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GENERATIVE ARTIFICIAL INTELLIGENCE IN HIGHER EDUCATION: PSYCHOLOGICAL, ACADEMIC, SOCIAL, AND EQUITY IMPLICATIONS FOR STUDENT WELLBEING AND SUCCESS

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ABSTRACT

Generative artificial intelligence (GenAI) is significantly shaping higher education, influencing how students learn, communicate, seek information, and access mental health support. This literature review synthesizes recent research on the connections among Artificial Intelligence (AI), digital well-being, and student success, with a particular focus on mental health support, academic learning, cognitive engagement, help-seeking behavior, human interaction, and equity. Evidence suggests that AI-powered chatbots can improve access to mental health information and support, especially for students who have difficulty accessing traditional services. However, concerns remain about overuse, including increased academic stress, loneliness, cognitive offloading, dependence, privacy risks, and reduced human interaction. New longitudinal evidence suggests that psychological distress may precede AI dependence, indicating a possible bidirectional relationship between AI use and well-being. Equity issues also stem from disparities in access to technology, AI literacy, language, disability, and socioeconomic status. The review maintains that AI should supplement, not replace, human-centered educational and support systems. Future research should prioritize longitudinal and intervention studies examining well-being, sense of belonging, persistence, and retention.

Keywords: Artificial intelligence, Generative artificial intelligence, Digital wellbeing, College students, Student mental health, Academic outcomes, Student success, Loneliness, belonging, AI dependence, Equity, Higher education

1 INTRODUCTION

Generative artificial intelligence is now one of the most significant technological advances in today's higher education sector (Wong, 2024). Since the widespread availability of large language model-based systems such as ChatGPT, students have been using AI more and more in areas including academic writing, brainstorming, studying, searching for information, problem-solving, language assistance, and communication (Bernabei et al., 2023). The rapid growth of these technologies has opened up possibilities for personalized learning and greater access to information, but has also raised concerns about academic integrity, critical thinking, privacy, student autonomy, and the quality of human interaction (Wong, 2024). Recent research indicates that the effects of generative AI extend well beyond improvements

in instructional efficiency and academic misconduct, encompassing students' psychological, social, and educational experiences (Jukiewicz, 2025; Ni & Li, 2026). Ni and Li, 2026) recent review of 87 studies shows how extensive this developing body of literature is, highlighting cognitive offloading, AI self-efficacy, emotional responses, identity threat, and trust as the key psychological aspects of generative AI use in higher education.

It is especially important to consider students' well-being in this changing situation, since mental health is closely linked to academic engagement, perseverance, relationship quality, and overall success. Nowadays, university students are experiencing more anxiety, depression, academic stress, loneliness, and a number of other psychological difficulties, and at the same time institutions are seeing an increasing demand for counseling and wellbeing services (Q. Li et al., 2025; Tan et al., 2023). Because of these problems, there has been growing interest in digital and AI-driven methods that can increase access to support. AI-based technologies can provide students with instant information, psychoeducation, personalized responses, and low-intensity support without them having to overcome some of the obstacles associated with traditional services (Jukiewicz, 2025a; Ni & Li, 2026; Wong, 2024). A recent systematic review of AI chatbots used with college students found that eight of the nine studies reported statistically significant improvements in at least one mental health or well-being outcome, although considerable methodological limitations remained (Nyakhar & Wang, 2025).

At the same time, new research warns against assuming that AI is inherently beneficial to students' well-being. Overuse or reliance on AI could lead to academic stress, feelings of loneliness, reduced social contact, and psychological problems (Y. Wang & Xu, 2026). For instance, Yang et al. (2026) examined 560 college students and found that frequent or excessive use of generative AI chatbots was positively associated with academic stress and loneliness, and that academic stress fully mediated the relationship between excessive AI use and anxiety. These results indicate that the effects of AI in this context depend in part on how students use the technology and on whether AI serves as a supplement to learning and support or becomes an ever-increasing replacement for human interaction.

