

Techno-Wellbeing and Flourishing in Higher Education: Student Experiences of Using Generative AI

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Abstract

In recent years, the rapid integration of generative artificial intelligence (GenAI) into higher education has sparked widespread interest, optimism, and concern. Tools such as ChatGPT, Microsoft Copilot and Google Gemini are increasingly used by students to support academic tasks, manage workloads, and navigate personal challenges. While much of the discourse has focused on academic integrity and performance, relatively little is known about how these technologies shape students' psychological well-being, sense of self, and capacity to flourish during their university experience. Drawing on flourishing theory, this study explores how GenAI adoption intersects with students' personal, academic and emerging professional lives, including its perceived role as mentor, coach or companion. Flourishing provided a lens to examine broader dimensions of well-being such as purpose, engagement, relationships and optimism in the context of GenAI. Utilising the Listening Room methodology, friendship trios from one college within a UK university took part in timed, prompt-led conversations, sharing their lived experiences of using GenAI. Findings indicate that students predominantly use GenAI as an augmentative tool to translate briefs, break down tasks, provide exemplars and refine communication, which enhance perceived competence and increase engagement and confidence in academic work. At the same time, students expressed concerns about fairness, academic integrity, over-reliance, skill atrophy, misinformation and the idea of GenAI as an emotional "friend", highlighting potential risks to self-respect, authentic relationships and trust in assessment. The study concludes that GenAI can both support and erode flourishing, stressing the need for human-centred institutional guidance that foregrounds well-being, alongside moral integrity and academic outcomes.

Keywords

flourishing, well-being, generative ai, GenAI, belonging, mattering, higher education

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Introduction

This study seeks to explore the impact of generative AI (GenAI) on student well-being and flourishing within the UK higher education context. TechnoWellness is a term used where technology use contributes to flourishing and well-being (Candel, 2021) as opposed to technostress where technology has a negative impact on well-being (Mansuroğlu & Smith, 2026; Wang et al., 2023). Rather than focusing solely on academic outcomes and how GenAI is used to support assessment (O’Dea et al., 2025) through content searching and curation, content generation and ideation and content enhancement and refinement (C. S. Lee et al., 2025), this research adopts a holistic approach. Informed by the Flourishing Scale developed by Diener et al. (2009), which conceptualises flourishing as success in areas such as purpose, relationships, engagement, and optimism, it examines how GenAI intersects with students’ emotional, social, and developmental experiences. The study aims to gain a deeper understanding of how emerging technologies can influence the wider ecology of student life and ability to flourish, as well as concerns of adverse effects on mental well-being and anxiousness (Haidt, 2024). With ubiquitous access to mobile technology and a plethora of apps, along with the addition of GenAI, there is a need for AI literacy to support the responsible use of these new technologies to ensure these enhance as opposed to diminish individuals’ quality of life (Černý, 2025).

While GenAI can simulate human-like communication and companionship through convincing dialogue (Jones et al., 2025), studies continue to demonstrate examples of unpredictability and inaccuracy (Torous et al., 2025) with the tendency to hallucinate. As these become more public, this can influence negative attitudes towards GenAI (Gabbiadini et al., 2025). Despite this, a recent study has found that students are using GenAI apps for relationship and mental health advice and support (Attwell, 2025) but we don’t know to what extent.

Overall, whilst the evidence base of literature relating to students’ use of GenAI continues to expand, much of this has focused on the ethical adoption of the technology, assessment and academic performance. Comparatively little attention has been given to how students’ interaction with GenAI contribute to the broader conditions that enable them to flourish.

To capture authentic lived experiences, this study employs the Listening Room methodology (Heron, 2020; Parkin & Heron, 2022), where students in friendship groups participate in recorded conversations guided by prompt cards. These are used to gain their understanding of AI and GenAI; how GenAI is used by them both within and outside of university; and through the eight components of Diener’s Flourishing Scale (Diener et al., 2009), what it means to them to flourish at university and how GenAI might support this. This approach is designed to foster openness, trust, and depth, allowing students to reflect on how GenAI tools are shaping their well-being and ability to flourish positively or negatively.

The study is guided by the following research questions:

RQ1: How are students using GenAI tools to support their well-being, learning, and day-to-day university and personal experience?

RQ2: In what ways does the use of GenAI contribute to or detract from students’ sense of psychological flourishing, as defined by the Flourishing Scale?

This study is informed by a critical realist ontology and an interpretivist epistemology. From this perspective, flourishing is understood as a real but complex and context-dependant phenomenon that emerges through the interplay of personal, relational and environmental factors. Generative AI is viewed not only as a deterministic influence on student well-being, but as one element within a broader social-technical ecology that shapes students' experiences of learning, connection and participation.

Literature review

Well-being

It is recognised that there is no 'typical' student, and that they are increasingly diverse in age, gender, ethnicity and prior educational experience (Morgan, 2013). Outside of university our students have competing responsibilities as carers and as part-time or even full-time workers. Our student body include those who are international where English is not their first language and those who have visible and invisible disabilities. The transition into and through university can therefore be challenging for many students, and in different ways.

When students come to university there is an expectation that they will not only have a good experience but through this they will develop new skills to communicate and engage productively with others (Masika & Jones, 2016) and the knowledge to confidently prepare them for their future, and live meaningfully in the world (Harward, 2016). To support this, research has been undertaken to look at student well-being and has gained increasing attention in recent years, as institutions face growing concerns about student mental health, stress, and social isolation (G. Flett et al., 2019). The World Health Organization (1946) defines health not merely as the absence of disease and infirmity, but also as a state of complete physical, mental and social well-being. Positive mental health is attributed to well-being and the absence of languishing (Keyes, 2002). Keyes (2009) mental health continuum provides a means of categorisation using the terms flourishing, moderate mental health and languishing. It aims to shift the focus from the absence of mental illness to the presence of positive mental health (Keyes, 2016).

Well-being is defined by Harward (2016, p. 9) as:

"Establishing the connection of engagement to the development of an integrated self, capable of agency, serving both self-interest and the public good; expressed in flourishing, persistence and identity formation."

Scholars have recognised well-being is a multi-dimensional concept (Jarden & Roache, 2023) and can fluctuate dependant on the challenges an individual faces at any given time, the resources and support they have (Dodge et al., 2012), as well as how they are feeling and functioning at a personal and social level (Michaelson et al., 2012).

There is a growing recognition of the need for a developmental approach that supports students to not only survive but to thrive and experience a good life whilst at university (De Ruyter, 2004). Within this shift, concepts such as belonging, mattering, thriving and flourishing offer frameworks to reimagine how institutions can nurture holistic student well-being.

Belonging, mattering and flourishing

This section looks at the different concepts that can contribute to a student's well-being during their time at university.

Belonging refers to the sense of being accepted and valued by peers, staff, and the wider academic community (Pedler et al., 2022). Strayhorn (2018, p. 4) offers this definition:

“In terms of college, sense of belonging refers to students’ perceived social support on campus, a feeling or sensation of connectedness, and the experience of mattering or feeling cared about, accepted, respected, valued by, and important to the campus community or others on campus such as faculty, staff, and peers.”

For students to develop a sense of belonging and ability to thrive, this should be a key consideration throughout the student lifecycle, requiring effective leadership at all levels (Mossop, 2026). Ahn and Davis (2020) argue to belong, consideration needs to be given to social engagement (academically and socially), surroundings (geographically and culturally), and personal space (self-esteem and life satisfaction). Experiencing a sense of belonging is also associated with a feeling of connectedness (Strayhorn, 2018) and that one is important or matters to others. Mattering, a closely related construct, describes the feeling that one’s presence and contributions are relational and recognised (Gravett, 2023) and that one is significant, valued and makes a meaningful contribution to the lives of others (G. L. Flett, 2018, 2022).

Both belonging and mattering have been linked to higher academic motivation, resilience, and life satisfaction among university students, and essential to well-being (G. L. Flett, 2018). Without a sense of belonging or mattering, students are more vulnerable to loneliness, anxiety, disengagement, and dropout (Allen et al., 2021; Walton et al., 2011). It is acknowledged that there is no one size fits all approach to ensure all students feel they belong and matter (Strudwick & Miller, 2026). One approach is involving students as partners to draw upon their perspectives to develop effective strategies (Mossop, 2026). This can only be representative if the breadth of student diversity in relation to class, race and age (Grace & Gravestock, 2009) is included, as well considering the implications of those students commuting to university, those with caring responsibilities and those engaging in paid work while studying (Carruthers Thomas, 2019; Thomas, 2012, 2020). Where students spend less time on campus, this can present a challenge and indeed threaten a student’s sense of belonging (Cohen, 2022) where opportunities for human connectedness, may be reduced; and in turn have an impact on what is needed to thrive and flourish (G. L. Flett, 2022).

