fourth, the research is often regionally concentrated, with a notable focus on countries in Asia (e.g. China, Hong Kong, Malaysia, Vietnam) and the Arab world (e.g. UAE, Egypt, Jordan, Kuwait). For example, Abdaljaleel et al. (2024) found that attitudes towards LLMs varied significantly based on country of residence and academic achievement. Ibrahim et al. (2023) conducted a comparative study showing that students in Brazil were more positively disposed towards ChatGPT than their counterparts in India or the US, particularly regarding its ethical use in academic contexts. These findings suggest the importance of cultural, linguistic, and socio-political factors in shaping student perspectives – factors which remain underexplored, particularly in underrepresented regions such as South-East Europe.

While the above characteristics identify clear limitations, recent studies also offer important insights into how students experience GenAI. For instance, Firat (2023) and Chiu (2024) demonstrate that students' emotional responses – ranging from curiosity to discomfort – are shaped by institutional discourses, peer influence, and perceptions of academic surveillance. Strzelecki (2024) highlights students' conflicted feelings of reliance and mistrust, and Cai et al. (2023) note tensions between enthusiasm and fear of skill erosion. However, these findings remain under-theorised in terms of relationality – how students' relationships with themselves, their peers, educators, and institutions are transformed by their use of GenAI tools.

To address this gap, our study builds on broader literature that explores the emotional and relational aspects of students' engagement with educational technologies more generally (e.g. Selwyn, 2012; Selwyn et al., 2018). These studies emphasise that students' reactions to technology are shaped not only by its functionality but also by how it reconfigures power, agency, and identity within educational settings. GenAI, we argue, intensifies these dynamics in unique ways: its human-like interaction style, capacity for generating knowledge, and ambiguous authorship status challenge conventional understandings of learning, effort, and accountability. As such, it elicits a distinctive range of emotional and relational responses – responses that cannot be fully captured by prior models of educational technology acceptance.

This brings us to the specific contribution of our study. We investigate how students from diverse academic backgrounds engage with ChatGPT in emotionally and relationally complex ways. By using focus groups with interdisciplinary undergraduate students, we are able to explore not only individual attitudes but also the social dynamics of AI engagement – how students discuss, negotiate, and co-construct their views through dialogue. Prior research has rarely examined how students' relationships with each other and with institutional norms are shaped in and through conversations about GenAI. Our study thus contributes to a richer understanding of how collective meaning-making, peer influence, and ethical reflection emerge in real-time interactions.

Moreover, our research fills a notable regional and epistemic gap. While previous studies, such as Eteokleous et al. (2023), have focused on faculty perspectives in our national context, there remains a lack of attention to how students from underrepresented geographies emotionally respond to GenAI technologies. Our study foregrounds the lived experiences of university students in Cyprus, an area underrepresented in global research on educational AI. By capturing the nuanced views and emotions of students from diverse disciplines, we contribute to global conversations about the transformative potential – and the deep ambivalences – surrounding the integration of LLMs into higher education.

Conceptual framework

To support our investigation into university students' views and emotions towards ChatGPT, we employ the Technology Acceptance Model (TAM) as a starting theoretical scaffold, while extending it with qualitative and sociological dimensions to capture the emotional, ethical, and pedagogical complexities involved in students' use of generative AI tools. Developed by Davis (1989) in the field of information systems, TAM was originally designed to predict and explain user acceptance of new technologies based on two primary factors: perceived usefulness and perceived ease of use. The core premise of TAM is that if individuals perceive a technology to be both useful and easy to use, they are more likely to develop a positive attitude towards it and eventually adopt it in their daily practices.

Because of its conceptual simplicity and predictive power, TAM has been widely adopted across disciplines, including business, health, and education. In higher education specifically, TAM has been used to investigate how students adopt learning management systems, online tools, and mobile learning platforms (Granić & Marangunić, 2019; Wojciechowski & Cellary, 2013). More recently, it has been applied to the study of ChatGPT and other large language models (Tiwari et al., 2023), offering valuable insights into students' initial reactions to AI tools in academic contexts. TAM's core constructs – perceived usefulness, perceived ease of use, and attitude – have also been expanded to incorporate external variables such as subjective norms, computer self-efficacy, and facilitating conditions (Venkatesh et al., 2012), making the model more adaptable to diverse settings.