The connection between AI and mental health might be more complicated than a simple cause-and-effect relationship in which AI leads to psychological distress. According to longitudinal research carried out by Huang et al. (2024), mental health issues were found to predict subsequent AI dependence among adolescents, while AI dependence itself did not significantly predict later anxiety or depression. Social motivations mediated the relationship between psychological difficulties and later AI dependence. Even though the study focused on adolescents rather than college students, its longitudinal approach offers an important methodological warning for research in higher education. It can be concluded that students who are experiencing psychological distress may turn to AI since it is accessible, private, and seen as less judgmental. As a result, future research should examine reciprocal relationships rather than assuming that AI use must be the initial factor in psychological difficulties.

The literature that has recently come to light gives a complicated account of the situation. Although AI could improve access to mental health assistance and educational resources, it might at the same time lead to new kinds of dependence, social isolation, and inequality. This integrative review brings the existing literature together in order to look at the ways in which generative AI is altering student wellbeing and success in five closely related areas: mental health and wellbeing, academic learning and outcomes, help-seeking and human connection, dependence on AI and psychological agency, and equity in higher education enabled by AI.

2 REVIEW METHODOLOGY

2.1 Review Design

The study used an integrative literature review method based on the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA 2020) framework. Such an integrative approach was appropriate, as research on GenAI and student success spans multiple disciplines, including higher education, educational psychology, student affairs, mental health, educational technology, and digital learning. The literature also contains quantitative, qualitative, mixed-methods, systematic review, and conceptual studies. By bringing together this variety of evidence, it is possible to examine the relationships among psychological, academic, social, and equity-related outcomes that might not be fully captured by a narrow systematic review (Page et al., 2021).

The review examined the relationship between Generative AI and AI-powered conversational systems, as well as various aspects of student mental health, digital well-being, academic learning, academic achievement, help-seeking, human connection, AI dependence, psychological experiences, and equity. It also focused on whether AI serves as a complement to current educational and support systems or replaces independent learning and human relationships.

2.2 Search Strategy and Information Sources

The relevant literature was found using ERIC, PsycINFO, PubMed, Scopus, Web of Science, Google Scholar, ScienceDirect, Springer Nature, Frontiers, SAGE, and Taylor & Francis. The main period for publications was 2020 to 2026, when research into generative AI developed rapidly. Earlier studies were included if they provided important empirical or longitudinal evidence on the relationship between AI use and psychological well-being.

The search terms brought together ideas concerning artificial intelligence, higher education, wellbeing, mental health, academic outcomes, social connection, AI dependence, and equity. The terms used were “artificial intelligence”, “generative artificial intelligence”, GenAI, ChatGPT, “large language models”, “AI chatbot”, “higher education”, “college students”, “university students”, “mental health”, wellbeing, anxiety, depression, loneliness, “academic stress”, “academic outcomes”, “student success”, belonging, “help-seeking”, “AI dependence”, “AI reliance”, “AI literacy”, equity, accessibility, “digital divide”, and retention. Synonyms were linked with OR and the main conceptual categories were combined with AND.

2.3 Eligibility and Selection

A study was considered relevant if it examined AI, especially generative AI or AI-based conversational systems, in relation to students in higher education and addressed at least one of the areas under review. The areas under review were mental health and wellbeing; academic learning or achievement; help-seeking and social connection; AI dependence and psychological experiences; and equity and institutional responsibility.

The first search returned 93 records; after screening and removing duplicates, 56 studies remained for title and abstract review. At that point, 11 records were excluded because they did not align with the review's focus. Then, 45 articles were examined in full, and of these, 33 were excluded after applying the eligibility criteria. Twenty-two studies were included in the final synthesis. The evidence was arranged by population, research design, method of AI application, outcomes, and thematic relevance.