Flourishing represents a holistic approach to student well-being, integrating psychological, social, and emotional aspects of human functioning (Seligman, 2011; VanderWeele, 2017). Students with positive well-being and mental health not only flourish but educational attainment is increased (OECD, 2025). Rather than focusing solely on the absence of distress and mental health (Hirshberg et al., 2022), flourishing considers whether individuals feel purposeful, engaged, connected, and competent (Diener & Biswas-Diener, 2008). This perspective is especially relevant in higher education, where students are navigating academic pressures alongside identity development, belonging, and for many the transition into adulthood. They want to be able to function effectively (Huppert & So, 2013) despite the challenges they might face.

To summarise belonging creates the relational foundation upon which mattering develops, and together these can enable flourishing. Once individuals feel they belong, they begin to experience mattering and the sense that they are noticed, valued and able to contribute. Together these conditions can support flourishing. Another way of looking at it, is that flourishing emerges when individuals experience meaningful relationships (belonging) and recognise that they are valued and able to contribute (mattering). Contributing to the happiness and well-being of others is one of the components of Diener et al. (2009) Flourishing Scale. This and a further seven can be used to measure social-psychological prosperity and complement other measures of well-being.

GenAI Use

For the purpose of this study, we define AI and GenAI as follows:

Artificial Intelligence (AI): AI refers to computer systems that perform tasks typically requiring human intelligence, such as decision-making, language processing, or pattern recognition. In higher education, AI includes tools like plagiarism detectors, automated grading systems, and adaptive learning technologies.

GenAI: A subset of AI that generates new content, such as text, images, code, or audio, based on patterns in data the model has been trained on. GenAI tools (e.g., ChatGPT, MS CoPilot) are increasingly used by students for ideation, clarification, as a study buddy or companion.

GenAI apps can be categorised by the types of content they create, for example text, image, audio, video and code generation; and may also be multimodal (Varga-Atkins et al., 2025). Riemer and Peter (2024) identified four archetypes of GenAI which are creative assistants, knowledge adviser, social companion, and task agent.

Those choosing to use GenAI, the focus and frequency can differ. These tools can be used for personal, social and professional use. Through a cross institutional study O'Dea et al. (2025), developed a typology of three user types as casual, cautious and confident. Riemer and Peter (2024) refer to user interactions with GenAI as either transactional discrete tasks creating an output through a prompt, or agentic or continuous use whereby the user engages in an ongoing dialogue initiated by user prompts and where the GenAI takes on a proactive role to make suggestions or simulate a conversation.

Concerns using GenAI

It is recognised that not everyone wants to engage with GenAI and for a variety of reasons, from the fear of doing something wrong to the implications of the cost of using GenAI tools such as environmental impact, bias and social justice (Beckingham & Hartley, 2025). It is known that GenAI are prone to hallucination or confabulation, providing incorrect and bias information, whilst still appearing to be very convincing (Mollick & Mollick, 2023). Riemer and Peter (2024, p. 2) explain this as

“Generative AI technologies are underpinned by probabilistic models rather than deterministic algorithms. As such, they do not store any data or content in any traditional sense, which could provide a direct representation of aspects of the world. These models have no reliable way to recall exact information. Rather, they generate content according to likenesses.”

Quality of information in response to a vague prompt can be impeded if this is not sufficiently detailed and contextualised. Ambiguity in language and lack of background knowledge contribute to this (Ali et al., 2024). The ability to critique outputs and develop an evaluative judgement (Bearman et al., 2024) is also vital. Mollick and Mollick (2023) refer to the importance of ‘keeping the human in the loop’, using GenAI as a supportive tool.

There are growing concerns relating to the use of GenAI tools and mental health and well-being, which include overreliance, loneliness, technostress, techno-overload, isolation and loss of agency (Klimova & Pikhart, 2025; Mansuroğlu & Smith, 2026; Wang et al., 2023). Worse still examples leading to suicide and delusions (De Freitas & Cohen, 2024; Myrow, 2025). Selwyn (2025) calls for the need to reimagine digital practices that maximise societal benefits with minimal environmental and social impact.

GenAI and Well-being

A study by Zao-Sanders (2025) reviewed use cases of GenAI apps and found that the top three were therapy/companionship, organising my life and finding purpose – themed as personal and professional support. There are a variety of technologies including chatbots as conversational agents, artificial agents that can monitor well-being indicators, and voice assistants such as Alexa or Google Assistant which can offer mindfulness exercises. Examples of apps available that support mental well-being, mental health and emotional health, claim to provide online therapy, help you to sleep better and manage stress.

In China there has been an increase in the demand for technology enabled mental health solutions and uptake of AI-powered tools, such as Wysa and Youper, which are conversational agents. They are designed to deliver psychoeducational content, mood tracking, and cognitive-behavioural strategies in a user-centred format (Sun et al., 2025). It is important to note that whilst such tools can provide guidance, they are not a replacement for professional care and may isolate individuals from seeking human support (Illingworth & Forsyth, 2026).

There are also a growing number of personal companion and friendship apps. The website There's an AI app for that (n.d.) has a database of over 45k AI tools categorised by personal, work, and creativity. Within the personal category there are 5.5k tools with subcategories that include relationships, education, health, learning, spirituality and personal development. Table 1 provides a small selection of apps relating to well-being and companionship.

Table 1. Examples of well-being and companion GenAI apps

App type	Name and location of app	Description
Well-being	Calm https://www.calm.com/	Mental health app
Well-being	Flourish https://www.myflourish.ai/	AI mental wellness app
Well-being	Headspace https://www.headspace.com/	Mental health support
Well-being	Wysa https://www.wysa.com/	Mental health redefined
Well-being	Youper https://www.youper.ai/	Emotional Health Assistant
Companion	Replika https://replika.com/	Interactive companion
Companion	Snapchat My AI https://www.snapchat.com/@myai	AI companion
Companion	Kindroid https://landing.kindroid.ai/	Multiple AI friends and group chat
Companion	Nomi https://nomi.ai/	AI companion
Companion	Character AI https://character.ai/	Allows chats with fictional or real-life inspired characters

In addition to bespoke well-being apps, LLMs such as Claude and ChatGPT have identified that their chatbots are being used for interpersonal advice, coaching, psychotherapy/counselling, companionship, romantic and sexual roleplay (Anthropic, 2025) and social and emotional well-being (OpenAI & MIT Media Lab, 2025).

How students are using Gen AI

GenAI can be used for support or as a virtual companion in relation to learning, with the potential of increasing motivation and self-efficacy by providing clarification, personalised learning, and immediate feedback leading to reduced stress support (Bai & Wang, 2025; Vieriu & Petrea, 2025). Its use can contribute to reward sensitivity, influencing an individual's response to instant feedback and perceived goal achievement and competence (Yang, 2025). The downside is that students can develop a dependence on GenAI and metacognitive laziness (Fan et al., 2025).

The human like responses and 24/7 access to academic support, reassure students at a time they need and can go some way to guide them whilst undertaking academic activities outside of the classroom, increasing student agency (Darvishi et al., 2024). Sharples (2023) suggests six roles GenAI can take in cooperative and social learning. These are a possibility engine, Socratic opponent, collaboration coach, co-designer, exploratorium and storyteller. Mollick and Mollick (2023, p. 4) offer mentor (providing feedback), tutor (direct instruction), coach (prompt metacognition and reflection), teammate (provide alternative viewpoints), student (receive explanations), simulator (deliberate practice) and tool (accomplish tasks).

OECD (2026, p. 17) found that students used GenAI primarily for general search, idea generation and literature research on the cognitive side and for summarising and drafting on the production side. Access outside university also contributes to self-directed learning (Pavone, 2025). A further study with students found participants integrated GenAI with self-care with advice seeking, mentorship, resource creation, social simulation and therapeutic self-expression (Capel et al., 2024).

In a US study by Reyes-Portillo et al. (2025), volunteer college students with elevated depression or anxiety symptoms were introduced to Wayhaven, which is a GenAI powered mental wellness chatbot. Results suggest that this may be a viable mental wellness resource for diverse students with elevated depression or anxiety symptoms. Conversational agents as chatbots can foster flourishing enabling users to talk with technology rather than clicking through technology, with responses that are seen as less judgemental (M. Lee & Contreras, 2023)

A Jisc study (Attwell, 2025), captures research involving 173 students in discussion groups and 1274 responses from survey. Students are using a variety of tools both in their personal life and for academic use. This found that some students already use AI applications for relationship and mental health advice or support, alongside academic tasks. For example, ChatGPT, Microsoft Copilot, Google Gemini, and Snapchat My AI daily are used for study, life organisation, job preparation, and personal support. Students reported that they were using GenAI apps for relationship and mental health advice and support. However, it is not evident if this was perceived as useful or contributing to their well-being. Responses captured that students have multiple concerns about bias and misinformation generated by GenAI and the impact AI will have on future employability. Furthermore, the inequity of use as whilst many are using free versions of the apps, there is a growing number paying for access to premium versions, putting those that cannot afford this at a disadvantage. This aligned with a study by Chan and Hu (2023) where students have raised concerns about the misalignment of their human values, social injustice and inequality relating to parity and access of these technologies.