However, the classical formulation of TAM has been subject to several important critiques. Scholars have noted that it tends to privilege rationalist and utilitarian understandings of technology use, often at the expense of more nuanced emotional, ethical, and social dynamics (Bagozzi, 2007; Selwyn, 2012). In particular, TAM has been critiqued for its limited attention to emotion, relationality, and temporal change, treating user behaviour as a relatively stable outcome of individual perceptions (Albayati, 2024). These critiques are especially relevant when studying generative AI in higher education, where student responses are frequently ambivalent, emotionally charged, and shaped by shifting cultural norms and institutional pressures.

We have taken these critiques seriously, hence we have adapted and repurposed the use of TAM in our study. Rather than assuming a linear, stable relationship between perceptions and behaviour, we treat the TAM constructs as guiding tools that help orient our focus towards how students talk about, feel about, and engage with ChatGPT. For example, when exploring perceived usefulness, we do not reduce it to task efficiency, but examine how students define usefulness in terms of emotional reassurance or moral ambiguity. Similarly, attitudes are not seen as static positions but as dynamic emotional orientations, often oscillating between ambivalent emotions such as enthusiasm and unease.

In our study design, TAM informed both data collection and analysis. In preparing our focus group protocols, for example, we drew on TAM's three core components – perceived usefulness, perceived ease of use, and attitude – to generate open-ended prompts about students' first impressions of ChatGPT, how they use it, what they find helpful or frustrating, and how they feel about those experiences. These prompts were deliberately open to elicit emotional nuance, ethical reflection, and peer dynamics. During analysis, TAM's categories served as initial coding anchors, but we quickly extended our coding scheme to include emergent emotional and relational themes (e.g. guilt, pride, embarrassment, dependency, ethical discomfort, peer pressure). These emotional responses were often entangled with students' evaluations of usefulness or ease, suggesting that classical TAM constructs can – and should – be expanded to capture emotional ambivalence.

To that end, we draw on the sociology of emotion to deepen our understanding of how students engage emotionally with generative AI. As Turner and Stets (2006) and Hochschild (1979) argue, emotions are not merely internal psychological states, but are socially constructed and culturally regulated. They emerge through interaction, institutional norms, and power relations, shaping and reflecting individuals' positions within social structures. In the context of education, emotions like pride, anxiety, shame, and curiosity are not simply “responses” to technologies – they are constitutive of how students learn, belong, and participate in academic life (Barbalet, 1998; Zembylas, 2008). Applying this lens, we understand students' views of ChatGPT as emotionally and socially mediated, rather than purely rational or individual (Papacharissi, 2015).

Furthermore, we respond to calls for rethinking technology acceptance beyond binary framings. Nistor et al.'s (2019) work, for example, has shown that students often express conflicting attitudes towards technology – simultaneously using it enthusiastically while feeling ethically compromised or emotionally detached. In our own study, students voiced admiration for ChatGPT's speed and utility, while also expressing concern about overreliance, diminished learning, or a vague sense of “cheating”. These complex positionalities challenge the assumption that technology acceptance is a clear-cut matter of positive or negative attitudes. Rather, it unfolds through emotionally layered narratives and shifting relational contexts.

Finally, we argue that repurposing TAM within a qualitative framework can make a valuable contribution to the literature on student engagement with AI. While prior studies have expanded TAM to include hedonic motivation (e.g. enjoyment, satisfaction), we go further by attending to moral discomfort, peer dynamics, and institutional trust as key emotional dimensions. Our approach does not reject TAM but seeks to radically recontextualize it – to move from a static, predictive model to a flexible, exploratory tool embedded in students' lived experience. In this sense, TAM serves not as a theory of behaviour prediction, but as a starting structure to capture how perceptions of usefulness and ease are embedded in emotional and ethical life. By combining TAM with sociological theory of emotion, we offer a more holistic account of how students relate to ChatGPT – not just as users of a tool, but as ethical agents navigating complex pedagogical and technological terrains. This integrated framework enables us to explore not only what students think about ChatGPT, but how they come to feel, question, and negotiate its presence in their educational lives.