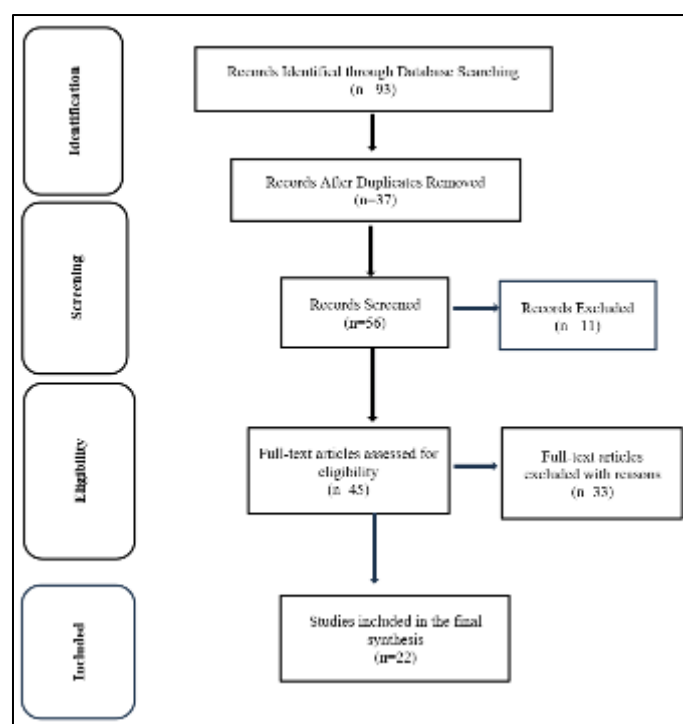


Figure 1: PRISMA Flow Diagram

2.4 Data Synthesis

Since there was a great deal of variation among the included papers with respect to research design, the populations studied, the interventions used, and the outcome measures, the findings were combined thematically rather than being analyzed statistically. The synthesis was based on five related themes: (a) AI and student mental health and digital wellbeing; (b) AI and academic learning and cognitive engagement; (c) AI, help-seeking, loneliness, and human connection; (d) AI dependence, psychological agency, and the direction of causality; and (e) AI, equity, and institutional responsibility. When assessing effectiveness or temporal relationships, greater weight was placed on systematic

reviews and longitudinal studies. Cross-sectional studies were regarded as indicating only an association and not as proving causation.

2.5 Review Limitations

The review is hindered by the fact that it involves a variety of different study designs, has small sample sizes, features short intervention periods, provides only limited evidence from longitudinal studies, has incomplete records of the database searches and the screening processes, and shows an uneven distribution across different geographic, cultural, linguistic, socioeconomic, and institutional settings. Moreover, because the literature on GenAI is developing so quickly, the findings will likely need to be updated as further evidence emerges.

2.6 Findings

2.6.1 Generative AI and Student Mental Health and Digital Wellbeing

A major area of current research in artificial intelligence within higher education is mental health and well-being. There is growing interest in the use of AI technologies for mental health education, screening, assessment, prediction, psychoeducation, and intervention (Wajid et al., 2025). Across various studies on this subject, the main advantage of AI is its ability to increase accessibility. Students can obtain information and receive low-intensity support without incurring costs, facing long waiting times, scheduling difficulties, limited professional availability, or the stigma associated with conventional mental health services (Nyakhar & Wang, 2025; R. Wang et al., 2026). This improved accessibility is especially relevant for students who are not sure if their concerns need professional help or who are unwilling to tell another person about their psychological difficulties.

The evidence relating to AI chatbots is encouraging but should be approached with caution. Nyakhar and Wang (2025) examined nine studies involving 1,082 college students and found that eight reported statistically significant improvements in at least one mental health or well-being outcome. Those interventions that included cognitive behavioral principles, personalization, and repeated interaction seemed especially promising. In a similar way, Reyes-Portillo et al. (2025) looked at a generative AI-based mental wellness chatbot intended for college students who were experiencing high levels of depression or anxiety. The study provided initial evidence of feasibility and acceptability, but because it used an open-trial design, it is not possible to draw strong conclusions about causal effectiveness. Taken together, these results suggest that AI could serve as a low-intensity resource, but they do not prove that general-purpose generative AI systems can safely or effectively serve as independent mental health treatments.