The students also recognised that a reliance on GenAI, whilst appearing to save them time and appear competent, could impair essential skills such critical thinking, creativity, communication and interpersonal skills. This argues for a need to cultivate a virtue of attention as this will help students to resist the ‘forever on’ lure of GenAI that diminishes their curiosity to find out things themselves, to engage in creativity and the ability to flourish (Clemente & Goodman, 2025).

In conclusion there is an opportunity to undertake empirical research to establish if and how the use of GenAI can contribute to student flourishing.

Methodology

The Flourishing Scale developed by Diener et al. (2009) offers a concise, validated tool that more directly captures students’ self-perceived success in key life domains. The scale looks beyond positive emotions and life satisfaction but also key aspects of psychological wealth, for example strong social relationships, self-respect and competence (Diener & Biswas-Diener, 2008). Its emphasis on purpose, optimism, relationships, and contribution aligns closely with the kinds of developmental and emotional outcomes students report in the context of GenAI use. Moreover, the scale’s clarity and adaptability make it well suited to qualitative exploration using student-led conversations.

The Flourishing Scale was chosen to establish the components that represent flourishing. It is a brief eight-item summary that has been used to quantitatively measure the respondent’s self-perceived success in important areas such as relationships, self-esteem, purpose, and optimism, providing a single psychological well-being score. Respondents use a 1-7 scale to indicate their agreement with each component. The possible range of scores is from 8 (lowest possible) to 56 (highest PWB possible). A high score represents a person with many psychological resources and strengths.

In this study, we chose not to focus directly on the extent to which an individual may be flourishing overall, but to utilise the components to understand how students’ use of GenAI may contribute to them. Table 2 capture the eight components of flourishing. These were then given a description by the authors, which are used to create the visual ‘Elements of Flourishing’ in Figure 1. (Note: Permission to use the flourishing scale with credit is granted by the author here <https://labs.psychology.illinois.edu/~ediener/scales.html>)

Table 2. Components of Flourishing (Diener et al., 2009)

Components	Flourishing Scale
Purpose and meaning	I lead a purposeful and meaningful life
Supportive relationships	My social relationships are supportive and rewarding
Engagement in activities	I am engaged and interested in my daily activities
Contribution to others	I actively contribute to the happiness and well-being of others
Competence and capabilities	I am competent and capable in the activities that are important to me
Self-respect and moral integrity	I am a good person and live a good life
Optimism	I am optimistic about my future
Respect	People respect me

The Elements of Flourishing visual was then shared in the qualitative approach we took which is outlined in the next section.

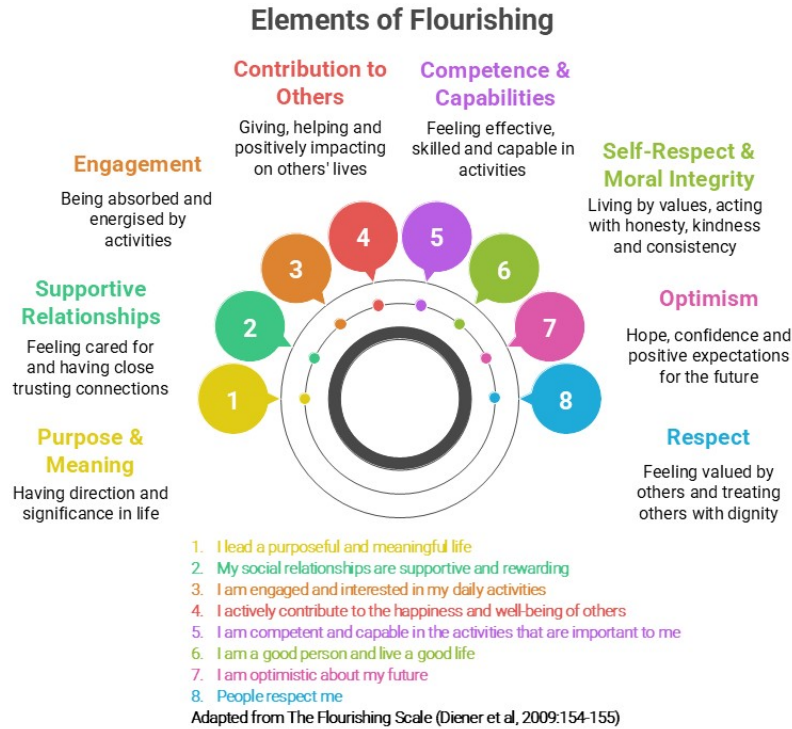


Figure 1. Elements of Flourishing, adapted from Diener et al. (2009)

Friendship as a method

This study employed the Listening Rooms methodology (Heron, 2020; Parkin & Heron, 2022), a friendship-driven approach designed to elicit rich, qualitative data through paired or group conversations. Unlike traditional interview techniques, Listening Rooms position friendship as a catalyst for data generation, enabling participants to engage in open, honest conversation with someone whom they share pre-existing trust. The method shifts power from researcher to participants, creating conditions for deeper reflection, emotional safety, and mutual meaning-making.

Participants

The study focused on five groups drawn from one college within a university consisting of three colleges. The college was purposively selected due to its relevance to the research aims and the researchers' established access to participants. Focusing on a single college enabled an in-depth exploration of the phenomenon within a shared organisational context while maintaining a manageable scope for this small-scale study. Although the findings may not be directly transferable to the other colleges, they provide valuable insights into the experiences and perspectives of participants within this setting.

Recruitment materials emphasised that the project wanted to explore their shared experiences and that the three friends would participate together. This approach prioritised the quality of connection between the participants over demographic representativeness, consistent with Listening Rooms principles that value depth and nuance of lived experiences. Each trio registered together, confirming their willingness to engage in extended conversation about artificial intelligence.

Data Collection

The data collection method involves three stages: pre-conversation consent and briefing; participant-led conversation within the Listening Room; and post-conversation debriefing. The timeframe during which data collection took place with students was over a period of two weeks.

Pre-conversation consent and briefing

Prior to the Listening Room conversation, each participant submitted a consent form via email. Each trio then attended a briefing session in Teams, facilitated by a researcher. During the briefing session, the researcher outlined the ethos of Listening Rooms, the purpose of the study, and instructions for how to navigate through the prompt cards used to support the conversation. The briefing emphasised that the researcher would not be present during the conversation, but that the conversation would be recorded, and later transcribed. It was also explained that data would be anonymised at the point of transcription. Participants were invited to speak freely with each other in a way that they would normally interact. This framing was intended to put the participants at ease and to reduce the formality associated with researcher-participant interactions.

Listening Room Conversations

Listening Rooms sessions involved each trio entering a private breakout room in Teams, set to automatically record upon entry. Each session lasted for a maximum of 60 minutes. Prompt cards were provided via a link in the ‘chat’ function, designed to be broad, non-directive, and open ended. Participants were encouraged to use the cards as conversational prompts, and to spend about ten minutes discussing each card. Friends were able to draw upon shared experiences, challenge one another gently, and articulate sensitive reflections with reduced fear of judgement. This dynamic enables participants to share insights, memories and feelings that are less accessible in conventional interview formats. The Listening Room is therefore a safe space, co-constructed by the participants themselves. The method’s focus on reciprocity, rather than individual narratives, led to the generation of data characterised by co-constructed meaning, layered perspectives, and spontaneous sense-making.

Prompt cards included the following themes: ‘Happiness’; ‘Generative Artificial Intelligence’ (GenAI); ‘GenAI Outside of University’; ‘GenAI at University’; ‘The Concept of Flourishing’; ‘Flourishing and GenAI’.

The purpose of the ‘Happiness’ card was to introduce a sense of ease and comfort and to allow the conversation to find a natural flow. Once the participants were comfortable in the Listening Rooms environment, more challenging themes were introduced. The ‘GenAI’ card encouraged participants to share their understanding of the terms ‘AI’ and ‘GenAI’. Some participants used this as an opportunity to web search the terms and to reach a shared understanding of the topics being discussed. The third card encouraged participants to discuss how they use GenAI in their daily lives, followed by a fourth card exploring how they use it academically during their university studies. The fifth card introduced ‘The Concept of Flourishing’ and asked participants to discuss what flourishing means to them, with support of the ‘Elements of Flourishing’ diagram (See Figure 1). The final card explored how participants might use GenAI to help them flourish at university.

Post conversation debriefing

At the end of each conversation, trios were presented with a slide containing signposting to support resources and services. This information was reiterated via email immediately after the session. The

absence of the researcher means there is no opportunity within the data collection stage to identify and address potential safeguarding issues. The debriefing is therefore important to provide holistic support information that a student can access if the research process has raised issues that they need support with.

Data Analysis

Audio recordings from the Listening Rooms were transcribed verbatim and anonymised. Round Table Analysis was then used to conduct a first round of data analysis. Round Table Analysis invites key stakeholders with an interest in the topic and the influence to make change happen to a guided thematic discussion of the data. The aim of the session is to co-create a set of findings and recommendations for changes to practice. Round Table Analysis is action focussed and time limited and therefore does not saturate the data analysis.