Methodology

This study adopted a qualitative approach, using focus groups to explore students' views and emotions about ChatGPT and other LLMs in higher education. Focus groups were chosen as the primary data collection method for several reasons. First, they allow for dialogic interaction among participants, where meaning is not only expressed but co-constructed through group discussion (Bloor et al., 2001; Morgan, 1997). Given the relative novelty of GenAI tools like ChatGPT in educational settings, we anticipated that

students might hold complex, evolving, or contradictory views – some of which could be more productively articulated in conversation with peers than in isolated one-on-one interviews. Focus groups are particularly well-suited to exploring collective meaning-making and patterns of shared or contested understandings within a specific social group – in this case, undergraduate students (Bauer & Gaskell, 1999; Pierce, 2008).

In particular, this study was guided by two primary research questions:

- (1) How do university students view and feel about ChatGPT and/or other LLMs, and why?
- (2) How do university students currently engage with these technologies, and what do they think should be their role in higher education contexts in the future?

Twenty-four undergraduate students from the University of Cyprus participated in the study. Students were recruited from an elective course titled “Human Rights”, offered by the Department of Political and Social Sciences. The course, which is open to students from other departments (e.g. Education, Law, Psychology), includes a thematic unit on the role of technology in the protection and abuse of human rights. This provided participants with a conceptual foundation for discussing the ethical, social, and political dimensions of technologies such as ChatGPT.

Students were recruited via an open invitation shared through the course’s digital platform. Participation was voluntary, and to promote comfort and openness, students were allowed to select focus groups with peers of their own choosing. All focus groups were conducted in November 2023, during the final weeks of the academic semester, a strategic choice to minimise any concerns about power dynamics or grade-related pressure. By this time, oral participation grades had already been finalised, and the remaining assessment was based on written exams. Participants were offered a modest bookstore voucher as an incentive. Of the 24 participants, nine identified as male (38%), one as gender-neutral (4%), and fourteen as female (58%). All participants were in their third or fourth year of study. Students had the option to speak in either English or Greek during the focus groups, depending on their comfort level. The focus groups discussions were recorded, transcribed and the Greek sections were translated into English.

Four in-person focus groups were conducted, each lasting approximately 60 minutes. The protocol was semi-structured and consisted primarily of open-ended questions, developed based on a review of relevant literature on technology acceptance, emotional responses to educational technology, and emerging studies on ChatGPT in education. Sample questions included:

- Have you ever used ChatGPT or any other LLM? If yes, how? If no, why not?
- Have you ever used ChatGPT or any other LLM for university work? If yes, how? If not, why not?
- Do you think there are any ethical issues around the use of LLM tools for university work?
- Do you think there are any ethical issues around the use of LLM tools for university assessment? (e.g. essays, exams) For example, if someone is submitting an essay that has been completed with the use of ChatGPT, do you think there are any ethical issues concerning the assessment of this essay?

These questions aimed to elicit not just behavioural descriptions but also emotional, ethical, and relational dimensions of student engagement with GenAI.

The study was reviewed and approved by the Cyprus National Bioethics Committee. All participants received an information sheet outlining the study’s purpose, their rights, and data confidentiality procedures. Written consent was obtained from all students prior to participation. Pseudonyms were used to protect anonymity in all data extracts and reporting.

We used reflexive thematic analysis as outlined by Braun and Clarke (2006, 2021) to analyse the data. We chose thematic analysis for its flexibility and suitability in identifying patterns of meaning across a dataset, especially in relation to participants’ experiences, values, and emotions. The process involved six phases:

- (1) *Familiarization*: The lead researcher read and re-read the transcripts while making initial notes about emerging meanings and emotional tones.
- (2) *Generating initial codes*: Using NVivo software, data were coded inductively across the dataset. Codes were not pre-defined but emerged through engagement with the data.

- (3) *Searching for themes*: Coded data were clustered into candidate themes that captured patterns of shared meaning relevant to the research questions.
- (4) *Reviewing themes*: Themes were reviewed and refined for coherence, distinctiveness, and analytical depth. Discussions among co-authors helped assess whether themes reflected latent meanings and relational dynamics, not just surface content.
- (5) *Defining and naming themes*: The final themes were clearly defined, with sub-themes used to capture variations and tensions within broader categories.
- (6) *Writing up*: Themes were contextualised within the literature, and illustrative quotes were selected to reflect the complexity and richness of student perspectives.