The difference between offering low-intensity support and providing clinical care is therefore important. AI can be used to provide psychoeducation, help students recognize common stress reactions, suggest general coping strategies, or guide them to campus and community resources. However, general-purpose AI systems might provide inaccurate information, fail to detect complex or culturally specific ways of expressing psychological distress, and fail to properly assess crisis risk (Jukiewicz, 2025; Paulus, 2026). This is especially significant when students are going through severe psychological distress. AI-based support should thus remain within well-defined limits and include proper human supervision, along with clear referral routes to qualified professionals when more intensive intervention is needed.

Digital wellbeing offers another way of looking at these issues. Nowadays, students use the same AI systems for their academic tasks, emotional support, communication, decision-making, and information search. Because of this, the line between educational technology and personal wellbeing is becoming less clear. Digital wellbeing should therefore not be seen merely in terms of how often students use technology, but rather in terms of whether that use supports sustainable psychological, social, emotional, and academic functioning. Just the fact that AI is available does not mean that there is positive digital wellbeing; instead, it is necessary to take into account the quality, purpose, intensity, and consequences of its use.

2.6.2 AI, Academic Learning, and Cognitive Engagement

GenAI also has great potential to affect students' academic learning. AI systems can provide instant explanations, examples, feedback, brainstorming help, language support, and personalized academic assistance (Jukiewicz, 2025; Wong, 2024). This kind of support may be especially useful for students who require help outside ordinary teaching hours or who have language or accessibility difficulties. In this light, AI can serve as an additional academic resource, extending students' access to educational support.

It is wrong to regard academic efficiency as equivalent to academic learning. A student might finish an assignment more quickly with the help of AI without in any way acquiring the knowledge, reasoning skills, metacognitive abilities, or capacity for independent problem-solving that the assignment was supposed to develop. This point is at the heart of concerns about cognitive offloading. Ni and Li (2026) identify cognitive offloading, AI self-efficacy, trust, emotional responses, and identity-related experiences as key psychological aspects of GenAI use in higher education. Even though

AI can reduce the time needed to complete some academic tasks, heavy dependence on automated systems may also decrease students' chances to work independently on challenging problems.

The literature therefore indicates that student success should be evaluated through outcomes that go beyond grades and task completion. Learning, knowledge retention, critical thinking, metacognition, academic engagement, self-efficacy, and the ability to solve problems independently might provide stronger evidence of whether AI is leading to genuine educational development. The main question is not whether students use AI but whether its use enhances or replaces the cognitive processes involved in learning.

It also shows why AI literacy is important: students who know how AI systems function, are aware of their limitations, and can critically assess information produced by AI may be better positioned to make use of the technology. On the other hand, students with a high degree of trust but low AI literacy may be more susceptible to misinformation, bias, and overreliance. That is why Ni and Li (2026) stress the importance of AI self-efficacy and calibrated trust as psychological factors. Higher education institutions should not seek to increase students' trust in AI but rather should work to help students understand when AI is useful, when their outputs need to be verified, and when human expertise is required.

2.6.3 AI, Help-Seeking, Loneliness, and Human Connection

A very important point is whether AI acts as a complement or a substitute for human support. One advantage of AI is that it reduces the barrier to seeking initial help. Students can ask questions privately, explore their concerns, and gather information before deciding whether to speak with a counselor, an advisor, a faculty member, or another professional (Rackoff et al., 2025; Reyes-Portillo et al., 2025). For students who feel uncertain, stigmatized, or anxious about seeking help in traditional ways, this kind of accessibility could be a significant first step towards accessing support systems.

On the one hand, the accessibility that makes AI so appealing may raise concerns about substitution. A cross-sectional survey by Ueda et al. (2026) of 1,805 U.S. adults aged 18 to 49 found that many participants used AI-based mental health support, and that those with moderate-to-severe anxiety or depressive symptoms were more likely to turn to AI for mental health support. Moreover, some respondents said they had reduced their use of human mental health professionals after starting to use AI for these purposes. Even though the study does not prove causation and the sample did not consist solely of university students, it raises a significant concern for higher education: greater use of AI does not automatically mean greater access to appropriate care.