A week in advance of the session, each stakeholder received a sub section of the data to read. Care is taken to ensure that each transcript is read by the same number of stakeholders, and that no stakeholder reads the same set of data. This ensures that each transcript has equal weight at the Round Table, and that each stakeholder brings a different perspective on the data. During the session, the group work together to identify priorities for analysis, then create an evidence base by drawing quotations from the transcripts. Based upon the evidence base, the group then agree upon findings and recommendations. This collaborative review of the transcripts provided data familiarisation and enhanced the trustworthiness of the analysis by enabling multiple researcher perspectives to be considered together.

Further analysis was conducted after the Round Table to take a deductive approach using the eight elements of the Flourishing scale as a coding structure. The data was reviewed again and coded according to these categories, with student quotations mapped to the relevant framework elements. To support coding consistency, the institutional version of Microsoft Copilot Chat was used as a supplementary verification tool to cross-check the researchers' manual identification of quotations associated with each element. All AI-generated suggestions were subsequently reviewed by the researchers through discussion and manual inspection of the original data, to ensure we retained responsibility for all coding and interpretive decisions.

Ethical Considerations

Ethical approval was obtained from the host institution. The unique relational nature of Listening Rooms required specific attention to consent, confidentiality and emotional risk. Participants were reminded that they retained full autonomy of what they shared during the Listening Room and that they could withdraw their consent at any point up to two weeks after the conversation. The debrief process was designed as a key site of ethical care.

Findings

Happiness

In response to the Happiness 'icebreaker' students responded by discussing what makes for a happy time at university, does happiness change, what the important people/events/sessions are needed for this to happen.

Students defined happiness at university as a balance between social belonging, manageable academic demands, high-quality teaching, and good well-being support. Happiness is dynamic,

shifting with seasons and weather, workload, personal circumstances, and level of adjustment to university life.

The individuals who matter most are friends and peers, followed by lecturers, support services, and student representation structures. Events and sessions that promote connection, reassurance, and support meaningfully contribute to a happier student experience, but only when well organised and relevant.

AI vs GenAI

Students were asked to discuss what is AI and what is GenAI. Across the five groups students generally understand AI at a high level, especially as something that mimics human intelligence or helps users' complete tasks. The ability to define GenAI was less widely understood, with two students expressing confusion, whereas the others were able to identify that it creates new content. One group discussed AI in detail at a sophisticated technical, ethical, and economic level.

Students were aware of both benefits (efficiency, creativity, automation) and risks (skill de-gradation, market concentration, ethical concerns, threats to creative fields). Emotional responses of fear and uncertainty, as well as fascination were common. Overall, the discussions suggest a student population that is aware, curious, and concerned, but with uneven depth of knowledge.

Popular GenAI Tools and Purpose

Across the five groups, students said their main GenAI tools for personal use were ChatGPT and Google's AI-enhanced search, with some also using Gemini, Canva AI and Snapchat AI. This was surprising given all students have access to Microsoft CoPilot Chat. They used GenAI for a wide range of everyday tasks, including quick factual enquiries, drafting or rewording messages, professional communication, recipes, travel planning, budgeting, shopping comparisons, health reassurance, emotional expression, and even catching up on missed TV shows. None of the students mentioned using bespoke well-being or mental health apps e.g. Calm and Wysa or companion apps e.g. Replika and Nomi, though one did refer to the features of Snapchat My AI. Studies are limited but this was also true of Herbener and Damholdt (2025)'s research where ChatGPT was the predominant app used.

Some students used GenAI for emotional clarity when overwhelmed, while others relied on it to simplify admin tasks or provide step-by-step revision help. However, not all welcomed GenAI. Some avoided it unless necessary, felt uneasy about intrusive features (such as Snapchat AI), or were concerned about environmental impact and a growing sense that AI use is becoming unavoidable.

Students' feelings were mixed. They appreciated GenAI's convenience, speed, and clarity, particularly when dealing with complex or emotionally loaded situations, but many were concerned about over-reliance and the potential loss of personal skills and independence. Ethical worries included fairness, job displacement, impacts on creative industries, and uncertainty about the accuracy of AI-generated information. A repeated theme was fear of losing originality, both individually and culturally. Some also worried that people might form emotional attachments to GenAI or overuse it socially, viewing this as a mental-health issue. Overall, students approached personal GenAI use with a blend of practicality, caution, and curiosity.

At university, students again identified ChatGPT as their main tool, with some use of Gemini, Grammarly, Team transcription, Otter AI, and coding tools like Copilot or Codey AI. Their academic use was more focused than personal use, typically involving breaking down assignment briefs, clarifying concepts, summarising readings, generating the structure of essay or dissertation,

and refining ideas. Many used GenAI for revision or to fill gaps in understanding. A smaller number used it for choosing assignment topics or drafting professional communications, being careful not to let GenAI shape the core content.

Feelings about academic use were also mixed, and often more emotionally charged. Students worried about fairness when others used AI to complete full assignments, creating a sense of inequality. Concerns about AI detection tools led to fears of false accusations or confusion about what counts as “use,” and declaration rules added additional stress. Despite this, students valued GenAI for reducing cognitive load, boosting confidence, and helping them begin difficult tasks. They consistently emphasised that GenAI should support not replace their thinking and were determined not to let AI generate original ideas for them. They wanted to use GenAI ethically but felt uncertain about boundaries, fairness, and reliability.

Discussion through the Lens of Flourishing

This study set out to explore how students are using GenAI tools and how such use may influence their well-being and flourishing. Drawing on Diener et al. (2009)’s Flourishing Scale as an evaluative lens, the study examined student experiences across the eight elements: purpose and meaning, supportive relationships, engagement, contribution to others, competence and capabilities, self-respect and moral integrity, optimism, and respect. Using the Listening Room methodology, students engaged in reflective conversations with peers, offering rich insights into the emotional, cognitive, and social dimensions of their interactions with GenAI which spanned personal, academic and professional use. This discussion interprets the findings in relation to the two guiding research questions and existing literature on student well-being, flourishing, and GenAI use in higher education; using the elements to as themes to structure this.

Purpose and Meaning

This can be succinctly described as ‘having direction and significance in life’. Of all the eight dimensions, this was one of the elements with the least clear links to using GenAI. Overall, it could be argued that students use of and perceptions of GenAI has little connection to how they feel about their overall direction and meaning in life, however one student made the connection between flourishing and “striving for good grades and maybe personal developments like I want to be better, and I want to be a better person”.

Kesebir (2018, p. 8) refer to happiness as a state of mind:

“It denotes a preponderance of positive emotions and positive attitudes toward one’s life and its diverse components...Happiness, on the other hand, refers to a life of well-being or flourishing, a life that is good for a person, benefits the person. It is more about “doing good” than “feeling good”. “

Students acknowledged that GenAI can positively impact their learning and education, and as such that could impact their overall direction in life. Purpose can equate to engagement in goal directed pursuits, and significance to the feeling of mattering or making an impact (Heintzelman, 2018). They also appreciated that GenAI can help develop plans and ideas for individual growth, outside of the normal mainstream education setting, including aspirations and accomplishments outside of traditional academia including dance, and sport, recognising that students’ milestones can be both personal and relational (Gravett, 2023).

There were also negative feelings in relation to direction and significance. Students expressed concern that overuse of GenAI could impact their skills and professional capabilities. For example:

“So my concern is how do we manage that. How do we still ensure that people are doing the work, people are still studying and getting educated and being skilled at using AI.”

This could in turn impact their wider employability and thus direction and significance in life. Clemente and Goodman (2025, p. 670) argue that the virtue of attention is “a fundamental constituent of human flourishing” and needs to be cultivated. When disrupted by GenAI tools this can have a negative impact on ‘character education’ needed to develop the virtues individuals need for life.

Supportive Relationships

This element of Flourishing considers feeling cared for, including having trusting connections with others. It was clear that students do see how GenAI (and technology more broadly) can impact these feelings. Their sentiment included using GenAI (particularly ChatGPT) as a ‘trauma dump’.

"I'm a very emotional person and I don't know how to sometimes work out what I'm saying. Like I can't put my words together so I just trauma dump on ChatGPT and I'm like I don't know what any of this means, can you help?... then it gives out step by step things and it's like 'Why don't you do this, why don't you do that' and I'm like 'Oh, okay, that actually makes sense. I was just making a mountain out of a molehill', but I just needed something to map it out so that I could get my head around it."

This action is not intended to replace any form of human interaction, but to help the student process and break down complex feelings and emotions, perhaps in advance for exploration and support-seeking from another person. It could be considered a filter or triage for the individual, prior to talking to another person. However, it does raise concerns of overuse which could lead to digital fatigue and loneliness if this approach took precedence over face-to-face interactions (Klimova & Pikhart, 2025) and reduced confidence in social integration, one of the dimensions of social well-being (Keyes, 1998).

GenAI platforms (such as CoPilot and ChatGPT) enable students to explore and enquire in a more human way than traditional search engines phrasing questions in a human-to-human style conversation. The technology is now also embedded into social media platforms which can enhance and support community building and relationships in those spaces. This can include Snapchat filters, and as well as enhancing the aesthetics of posts and content to increase engagement with peers.