Importantly, while we refer to students as “enthusiasts”, “sceptics”, and “rejectionists” for narrative clarity, these are not demographic categories or fixed typologies. Rather, they are analytically constructed patterns of meaning derived through thematic analysis of students’ emotional orientations, discursive framings, and relational stances towards ChatGPT. These categories reflect tendencies in how students made sense of and emotionally positioned themselves in relation to generative AI tools, rather than stable or mutually exclusive identities.

The construction of these categories involved identifying shared emotional-discursive patterns across the data. For example, enthusiasts consistently expressed feelings of excitement and admiration for ChatGPT’s capabilities. However, these expressions were frequently accompanied by limited awareness of the tool’s limitations, such as potential bias, misinformation, or institutional restrictions. This suggests that what we termed “enthusiasm” was not necessarily a product of deep critical engagement, but in some cases, a reflection of novelty, convenience, or unexamined optimism. We acknowledge this nuance accordingly in the presentation of findings.

Similarly, students we described as sceptics expressed ambivalence or uncertainty – recognising both the utility and the risks of using ChatGPT in academic contexts. These participants were often aware of issues such as over-reliance, the undermining of academic skills, or concerns about fairness and originality. Their responses reflected a desire to use the tool “in moderation”, revealing a negotiated stance shaped by both practical benefits and ethical concerns. We use the term sceptic here not to suggest outright rejection but to signal this more measured, ambivalent positioning.

Finally, the rejectionists were students who rejected the use of ChatGPT altogether, often citing ethical reasons, fear of dependency, or distrust in the quality of the output. This group showed a higher level of critical engagement with the potential implications of GenAI in education, though in some cases, this stance was also shaped by personal values or discomfort with technological mediation in learning.

It is important to emphasise that these categories are not static and should be understood as fluid, overlapping positionalities rather than discrete groups. Some students moved between these orientations during the focus group discussions, or expressed elements of more than one stance. Thus, the labels serve an analytical function – to help map the emotional, ethical and relational contours of student engagement with ChatGPT – while allowing for complexity, ambivalence, and contradiction within each category.

Findings

The enthusiasts

The first group was the *enthusiasts*: students who were unequivocally supportive of the use of LLMs by students, acknowledging its many ethical and pedagogical limits but without any serious ethical or pedagogical reservations as to its use. These students highlighted the various benefits of ChatGPT, for example in terms of saving them time, allowing them to comprehend the class material better, giving them ideas for structuring essays, helping them to prepare for exams, correcting their grammar and spelling, improving their academic language, helping them find sources and motivating them to study.

I think it’s a very useful tool that can be used in a way that can really help society. (FG 1)

I used it. A lot of times I've had- let's say in the slides of the presentations that the lecturers give us because I don't usually take notes, in order to remember something, I put the notes in there ... and it's like having a teacher explaining it to me. (FG 1)

I'm a huge fan of ChatGPT, I use it all the time but I try to use it with my critical thinking and my logic ... Also, I don't use it to write paragraphs and stuff, I use it for practical things. For instance I ask 'what should the first few pages of my thesis contain?', so I use it for more practical things. Or let's say I ask which journals I can find for neuroscience. ...so it can guide me and I can go and look it up ... it can even create quizzes for you! (FG 1)

It should not be demonized. But in a way it should be embraced by universities as a tool, as something that helps student productivity and there should be specific directions. That is, some seminar that is compulsory with their degree, 2 ECTS¹ let's say. (FG3)

These students preferred LLMs to using search engines, because the former are more "direct" and respond to their exact query rather than presenting dozens of sites that one has to waste time filtering through:

Google presented a huge volume of similar results, so you had to go to the ninth page. Whereas here, although it's bad, it comes up and filters the knowledge and ads. (FG 1)

It's much faster and more direct [than Google] and gives you exactly what you want to find. (FG4)

Interestingly, none of the students had read or were even aware of the university guidelines on ethical use of AI and the requirement to be transparent about using it for coursework (these were emailed to them but according to the students they expected the tutors to explain these guidelines) and did not view not disclosing its use as unethical:

Researcher: Did you write that you used it [ChatGPT] in this way [to assist with their essay]?

Student A: no, I didn't say anything to my teacher (FG1)

Students within this category were not unaware of the limitations and biases of the software. For instance, they pointed out that they knew that one ought to keep in mind that it did not have access to all journals or large databases or that the sources could be made up. However, this did not preclude them from using it or from being strongly against banning it from universities.