The problem of using human substitutes is not only relevant to mental health services but also applies to a wider range of relationships that students have. Since higher education is essentially based on relationships, students form their academic, professional, and social identities through interactions with peers, faculty members, advisors, mentors, counselors, and other members of the campus community. Crawford et al. (2024) found associations among university students between AI substitution, feelings of loneliness, student success, and retention, indicating that the effects of AI may extend beyond academic integrity to shape students' social experiences.

The difference between augmentation and substitution is therefore essential to understanding the impact of generative AI on student success. When it helps students prepare for conversations with staff members, understand the course material, learn about campus resources, or overcome obstacles to participation, AI can serve as a bridge to human interaction. On the other hand, AI becomes a substitute when students come to depend more on it than on talking to their peers, faculty members, advisors, counselors, or other members of their support network. Research on AI, loneliness, social support, and student well-being suggests that the effects of AI depend not only on how often it is used but also on whether it strengthens or weakens students' broader social networks (Crawford et al., 2024; Klimova & Pikhart, 2025).

2.6.4 Excessive AI Use, Academic Stress, and Psychological Wellbeing

It is especially important to distinguish between intentional use and overreliance. It is fundamentally different to use AI from time to time for brainstorming, getting clarification, or receiving feedback than it is to rely on AI for making academic decisions, controlling one's emotions, carrying out social interactions, or completing most kinds of independent academic work. Overuse could affect students' academic engagement and social relationships, with consequences for their well-being.

Yang et al. (2026), in their study of 560 college students in Beijing and Hong Kong, discovered a positive association between frequent and excessive use of generative AI chatbots and both academic stress and loneliness. Academic stress completely mediated the connection between excessive use of AI and anxiety. The results indicate that the relationship between AI and psychological well-being may be mediated by academic and social mechanisms. Students might feel greater stress when AI is incorporated into academic work in ways that increase their dependence, change expectations, or lower their confidence in their own abilities.

At the same time, it would be wrong to regard these findings as proof that AI must lead to anxiety. Since cross-sectional associations cannot establish the direction of causality, students who already have difficulties with their studies or are experiencing psychological distress are more likely to rely heavily on AI. Therefore, to understand AI dependence, it is necessary to consider the broader circumstances in which students turn to AI.

2.6.5 AI Dependence, Psychological Agency, and Causal Direction

The idea that psychological distress might come before AI dependence is a significant point in existing literature. Huang et al. (2024), who analyzed longitudinal cross-lagged data from 3,843 adolescents, discovered that mental health problems predicted future AI dependence, while AI dependence did not have a significant effect on later anxiety or depression. The motives associated with escape and social interaction accounted for the relationship between psychological difficulties and AI dependence.

Even though the population differed from that of higher-education students, the study contradicts the idea that heavy AI use inevitably leads to psychological problems. People who are experiencing anxiety, depression, a sense of loneliness, or other difficulties might turn to AI exactly because it is available, private, and seen as less judgmental. AI can thus serve as a coping mechanism or an alternative means of interaction for those already struggling in their human relationships.

The fact that this evidence has important consequences for research into higher education. Instead of viewing the use of AI as a single, independent variable with foreseeable results, researchers ought to examine the mutually influencing pathways. Psychological distress could lead to greater use of AI; the use of AI, in turn, might affect academic engagement or social interaction; and these changes could then impact people's well-being. Alternatively, both the use of AI and well-being could be shaped by underlying academic, social, or psychological factors. For this reason, longitudinal research is needed to establish the temporal relationships among AI use, psychological well-being, academic stress, loneliness, belonging, and student success.

2.6.6 Social Robots and Increasingly Human-Like AI

The growing use of more conversational and physically embodied AI is adding a new dimension to the relationship between technology and human connection. Social robots driven by generative AI link conversational abilities to physical form and interaction across multiple modes, potentially leading users to perceive a greater sense of social presence (Konrad et al., 2025). Research that is still emerging suggests that socially assistive robots could offer opportunities for personalized interaction, engagement, stress management, and psychological support for university students, even though the evidence remains in its early stages (Li et al., 2025; Mauliana et al., 2025).