On the one hand GenAI can learn how the student communicates, and reciprocates that style, which in turn can improve the confidence of students with their communication style (with others). However, some students expressed concern at GenAI's usage by others and hinted at how this could be detrimental to the theme of supportive relationships. For example, scepticism at using GenAI in social media communications, and questioning what is authentic and what is not. One student was concerned about AI being integrated with Snapchat and accidentally sending messages that were AI generated.

"I've accidentally sent so many messages that I meant to send to my friends and I've clicked that by accident, and I'm like 'Oh no, I don't want to send it to that' because that does freak me out, the fact it just appeared on Snapchat. And you can't get rid of it."

Engagement

Whilst there were fewer variations of comments made regarding themes linked to engagement, what appeared were a few consistent themes. It is also worth noting, this was the only element of flourishing with no negative links to GenAI, and so it is fair to say that students recognise the potential and positivity for GenAI to enhance being absorbed by and energised by activities.

Students referenced how GenAI has been a positive enabler to exam revision; from creating test questions to double checking answers.

"The only reason why I've academically used it in university is for my exam, like revision. If I can't find, over my notes, what something is – I'm just going to type it in, because it will give me the fact anyway. Obviously I know that AI is not 100% accurate, but I'm taking that risk anyway."

Whilst complex and multifaceted, engagement has long been recognised that this contributes to students' capacity for continuous learning and personal development (Kuh, 2003); (Kuh, 2009, p. 5). GenAI can provide 'just in time learning' and the ability to engage in this at a time of their own choosing. One student said: "I find it quicker than going on Google. . . if I just need an answer straight away."

Outside of class time, students seeking help from tutors are unlikely to get immediate support at a time they choose to engage. Conversely disengagement has been aligned to a lack of sense of belonging and mattering (Allen et al., 2021; Walton et al., 2011).

On a personal level, students linked their sporting hobbies and endeavours to GenAI, for example running/workouts and leisure activities such as finding out what happened in missed television programmes.

"For like running, if I'm trying to ease myself back into running, I'll be like what do you recommend, like should I do this plan again, should I start from here, or what's the best way to start without getting injured."

Contributions To Others

This element of flourishing was the least connected to the outcomes of the listening rooms conversations, with only two themes linked. Students recognised that GenAI can help break down complex ideas and topics. For example:

"If I don't understand anything I'll be like 'I don't understand this, we did this bit in coding in C Sharp, can you help?', and it'll explain how to do it and stuff."

This might be helpful in groupwork or when giving or receiving support with other people, for example mentoring or coaching; roles identified by Mollick and Mollick (2023).

However, there was strong feeling that high or medium-risk scenarios that require emotional support should not come from GenAI despite the perception that GenAI can add value here. Students were unanimous in their feeling that the need for emotional support should come from another person, with specific reference made to friends and family. One student lamented the loss of the mentoring scheme:

"A mentor is about being relatable, and that industry specific experience to then help someone else grow, it's not black and white. It's meant to be like a relationship, a connection. I found my mentor through that and we got loads of experiences through that, and it will probably then become like an AI thing."

This aligns with Illingworth and Forsyth (2026), who raise the concern that over engagement with GenAI may isolate individuals from seeking human support. When introduced to the Flourishing Scale diagram, one student did comment: "I actively contribute to the happiness and well-being of others. I would like to think so."

Competences and Capabilities

Students discussed that GenAI was useful in their professional, academic and personal domains. Professionally students discussed using GenAI to create LinkedIn accounts transcribing activities

or helping formulate sensitive work-related emails. Similarly, there was evidence that GenAI contributed within their academic life.

This was articulated as GenAI acting as a learning aid, which can assist with clarification, jargon busting and summarising of information for understanding assessment or supporting revision. This indicates that using GenAI can contribute to competence by reducing complexity and cognitive overload, through clarification seeking. This aligns with Capel et al. (2024)'s study and the students use of GenAI for advice seeking and therapeutic self-expression. Examples included:

“Uploading my assignment briefs to just explain it with a lot less jargon” and “It’s very manageable. . . it’s not overwhelming”

“When I’m doing revision and test papers, if I don’t fully understand something, once I’ve had a go step by step ideas, I will get AI to run through it and give me step by steps.”

Participants also conveyed the usefulness of GenAI for activities such developing recipes and cooking, conducting price comparisons, developing fitness regimes and route planning.

“I use it for recipes sometimes if I’ve not got much in the fridge. I’ll be like ‘Do you think if I mix this with this, like what herb do you think will go with that?’, or like ‘Can I make a meal out of this? What suggestions have you got?’”

While Gen AI supports task-level capability it potentially reduces students’ sense of independent competence. There are also pedagogical risks of diminishing critical evaluation (Mollick & Mollick, 2023) and cognitive engagement (Yang, 2025). The participants offer their concerns around becoming over reliant on Gen AI and how it can impede their productivity or success due its potential inaccuracies, particularly in the academic and professional domain.

“Yeah, I wouldn’t use it for coursework because then again I become too heavily reliant on it.”

“It scares me how wrong it can get things”

“As much as I can I try not to use it, because I believe there are things it just takes away from you if you end up depending on it more than you do the work or you do the thinking on your own”

“AI is actually slowing us down. . . coders now struggle to code without AI. . . So we are losing knowledge, losing efficiency, and becoming dependent.”

Self-Respect and Moral Integrity

This relates to how individuals feel or relate to being a ‘good person’, including living by values and acting with honesty. The use of Gen AI and the extent to which students will employ GenAI in their academic domain presents an ethical and moral dilemma (Smit et al., 2025).

Previous literature suggests that students are unsupportive or hold negative views of entirely outsourcing their assessments to GenAI tools (Attwell, 2025; Chan & Hu, 2023). This was echoed in the findings, with students frequently highlighting moral and ethical concerns over Gen AI in both the academic and the wider professional domain. Students expressed they didn’t want GenAI to undermine their previous achievements and efforts.

“Well because I don’t want to cheat or anything like that. I’m in the final year; I’ve got this far.) and therefore, have set boundaries on its usage or avoided entirely (P1. “So, for me personally I try not to use it.”

Two students were not confident in using GenAI and expressed fear in doing so.

“I have never used it, just because I thought it was like a cheat.” and “I think I still use Google, I still haven’t transitioned yet”.

This raises a concern, in that students could be disadvantaged where they lack either the confidence or technological competence to use GenAI purposefully (Griffin & James, 2025)

The students also articulated environmental and societal ethics especially around the water and energy footprints of AI data centres as reasons to minimise or avoid use:

“I think that environmentally as well, I think that it’s not good for society.”

“I’m iffy about AI killing the environment, so I don’t like to overuse it.”

“Even if you don’t want to kill the environment, you’re still killing the environment.”

Finally, there was a related emergent theme about the participants discomfort around the GenAI’s encroachment into creative arts where human imagination and authenticity are seen as valuable tenets. Their insistence that “art should be humans only” reflects a moral stance, and that GenAI in these spaces was viewed as ethically inappropriate.

There were reservations about how GenAI may undermine previous personal achievements and overshadow their true ability, wider societal and environmental concerns over the morality and use of GenAI.

This contributes to students exhibiting ethical related hesitation and boundary setting in the academic domain stating, “I try to find ways around it”. Through the flourishing lens, using GenAI may be perceived as diminishing an individual’s ability to flourish in the self-respect and moral integrity realm.

Optimism

Gen AI was repeatedly positioned as an inevitable technological force with profound implications for employment and career security. In one group the students discussed their concerns about widespread automation and job loss:

“Are robots going to take my job. . . 94%” “Chance that robots would take my job...by 2030, 30% of jobs. . . fully automated”

While simultaneously emphasising a lack of personal control over these developments:

“It’s not a choice now”

This is a common concern and whilst students are open to the use of GenAI and cautiously optimistic about the benefits, they still had worries relating to the use of GenAI (Cleland & Stuart, 2025)

This framing presents as the future as externally determined and adds to a sense of anxiety of GenAI rather than optimism.

“But at the end of the day, we’re moving forward in this technological new age where we’re entering a stage where tech is going to run the world at some point and I think that people are scared, especially in job industries.”

Through the flourishing lens, such perceptions constrain optimism by disrupting individuals’ ability to imagine a stable, meaningful, or self-directed future, even where GenAI is recognised as functionally useful in the present. This is exacerbated by a lack of trust in the technology due to its unpredictability in its outputs (Marimon et al., 2025).

However, the participants have discussed how they have used GenAI in their personal, professional and academic domains, and acknowledging that GenAI aids them in different aspects of their lives, therefore characterising GenAI as purely an inexorable negative force, does not seem an accurate interpretation of the data. Its use can contribute to reward sensitivity, influencing an individual’s response to instant feedback and perceived goal achievement and competence (Yang, 2025).

Respect

On the Flourishing Scale, ‘Respect’ refers to the sense of feeling valued and treating others with dignity. This was discussed both in terms of how they wished to be treated and how they wished to present themselves to others. This also aligns to belonging and mattering theory and the perceived experience of feeling respected and valued (Strayhorn, 2018).