One enthusiastic student explained how he perceived ChatGPT to be "arrogant". When he was probed more into it, he responded that he did not believe it had the required humility to be able to be aware of its own limitations and biases:

Student A: It fabricates information on its own. [Laughs] Let's say you might tell it something, it's so arrogant that it will do its best to answer. For example, I put my name in and it tells me that I'm a professor at the University of Crete in the Archaeology Department! (FG 1)

Researcher: When you say arrogant, what do you mean?

Student A: I mean that it won't reply by admitting that 'I don't have this information'. And another thing I wanted to say is that people put restrictions on it and also people pre-influence the way it answers and this is very dangerous. (FG1)

In this conversation, the student expressed how he believed the engineers, the tech company and the governments which allow these companies to operate within their sovereignty have also the power to determine the questions and hence distort the responses. Given that the focus groups took place in November 2023, the Israeli-Palestinian conflict which was dominating the news at the time, was also mentioned as an example that illustrates this bias with regards to the causes of the conflict, showing that students had engaged with it for political matters in order to gauge its objectivity. A student noted how "it tells you information which is supportive of the Israelis, while for the Palestinians it tells you that it cannot provide a response for such sensitive stuff" (FG1) but this did not stop him from using it. In other words, these students trusted themselves with being able to identify the biases and inaccuracies and filter them out themselves, or use ChatGPT selectively and strategically as a practical guide rather than for writing their essay from scratch.

Unsurprisingly, the enthusiasts were strongly against the prohibition of LLMs from universities, as they argued that if a student wants to be unethical, they will always find ways to do so, with or without AI. They

also thought that banning LLMs would be doing an injustice to those students who were using it ethically i.e. that it was possible to use it ethically:

I believe that yes it should be allowed because it can be a temptation for fellow students to use it incorrectly if it is banned but also there are always ways for a student to do something; for example if a student is not interested in writing their thesis and writing it with the sources they find and so on and if the AI didn't exist, I think they would find other ways. So, I think that by not allowing some students to use certain tools you are at the same time not allowing those who are actually benefiting by that tool in a meaningful way. And those who don't want to use their critical thinking and logic to do their assignments, I don't think it's going to affect them not having AI because they're going to find another way. (FG1)

The sceptics

The second group of students – the *sceptics* – comprised the majority of students and were somewhere in the middle of the spectrum. They were on the one hand in support of the use of LLMs but under certain conditions. They could see their value and agreed with their fellow students that it should not be banned, but on the other hand believed that strong protective mechanisms should be enforced to mitigate their risks and prevent unethical use. For example, these students argued that it is acceptable to use ChatGPT to help them with the structure of an essay, but then the student should do the rest of the essay on their own, otherwise this constitutes plagiarism. They saw it highly unethical to graduate from universities with a degree that was largely done using LLMs:

I think it's a powerful tool that if we use it correctly and with a limit it is very good. But, you always need a limit which humans always lose. That is, at some stage we will get to a point where many students may do a Master's degree, even a PhD and use this tool for a large part of a paper or research. It's very unethical to me. (FG 1)

Clearly it's a tool that has a lot of risks but I think that through proper handling and use of Chat GPT you can really benefit from it. It's just, it's generally how much you will depend on Chat GPT itself and that clearly has to do with the principles you have as a human being. To the extent that you want to understand the maximum or the optimum. So, either you just have it as an easy solution or you can just see where you can be helped through this tool". (FG2)

I'm not against it because I don't think it's wrong to use it if you don't use it for plagiarism. The problem is how can you tell that someone used it for plagiarism? Because I think Chat GPT every time you ask for something, it will say it a little differently. And the other thing is that I'm not sure how useful it really is at the level it is now. [...] I'm not against it if it's something that is necessary, I just have some issues with the way we use it now. (FG 1)

In contrast to the previous group (enthusiasts), the sceptics' responses were often more critical of such technologies, arguing that their use is not really "free", as the software gets improved over time using the users' "work", but also similar to the group above, acutely aware of its limitations such as inaccurate or biased data, particularly as it was liable to human error and subjectivity.

it's not exactly free ... whatever input we put into it helps it evolve further and all this information that it gathers from us will make it better eventually and that's why premiums keep coming out, for example, which are just updated because it's been catching the information from us for a long time, it becomes an improved version that you have to pay to have and then that gets released to the world, then it gets updated and so on. (FG 1)

The sources it uses are not always correct and therefore sometimes the information may be wrong and sometimes it is correct. Also, they are used from parts made by other people, let's say AI image generators use images from the internet or artists' works. Basically everything that AI knows, it knows from humans. (FG 1)

Within the group of sceptical students there were those who engaged with the technology very often, while there were also others who resisted using it – and some had never used it at all- precisely because of their concerns and fears (so it was not a matter of frequency of use).