A recurrent theme was the desire for human connection, with several participants expressing discomfort at interacting with automated systems rather than real people.

“Like when you’re on a call you don’t want to be talking to a robot, you want to be talking to an actual person.”

This reflects the Flourishing Scale’s emphasis on feeling respected and taken seriously by other participants equated respect with being acknowledged by a human, not an automated voice or chatbot. Yet there is evidence that chatbots are seen as less judgemental and encourages interaction (M. Lee & Contreras, 2023)

At the same time, GenAI was strategically used to enhance professionalism, especially in contexts where respectful communication was seen as essential. Students described using GenAI to help them phrase sensitive messages appropriately or to strengthen the quality of job applications.

“I’m in a situation where I need to handle something really professionally and I’m trying to go about it the right way because it’s a sensitive thing, I’ve used it before to be like what’s the correct way to handle this and bring this up.”

Another described using ChatGPT to refine a cover letter. Here, GenAI functions as a tool to protect and project one’s professional identity, helping students to appear competent, polished and respectful of workplace norms.

“I would give ChatGPT my original cover letter.”

However, participants also recognised that GenAI carries reputational risks. They expressed concern that overreliance on GenAI or using it inappropriately could lead others to lose respect for them or view their work as illegitimate, unreliable or even dishonest. One student described frustration when peers defaulted to using GenAI in seminars:

“What’s the point of a two-hour seminar if you’re just going to ask someone else to do it for you?”

Here, GenAI use could be interpreted as disrespectful to the learning environment and to others’ effort. Participants also worried that AI-generated work could be misinterpreted as cheating or could undermine perceptions of authenticity and capability. Finally, it was also evident that there is still unclarity of how GenAI works and the expectation that because it can search the open web, it will provide the best response.

“Google, you have to scroll through and find out the information yourself, or there’s got to be a specific website where someone has done the research and then uploaded it. Like ChatGPT actively just searches through all of the outputs on the internet and on podcasts and gives you the most informed answer.”

Overall, our findings suggest that the use of GenAI can both contribute to flourishing but also detract from flourishing, where it was felt the human aspects were valued more. Table 3 brings together a summary of these examples aligned to the eight elements of the Flourishing Scale.

Table 3. Summary of examples of student use of GenAI contributing to or detracting from flourishing

Contributions to Flourishing	
Competence and Capabilities; Engagement	By translating briefs into plain language, outlining steps, providing exemplars, and debugging code, GenAI often reduces activation barriers, helping students feel capable and engaged sooner. Students framed this as a legitimate way to “get started” without letting GenAI do all the work. This suggests such augmentation uses can enhance engagement with learning and can improve outcomes when students remain cognitively active.
Purpose and Meaning; Optimism	When GenAI clarifies expectations, students report greater direction and confidence which features at the heart of flourishing. Faster clarity can free time for peer support and contribution (e.g., focusing seminars on discussion rather than deciphering wording).
Supportive Relationships; Contribution to Others	Some used GenAI to improve professional communication, facilitating smoother interactions with peers and tutors. This again can build personal confidence.
Detractions from Flourishing	
Self-Respect and Moral Integrity; Respect	Students expressed strong concerns about fairness and academic integrity, for example asking GenAI to do the seminar work, fearing that honest effort isn’t rewarded equally and that detection is unreliable. This erodes perceived respect and the moral fabric of assessment.
Competence and Capabilities	Many worried that if using GenAI too frequently it can lead to over reliance, risking skill atrophy and shallower uncritical thinking.
Supportive Relationships	Several were uneasy about GenAI being a “friend” or emotional proxy, echoing warnings about bias, unpredictable responses, risk of dependency. Such uses may undermine the human relationships and community ties that most students see as central to flourishing.

Conclusion

The aim of this study was to investigate how students in UK higher education are using GenAI tools in ways that influence their overall well-being and psychological flourishing. Grounded in Diener et al. (2009)’s Flourishing Scale as an evaluative framework, the research has gained an insight and understanding of how GenAI adoption can contribute to the shaping students’ experiences, professionally, academically and personally.

By using the Listening Room methodology to explore these themes in friendship-based conversations, the study prioritised inclusive and authentic, student-led reflection over researcher-led

interrogation (Parkin & Heron, 2023). However, students may have been reluctant to share more personal usage of GenAI, for example as personal companionship or well-being therapy.

Epistemologically, the study has adopted an interpretivist stance, recognising that students' experiences of flourishing cannot be measured or explained solely through objective indicators. Rather flourishing is understood through the personal meaning students attribute to their interactions with GenAI, their peers and educators, and their wider learning environments. This approach acknowledges that knowledge is co-constructed between the researchers' interpretations of the participants responses, whilst seeking to develop contextually grounded insights into how students perceive the ways in which GenAI may support or constrain experiences of belonging, mattering and flourishing.

The research has uncovered nuanced insights into how GenAI could influence student flourishing, not only as a cognitive or academic support tool but also as a potential emotional and social agent. However, concerns were widespread: our interpretations highlighted that students felt flourishing must ultimately come from self-effort, human connection, and genuine capability, and that over-reliance on GenAI risks undermining these foundations.

Overall GenAI supports flourishing when used to augment students' autonomy and initial understanding of concepts (Competence and Capabilities, Engagement, Purpose and Meaning, Optimism) and undermines flourishing when it replaces thinking or relationships (Self-Respect and Moral Integrity, Respect, Supportive Relationships), or when reliance raises cognitive/ethical risks.

The students recognised that GenAI can contribute to flourishing, but only if used mindfully, ethically, and in ways that reinforce rather than replace personal development and academic autonomy. Overall flourishing requires human growth, and GenAI should remain a supporting tool, not the driver of that journey. Discussing these ethical dilemmas and 'moral hazards' with students needs to be an ongoing conversation and involving them in policy making (Smit et al., 2025) and developing student facing guidance is vital.

Limitations and further research

It is acknowledged that this study is drawn upon a small number of participants from one college with an institution. However, this opens the opportunity to undertake further research to better understand the opportunities, limitations, and ethical considerations of GenAI's evolving role in higher education and the relation to student flourishing. Whilst the research contributes new knowledge on the relational and emotional dimensions of student-GenAI interactions, providing insights into human-centred approaches to GenAI use personally, academically and professionally there is scope to elicit further qualitative insights through one-to-one interviews or more directed qualitative data through questionnaires to ensure full anonymity from the researchers.

There is scope for further research to move beyond instrumental accounts of GenAI use to explore how it influences students' experiences of belonging, mattering and flourishing within higher education. Such work would contribute to a more holistic understanding of student flourishing by examining not only what students do with GenAI, but how it influences their relationships, sense of purpose, agency and participation in learning communities. A relational perspective of this kind has the potential to inform institutional approaches that seek to harness GenAI in ways that support both academic success and human flourishing.

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The institutional version of Microsoft Copilot Chat was used to cross-check the manual identification of student quotes aligned with the eight elements of the theoretical framework used. The authors confirm these were reviewed and verified with the transcripts.

Contributions against CReDIT

Sue Beckingham: Conceptualisation, Investigation, Data Curation, Writing - Original Draft, Writing - Review and Editing, Project administration, Methodology

Joel Gray: Investigation, Data Curation, Writing - Original Draft, Writing - Review and Editing, Project administration

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References

- Ahn, M. Y., & Davis, H. H. (2020). Four domains of students' sense of belonging to university. *Studies in Higher Education*, 45(3), 622–634. <https://doi.org/10.1080/03075079.2018.1564902>
- Ali, O., Murray, P. A., Momin, M., Dwivedi, Y. K., & Malik, T. (2024). The effects of artificial intelligence applications in educational settings: Challenges and strategies. *Technological Forecasting & Social Change*, 199, Article 123076. <https://doi.org/10.1016/j.techfore.2023.123076>
- Allen, K. A., Kern, M. L., Rozek, C. S., McInerney, D. M., & Slavich, G. M. (2021). Belonging: A review of conceptual issues, an integrative framework, and directions for future research. *Australian Journal of Psychology*, 73(1), 87–102. <https://doi.org/10.1080/00049530.2021.1883409>
- Anthropic. (2025). *How people use claude for support, advice, and companionship* [Anthropic]. <https://www.anthropic.com/news/how-people-use-claude-for-support-advice-and-companionship>
- Attwell, S. (2025). *Student perceptions of AI 2025* [Jisc]. <https://www.jisc.ac.uk/reports/student-perceptions-of-ai-2025>
- Bai, Y., & Wang, S. (2025). Impact of generative AI interaction and output quality on university students' learning outcomes: A technology-mediated and motivation-driven approach. *Scientific Reports*, 15, Article 24054. <https://doi.org/10.1038/s41598-025-08697-6>