Student C: Actually, I personally have never used this kind of tool to perform better in a task but I'm in favour of using it because just like before we didn't have mobile phones and now we do because we are evolving, so through this program our life is getting easier.

Researcher: Is there a reason you don't use it?

Student C: There are two reasons. The first is that everything I create I want to create based on myself. And two, I don't know yet because it's in a pilot stage of this thing if they can find out that you copied something from there. So, it's also risky for you. (FG2)

Similarly, in the other focus groups, students supported it but were still reluctant to use it due to various ethical concerns including those of privacy, lack of transparency and putting people at risk of losing their jobs etc. Yet, they were still open and willing to use it in the future if these emotional and ethical concerns were alleviated.

Student F: I haven't used it because Chat GPT has recently come out and I generally prefer to write my papers myself. But if I generally came to a stage where, I found it very difficult to do a task, I might put Chat GPT to help me. (FG4)

Student B: I didn't use it because I'm a bit sceptical about AI. Also, I think you need to have an account and I don't want to give my information to AI because I don't trust it yet, there's no regulations and stuff like that. Although I'm not top internet safety. I actually didn't use it because I think the way we use AI now is a little bit dangerous, because I think that when a new technology comes out a lot of times instead of using it in a way that is the most beneficial to society as a whole, we use it in a way that puts some- let's say people's jobs a little bit at risk.

Researcher: Do you think that if some time went by and some improvements were made you would use it?

Student B: Maybe (FG1)

Immediately after this conversation, Student C (FG1) said that she uses it "all the time" as it helps her communicate her scattered thoughts in a more structured and effective way. The conversation is included below as it shows how students within this group vary in their use but also how they are keen to also express that this common use of the technology was a useful but a discomforting experience as it was guilt-inducing:

Student C: I use it all the time because generally when I want to do an assignment or write something there are too many thoughts and I have a hard time summarizing everything and I just write, write, write. That's why it helps me to say what I want to say correctly. [...] On the other hand, I also feel guilty because I feel that I don't put myself to think and someone else does it for me. (FG1)

As the above quote illustrates, emotional ambivalence is a strong element within the sceptic group of students. Beyond the feelings of guilt, there is also the fear that use of this technology will negatively impact students' ability to think. The same student later in the discussion points out her fear explicitly:

Student C: The only thing that scares me is that it is making me worse because I am not thinking of everything. And the fact that it saves you time is good but on the other hand... It doesn't make me train my brain.

Researcher: So you think that in the long run it can diminish your skills?

Student C: Yes. Maybe I'm not sure. Let's say it can cause Alzheimer's in the end because you don't train yourself to think. (FG1)

Okay it makes sense that using GPT Chat is a great convenience. You don't exhaust yourself in reading so many books and resources, ChatGPT is indeed a good outlet. But most of the time this thing leads to superficial learning and drawing our knowledge from Chat GPT leads us to completely trust the information it gives us losing our possibility to learn. I'm not saying it shouldn't be done but it should be done in moderation. (FG3)

Therefore, within the sceptics we see students who recognise the negative pedagogical impact of LLMs but (like the enthusiasts) disagree with their prohibition as they feel it is fighting a lost battle:

The university is a microcosm of society, whether it bans something or not it will continue to exist. Just like drugs are banned and their use continues. (FG2)

Students also pointed out that it would be extremely difficult for it to be banned now that it is so mainstream, and that prohibiting it would induce a crisis in the world:

Student D: Who has the power to control what happens to ChatGPT ... who can now say we're removing it or bringing it back or putting premium features on it, who decides?

Student A: And what knowledge it allows and what knowledge it restricts.

Student D: So what I wanted to say is that if we eventually start to become dependent on this thing, the person who says "we have to remove it" will bring a crisis to the world. (FG 1)

The rejectionists

The final group of students were the *rejectionists*. These were the smallest group, constituting only 4 out of 24 students. The rejectionists were those students who had never used LLMs before, and who were out rightly and explicitly avoiding using them due to ethical objections and pedagogical concerns:

I personally have never used it before. I learned it through various discussions with fellow students. I think the reason why I haven't used it before is because when we have a project, I think the process itself of coming together and arriving at a result on your own is more important to benefit from. So if it is something ready-made, in essence I don't actually benefit . . . (FG 4).

I have not used Chat GPT either. I don't even know how you search there. I haven't downloaded it on my computer. I just also think and I agree with Eleonora (pseudonym) that it is an assessment criterion to search on your own even for the structure, the structure again is up to the student's discretion, how they formulate their assignment etc. So again I think it gives you something ready-made so it's pointless. (FG4)

There are two reasons [why I don't use ChatGPT]. The first is that whatever I create I want to create it based on myself. And second, I don't know yet - because this thing is at a pilot stage - if they can find out that you copied something from there. So, it's also risky for you. (FG4)

These students believed that learning is a process which requires the student to directly engage with all the steps in order to benefit. If something is presented ready-made for them, then they would not reap the holistic benefits of this learning process. For these students, the process of researching as well as the process of brainstorming to plan the structure of your essay were all significant steps which require critical thinking, reasoning and decision-making on behalf of the student and so using LLMs for these would be “pointless” and also unfair and unethical. They believed that when students are graded on tasks that they do not do themselves but instead the AI are doing them, then such students gain an unfair advantage when compared to other students who are doing the work entirely on their own. It is interesting to also note here that the rejectionist tendency was stronger in Focus Group 4 (FG4). This could partly be explained by the fact that the participants were like-minded friends, but it is also a potential effect of the focus group dynamic (as discussed in the methodology). Moreover, a particular student in FG 4 who according to the three ideal-types identified here would belong to the enthusiasts, by the end of this focus group admitted that she now had “second thoughts” about the use of ChatGPT and that she came to the focus group in order for her to also discover what she really thought about its use as so far she had been using it mechanically without really reflecting on this behaviour.

Conclusion and implications

This qualitative case study contributes to a growing body of research that seeks to understand how students experience, interpret, and emotionally navigate the rise of generative AI in higher education. Focusing specifically on ChatGPT, our analysis revealed a complex and ambivalent landscape of student responses, captured through three analytically constructed categories: the enthusiasts, the sceptics, and the rejectionists. Importantly, these groupings should not be interpreted as static identities or simple demographic clusters but rather as emergent patterns of emotional and discursive positioning. Our study thus offers a more nuanced picture than many previous studies, which have tended to report either uncritical optimism or alarmist concerns (Chiu et al., 2023; Ngo, 2023).

In applying the Technology Acceptance Model (TAM), we sought to extend its utility beyond its typical application in quantitative research. While TAM is often critiqued for privileging utilitarian and rationalist perspectives (Venkatesh & Davis, 2000), we deliberately used it here as a heuristic device in a qualitative analysis to explore how perceived usefulness and ease of use intersect with emotional, ethical, and pedagogical concerns. For example, while many enthusiasts expressed that ChatGPT made their study life easier and more efficient, these perceptions were always situated within broader emotional and ethical discourses. One participant, for instance, described feeling “guilty” about using the tool even as they acknowledged its utility. This demonstrates that TAM's categories must be enriched with emotional and normative dimensions to be analytically productive in educational research on AI (Farhi et al., 2023; Liu & Ma, 2024). In this sense, our use of TAM helped us identify divergences between expressed enthusiasm and

critical awareness, particularly in the case of the sceptics, many of whom were pragmatically supportive of ChatGPT but cautious due to ethical and pedagogical implications.

Moreover, the rejectionists offer a particularly important counterpoint to the dominant narratives in TAM-based research, which tend to focus on adoption and usage. The refusal to engage with ChatGPT, expressed through moral objections or a defence of traditional pedagogical values, suggests that TAM should not only be used to measure uptake but also resistance and refusal – phenomena equally worthy of study. This contributes to recent scholarship arguing for a more expansive understanding of technology acceptance that includes voices of critique and dissent (Granić & Marangunić, 2019).