- Bearman, M., Tai, J., Dawson, P., Boud, D., & Ajjawi, R. (2024). Developing evaluative judgement for a time of generative artificial intelligence. *Assessment and Evaluation in Higher Education*, 49(6), 893–905. <https://doi.org/10.1080/02602938.2024.2335321>
- Beckingham, S., & Hartley, P. (2025). In search of ‘responsible’ generative AI (GenAI). In *In: Doolan m.a. and ritchie, l. eds. transforming teaching excellence: Future proofing education for all. leading global excellence in pedagogy, volume 3. UK: Ifntf publishing. isbn 978-1-7393772-2-9 (ebook).*
- Candel, O. S. (2021). Measuring TechnoWellness and its relationship to subjective well-being: The mediating role of optimism. *Psychology in Russia: state of the art*, 14(3), 166–179. <https://doi.org/10.11621/pir.2021.03y>
- Capel, T., Ploderer, B., Bircanin, F., Hanmer, S., Yates, J. P., Wang, J., Khor, K. L., Leong, T. W., Wadley, G., & Newcomb, M. (2024). Studying self-care with generative AI tools: Lessons for design. In *In j. fritsch, c. a. le dantec, a. vallgård, l. jönsson, & s. f. alaoui (eds.), designing interactive systems conference (pp. 1620–1637). acm.* <https://doi.org/10.1145/3643834.3661614>
- Carruthers Thomas, K. (2019). *Rethinking student belonging in higher education*. Routledge.
- Černý, M. (2025). Conceptualisation of digital wellbeing associated with generative artificial intelligence from the perspective of university students. *European Journal of Investigation in Health, Psychology and Education*, 15(10), Article 197. <https://doi.org/10.3390/ejihpe15100197>
- Chan, C. K. Y., & Hu, W. (2023). Students’ voices on generative AI: Perceptions, benefits, and challenges in higher education. *International Journal of Educational Technology in Higher Education*, 20(1), Article 43. <https://doi.org/10.1186/s41239-023-00411-8>
- Cleland, S., & Stuart, J. (2025). “cautiously optimistic”: Young people’s thoughts about the impacts and influences of generative artificial intelligence. *Research Brief, 1*. https://collections.unu.edu/eserv/UNU:10133/Cautiously_Optimistic-No12025-UNUMACAU.pdf
- Clemente, M., & Goodman, D. M. (2025). Educating attention: Flourishing in the age of generative AI. *British Journal of Educational Studies*, 73(5), 655–672. <https://doi.org/10.1080/00071005.2025.2542682>
- Cohen, G. L. (2022). *Belonging: The science of creating connection and bridging divides*. Norton.
- Darvishi, A., Khosravi, H., Sadiq, S., Gašević, D., & Siemens, G. (2024). Impact of AI assistance on student agency. *Computers and Education*, 210, Article 104967. <https://doi.org/10.1016/j.compedu.2023.104967>
- De Freitas, J., & Cohen, I. (2024). The health risks of generative AI-based wellness apps. *Nature Medicine*, 30, 1269–1275. <https://doi.org/10.1038/s41591-024-02943-6>
- De Ruyter, D. (2004). Pottering in the garden? on human flourishing and education. *British Journal of Educational Studies*, 52(4), 377–389. <https://doi.org/10.1111/j.1467-8527.2004.00274.x>
- Diener, E., & Biswas-Diener, R. (2008). *Happiness: Unlocking the mysteries of psychological wealth*. Blackwell Publishing.
- Diener, E., Wirtz, D., Tov, W., Kim-Prieto, C., Choi, D., Oishi, S., & Biswas-Diener, R. (2009). New well-being measures: Short scales to assess flourishing and positive and negative feelings. *Social Indicators Research*, 97(2), 143–156. <https://doi.org/10.1007/s11205-009-9493-y>
- Dodge, R., Daly, A., Huyton, J., & Sanders, L. (2012). The challenge of defining wellbeing. *International Journal of Wellbeing*, 2(3), 222–235. <https://doi.org/10.5502/ijw.v2i3.4>

- Fan, Y., Tang, L., Le, H., Shen, K., Tan, S., Zhao, Y., Shen, Y., Li, X., & Gašević, D. (2025). Beware of metacognitive laziness: Effects of generative artificial intelligence on learning motivation, processes, and performance. *British Journal of Educational Technology*, 56(2), 489–530. <https://doi.org/10.1111/bjet.13544>
- Flett, G., Khan, A., & Su, C. (2019). Mattering and psychological well-being in college and university students: Review and recommendations for campus-based initiatives. *International Journal of Mental Health and Addiction*, 17, 667–680. <https://doi.org/10.1007/s11469-019-00073-6>
- Flett, G. L. (2018). *The psychology of mattering: Understanding the human need to be significant*. Elsevier Academic Press.
- Flett, G. L. (2022). An introduction, review, and conceptual analysis of mattering as an essential construct and an essential way of life. *Journal of Psychoeducational Assessment*, 40(1). <https://doi.org/10.1177/073428292110576>
- Gabbiadini, A., Ognibene, D., Baldissarri, C., & Manfredi, A. (2025). The emotional impact of generative AI: Negative emotions and perception of threat. *Behaviour and Information Technology*, 44(4), 676–693. <https://doi.org/10.1080/0144929X.2024.2333933>
- Grace, S., & Gravestock, P. (2009). *Inclusion and diversity meeting the needs of all students*. Routledge.
- Gravett, K. (2023). Relational pedagogies: Connections and mattering in higher education [Bloomsbury].
- Griffin, H., & James, T. (2025). The temptation of the silver platter: Preventing the sidestep and normalising the productive struggle [Intelligent Technologies in Education]. <https://doi.org/10.53761/ited/1.3>
- Haidt, J. (2024). *The anxious generation: How the great rewiring of childhood is causing an epidemic of mental illness*. Penguin Press.
- Harward, D. W. (2016). Introduction. In *In: D. w harward (ed) well-being and higher education. a strategy for change and the realization of education's greater purpose (pp. 3-17). bridging theory to practice*.
- Heintzelman, S. J. (2018). Eudaimonia in the contemporary science of subjective well-being: Psychological well-being, self-determination, and meaning in life. In *In e. diener, s. oishi, & l. tay (eds.), handbook of well-being (pp. 167-180). def publishers*.
- Herbener, A. B., & Damholdt, M. F. (2025). Are lonely youngsters turning to chatbots for companionship? the relationship between chatbot usage and social connectedness in danish high-school students. *International Journal of Human-Computer Studies*, 196, Article 103409. <https://doi.org/10.1016/j.ijhcs.2024.103409>
- Heron, E. (2020). Friendship as method: Reflections on a new approach to understanding student experiences in higher education [Journal Of Further and Higher Education, (pp. 1-15)]. <https://doi.org/10.1080/0309877X.2018.1541977>
- Hirshberg, M., Colaianne, B., Greenberg, M., Inkelas, K. K., Davidson, R. J., Germano, D., Dunne, J. D., & Roeser, R. W. (2022). Can the academic and experiential study of flourishing improve flourishing in college students? a multi-university study. *Mindfulness*, 13, 2243–2256. <https://doi.org/10.1007/s12671-022-01952-1>
- Huppert, F. A., & So, T. T. C. (2013). Flourishing across europe: Application of a new conceptual framework for defining well-being. *Social Indicators Research*, 110(3), 837–861. <https://doi.org/10.1007/s11205-011-9966-7>