A further contribution of this study is the clarity it brings to the specific use cases of ChatGPT as discussed by students. These were not abstract reflections, but grounded in their lived academic realities. Students described using ChatGPT for brainstorming essay ideas, summarising complex readings, checking grammar, or clarifying unfamiliar concepts. Others expressed concern about peers using it for entire assignments or exam preparation. These differentiated use cases suggest a continuum of engagement with GenAI, from supplementary aid to potentially unethical reliance. Importantly, these practices often blurred the lines between learning enhancement and academic dishonesty, further highlighting the emotional and ethical ambivalence at play.

This ambivalence is a key finding of our study. Rather than portraying students as either naive adopters or sophisticated critics, we show how their positions are shaped by overlapping feelings of curiosity, anxiety, guilt, empowerment, and resistance. These emotional responses are not merely epiphenomena of technological adoption; they are constitutive of how students relate to AI and to learning itself. Emotional investments thus shape, and are shaped by, pedagogical practices and institutional discourses. Future research could further theorise these emotional attachments using affect theory or sociology of emotion to explore how technologies mediate students' identities and relationalities (Papacharissi, 2015; Selwyn, 2012).

In this light, one important implication is the need for higher education policy to move beyond binary positions of prohibition versus uncritical adoption. Instead, institutions should strive to create pedagogical environments that foster critical engagement, emotional reflection, and ethical discernment in the use of GenAI. Our findings show that students desire more guidance and clarity from their universities, not just on technical usage but on what is pedagogically and ethically appropriate (Shoufan, 2023). The enthusiasts, in particular, called for the normalisation of ChatGPT use within structured boundaries, akin to training provided for referencing software or research tools. Conversely, the sceptics emphasised the need for regulatory mechanisms that ensure transparency and fairness, while rejectionists highlighted the urgency of defending pedagogical values that prioritise critical thinking, originality, and human connection.

Another implication relates to rethinking academic integrity and plagiarism in the context of LLMs. The traditional frameworks for identifying and penalising plagiarism are ill-suited for the complexities introduced by generative AI. Our study suggests that a punitive approach risks alienating students and missing opportunities for pedagogical growth. Instead, we advocate for a shift towards preventive, educative strategies that foreground ethical reasoning and digital literacy. This includes developing clearer institutional guidelines, co-constructed with students, that define acceptable uses of AI and establish shared responsibilities for maintaining academic standards.

Furthermore, this study raises important questions about the relational dimensions of AI use in education. GenAI does not only affect learning processes but reshapes relationships – between students and teachers, among peers, and between students and institutions. Students' ambivalence towards ChatGPT often reflected deeper concerns about trust, authenticity, and the human dimensions of education (Selwyn et al., 2018). Institutions must therefore attend to these relational dynamics when crafting AI-related policies. Policies should be designed not only to regulate AI use but to sustain meaningful learning relationships. This includes fostering open dialogues between students and staff, integrating emotional literacy into digital education programs, and creating institutional spaces for collective reflection on the role of AI in academia.

In the broader research landscape, our findings problematise the assumption that student perspectives should be uncritically translated into policy advice. While student views are crucial, they must be interpreted within their socio-emotional and institutional contexts. As shown in our study, even students who did not use ChatGPT regularly opposed outright bans, perhaps as a defensive reaction to institutional moral

panic. Therefore, policies should not only respond to student views but interrogate the conditions under which those views are formed. Future research should explore these dynamics across multiple sites and cultures, using mixed methods to triangulate emotional, ethical, and behavioural data.

In conclusion, this study advances the conversation on generative AI in higher education by centring the emotional and ethical dimensions of student experience. Through our qualitative use of the Technology Acceptance Model and a sociological understanding of emotion, we offer a framework that captures the ambivalence, creativity, and complexity of students' engagement with ChatGPT. While the study's limitations – a single institutional site, a focus on one AI tool, and reliance on self-reported data – preclude broad generalisations, the insights provided here illuminate key issues that demand attention as AI becomes an increasingly integral part of higher education. Future studies should deepen the conceptual integration of emotional and relational dimensions in technology acceptance research, while educational institutions must approach AI policy not as a technical issue alone but as a relational and ethical project in which students must be meaningfully included.

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