- Illingworth, S., & Forsyth, R. (2026). *GenAI in higher education: Redefining teaching and learning*. Bloomsbury Academic.
- Jarden, A., & Roache, A. (2023). What is wellbeing? international journal of environmental research and public health, 20(6) 5006. <https://doi.org/10.3390/ijerph20065006>
- Jones, C. R., Rath, I., Taylor, S., & Bergen, B. K. (2025). People cannot distinguish GPT-4 from a human in a turing test. *Proceedings of the 2025 ACM Conference on Fairness, Accountability, and Transparency*, 1615–1639. <https://doi.org/10.1145/3715275.3732108>
- Kesebir, P. (2018). Scientific answers to the timeless philosophical question of happiness. In E. Diener, S. Oishi, & L. Tay (Eds.), *Handbook of well-being*. DEF Publishers.
- Keyes, C. L. M. (1998). Social well-being. *Social Psychology Quarterly*, 61(2), 121–140. <https://doi.org/10.2307/2787065>
- Keyes, C. L. M. (2002). The mental health continuum: From languishing to flourishing in life. *Journal of Health and Social Behavior*, 43(2), 207–222. <https://doi.org/10.2307/3090197>
- Keyes, C. L. M. (2009). Mental health continuum–short form (mhc-sf) [database record] [APA PsycTests]. <https://doi.org/10.1037/t30592-000>
- Keyes, C. L. M. (2016). Why flourishing? in: D [W Harvard (Ed) Well-Being and Higher Education. A Strategy for Change and the Realization of Education's Greater Purpose (pp. 99-107). Bridging Theory to Practice].
- Klimova, B., & Pikhart, M. (2025). Exploring the effects of artificial intelligence on student and academic well-being in higher education: A mini-review. *Frontiers in Psychology*, 16, Article 1498132. <https://doi.org/10.3389/fpsyg.2025.1498132>
- Kuh, G. D. (2003). What we're learning about student engagement from nsse. *Change: The Magazine of Higher Learning*, 35(2), 24–32. <https://doi.org/10.1080/00091380309604090>
- Kuh, G. D. (2009). The national survey of student engagement: Conceptual and empirical foundations. *New Directions for Institutional Research*, 141, 5–20. <https://doi.org/10.1002/ir.283>
- Lee, C. S., Tan, L. E., & Goh, D. H. (2025). Examining generation z's use of generative AI from an affordance-based approach [Information Research, 30. IConference 2025, 1095–1102]. <https://doi.org/10.47989/ir30iConf47083>
- Lee, M., & Contreras, J. (2023). Flourishing with moral emotions through conversational agents. In *In m. las heras, m. grau g and & y. rofcanin (eds). human flourishing: A multidisciplinary perspective on neuroscience, health, organizations and arts (pp. 163-179). springer nature*. <https://doi.org/10.1007/978-3-031-09786-7>
- Mansuroğlu, E., & Smith, A. P. (2026). Technostress and employee well-being: A systematic review of empirical evidence. *Computers in Human Behavior Reports*, 21, Article 100941. <https://doi.org/10.1016/j.chbr.2026.100941>
- Marimon, F., Arias Valle, M., Coria Augusto, C., & Larrea Arnau, C. (2025). From optimism to confidence: The impact of ChatGPT on students' confidence in AI-assisted learning. *RIED-Ibero-American Journal of Distance Education*, 28(2), 131–153. <https://doi.org/10.5944/ried.28.2.43238>
- Masika, R., & Jones, J. (2016). Building student belonging and engagement: Insights into higher education students' experiences of participating and learning together. *Teaching in Higher Education*, 21(2), 138–150. <https://doi.org/10.1080/13562517.2015.1122585>
- Michaelson, J., Mahony, S., & Schifferes, J. (2012). *Measuring wellbeing: A guide for practitioners* [New Economics Foundation]. <https://neweconomics.org/2012/07/measuring-wellbeing>

- Mollick, E. R., & Mollick, L. (2023). *Assigning AI: Seven approaches for students, with prompts* [The Wharton School Research Paper, Available at SSRN. or]. <https://doi.org/10.2139/ssrn.4475995>
- Morgan, M. (2013). *Supporting student diversity in higher education: A practical guide*. Routledge.
- Mossop, L. (2026). Building a sense of belonging in he: Why leadership matters. In *In k. strudwick, k. and k.a miller (eds) building student belonging in higher education (pp. 18-33)*. emerald publishing.
- Myrow, R. (2025). *Openai faces legal storm over claims its AI drove users to suicide, delusions* [KQED]. <https://www.kqed.org/news/12063401/openai-faces-legal-storm-over-claims-it-s-ai-drove-users-to-suicide-delusions>
- O'Dea, X., Bale, R., Chiu, Y.-L. T., Suleymenova, K., Tinker, A., & Stoker, R. (2025). Ethical uses of generative AI in assessment: Student perceptions in UK contexts. *Evaluation Review*, 0(0), 1–25. <https://doi.org/10.1177/0193841X251399712>
- OECD. (2025). , education at a glance 2025: OECD indicators [OECD Publishing, Paris]. <https://doi.org/10.1787/1c0d9c79-en>
- OECD. (2026). , OECD digital education outlook 2026: Exploring effective uses of generative AI in education [OECD Publishing, Paris]. <https://doi.org/10.1787/062a7394-en>
- OpenAI & MIT Media Lab. (2025). *Early methods for studying affective use and emotional wellbeing on ChatGPT* [OpenAI]. <https://openai.com/index/affective-use-study/>
- Parkin, H., & Heron, E. (2023). Listening works: Using the listening rooms methodology to explore diversity [Journal of Learning Development in Higher Education, (26)]. <https://doi.org/10.47408/jldhe.vi26.914>
- Parkin, H., & Heron, E. (2022). Innovative methods for positive institutional change: The listening rooms project and student and staff ‘voice’. *Educational Developments*, 23(3). <https://www.seda.ac.uk/wp-content/uploads/2023/02/Ed-Devs-23.3.pdf>
- Pavone, G. (2025). Generative AI in the learning process: Threat or tool? understanding the role of self-esteem and academic anxiety in shaping student motivations. *Journal of Marketing Education*, 0(0). <https://doi.org/10.1177/02734753251346857>
- Pedler, M. L., Willis, R., & Nieuwoudt, J. E. (2022). A sense of belonging at university: Student retention, motivation and enjoyment [Journal of Further and Higher Education, 46:3, 397-408]. <https://doi.org/10.1080/0309877X.2021.1955844>
- Reyes-Portillo, J. A., So, A., McAlister, K., Nicodemus, C., Golden, A., Jacobson, C., & Huberty, J. (2025). Generative AI-powered mental wellness chatbot for college student mental wellness: Open trial. *JMIR Formative Research*, 9. <https://doi.org/10.2196/71923>
- Riemer, K., & Peter, S. (2024). Conceptualizing generative AI as style engines: Application archetypes and implications. *International Journal of Management*, 79. <https://doi.org/10.1016/j.ijinfomgt.2024.102824>
- Seligman, M. E. (2011). *Flourish: A visionary new understanding of happiness and well-being*. Nicholas Brealey Publishing.
- Selwyn, N. (2025). *Digital degrowth: Radically rethinking our digital futures*. Polity.
- Sharples, M. (2023). Towards social generative AI for education: Theory, practices and ethics. *Learning: Research and Practice*, 9(2), 159–167. <https://doi.org/10.1080/23735082.2023.2261131>

- Smit, M., Wagner, R. F., & Bond-Barnard, T. J. (2025). Ambiguous regulations for dealing with AI in higher education can lead to moral hazards among students. *Project Leadership and Society*, 6, Article 100187. <https://doi.org/10.1016/j.plas.2025.100187>
- Strayhorn, T. L. (2018). *College students' sense of belonging: A key to educational success for all students 2nd edn*. Routledge.
- Strudwick, K., & Miller, K. A. (2026). *Building student belonging in higher education*. Emerald Publishing.
- Sun, X., Jahangir, A., Alghamdi, A., & Liu, F. (2025). Use of ai-based mental health tools and psychological well-being among chinese university students: A parallel mediation model of emotional self-efficacy and perceived autonomy. *Scientific Reports* 15, 40305(2025). <https://doi.org/10.1038/s41598-025-24013-8>
- There's an AI app for that. (n.d.). *There's an AI app for that* [[Database]]. <https://theresanaiforthat.com/>
- Thomas, L. (2012). Building student engagement and belonging in higher education at a time of change [Paul Hamlyn Foundation].
- Thomas, L. (2020). 'i am happy just doing the work . . . ' commuter student engagement in the wider higher education experience. *Higher Education Quarterly*, 74(3), 290–303. <https://doi.org/10.1111/hequ.12243>
- Torous, J., Linardon, J., Goldberg, S. B., Sun, S., Bell, I., Nicholas, J., Hassan, L., Hua, Y., Milton, A., & Firth, J. (2025). The evolving field of digital mental health: Current evidence and implementation issues for smartphone apps, generative artificial intelligence, and virtual reality. *World Psychiatry*, 24(2), 156–174. <https://doi.org/10.1002/wps.21299>
- VanderWeele, T. J. (2017). On the promotion of human flourishing. *Proceedings of the National Academy of Sciences*, 114(31) 8148-8156. <https://doi.org/10.1073/pnas.1702996114>
- Varga-Atkins, T., Saunders, S., Beckingham, S., Hartley, P., Keshishi, N., Lacković, N., Li, N., Lindsay, R., Wen, R., & Winder, I. (2025). An educators' guide to multimodal learning and generative AI [[Report]]. <https://doi.org/10.17638/03194252>
- Vieriu, A. M., & Petrea, G. (2025). The impact of artificial intelligence (AI) on students' academic development. *Education Sciences*, 15(3), Article 343. <https://doi.org/10.3390/educsci15030343>
- Walton, G. M., Cohen, G. L., Cwir, D., & Spencer, S. J. (2011). Mere belonging: The power of social connections. *Journal of Personality and Social Psychology*, 102(3), 513–532. <https://doi.org/10.1037/a0025731>
- Wang, H., Ding, H., & Kong, X. (2023). Understanding technostress and employee well-being in digital work: The roles of work exhaustion and workplace knowledge diversity. *International Journal of Manpower*, 44(2), 334–353. <https://doi.org/10.1108/IJM-08-2021-0480>
- World Health Organization. (1946). "health" [World Health Organization Constitution]. <https://www.who.int/about/governance/constitution>
- Yang, H. (2025). Harnessing generative AI: Exploring its impact on cognitive engagement, emotional engagement, learning retention, reward sensitivity, and motivation through reinforcement theory. *Learning and Motivation*, 90. <https://doi.org/10.1016/j.lmot.2025.102136>
- Zao-Sanders, M. (2025). *How people are really using GenAI in 2025* [Harvard Business Review]. <https://hbr.org/2025/04/how-people-are-really-using-gen-ai-in-2025>