The fact that AI is becoming more and more like a human being may lead to both some advantages and some problems. It might make AI more accessible to students who have difficulty with typical social interactions, as it could serve as a bridge, enabling them to practice communication, cope with stress, or build their confidence before engaging with others. On the other hand, a greater degree of social presence could also lead to emotional dependence if students come to see AI systems as substitutes for their peers, mentors, advisors, or counselors.

Tisza et al. (2026) highlight the opportunities and challenges of using generative AI in educational social robots, including personalization, engagement, accessibility, trust, privacy, ethics, and technological limitations. The importance of these concerns is that it is necessary to assess AI not just on whether students enjoy or gain from interacting with it, but also on whether such interactions strengthen or weaken students' human relationships.

2.6.7 Equity, Access, and the AI Divide

Equity is also a key aspect of AI and student success since students do not begin their experience of AI-enabled higher education from equal footing. The various ways in which students have access to devices, the internet, high-quality AI tools, AI literacy, language compatibility, disability support, and socioeconomic resources and institutional assistance can influence their ability to benefit from AI. Ni and Li (2026) found six major dimensions of equity in the developing literature: the digital divide, disability-related access, inequities concerning the first language, socioeconomic stratification, gender and racial disparities.

The inequalities indicate that the AI gap is not just a matter of whether or not students have a computer or an internet connection. It is possible for students to have access to AI yet to lack the knowledge required to assess the outputs critically. Some students may have access to free versions of AI systems, while others have access to more advanced paid tools. Language differences may also affect the quality and relevance of AI-generated responses, and students with disabilities may face accessibility challenges. As a result, adopting AI without taking account of existing institutional inequalities could inadvertently reinforce or widen those disparities.

International and multilingual students can enjoy a range of opportunities alongside facing a number of challenges. AI can help with language acquisition, adjustment to academic life, translation, and navigation of unfamiliar educational settings. At the same time, though, AI systems might reproduce linguistic and cultural assumptions that privilege dominant languages and cultural backgrounds. Similarly, some students may encounter limitations due to inadequate infrastructure when using technologies primarily developed in high-income countries (Ni & Li, 2026). Research should therefore go beyond the usual institutional contexts based in high-income countries.

Equity should therefore be seen as a component of student wellbeing and success, rather than as a separate technological problem. Since unequal access to AI literacy, support, and high-quality tools leads to differences in students' academic confidence, engagement, or wellbeing, the introduction of AI becomes a matter of educational equity.

2.7 Institutional Responsibility and Ethical Governance

The increasing degree to which AI is being incorporated into student support places great responsibilities on higher education institutions. Universities should set out clear expectations regarding privacy, transparency, data security, accountability, and human supervision. Students need to know when they are dealing with AI, what information is being gathered, how that information is stored and used, and at what point human professionals will get involved (World Health Organization [WHO], 2021, 2023).

It is especially important to keep these responsibilities in mind when AI is employed in mental health situations. Such AI systems might generate responses that seem reasonable even if they contain inaccurate or misleading information, and they could also replicate the biases present in the data used to train them, failing to recognize complex or culturally specific ways of showing distress (WHO, 2023). Because of this, AI should not act as an independent clinical decision-maker; instead, its role must be limited by clearly established escalation procedures under which it can offer information or provide low-intensity support, while students experiencing serious distress are referred to qualified professionals.

Institutional responsibility also requires attention to equity and inclusion. AI systems should be evaluated for accessibility, language responsiveness, cultural appropriateness, privacy protection, and differential effects across student populations. Such governance is consistent with broader recommendations emphasizing transparency, human responsibility, safety, inclusion, and equity in AI-enabled health and educational services (WHO, 2021, 2024).

3 DISCUSSION

The present integrative review examined the effects of generative artificial intelligence (GenAI) on student well-being and success in higher education from psychological, academic, social, and equity perspectives. The literature as a whole shows that GenAI should not be seen as either inherently beneficial or inherently harmful; rather, its impact depends on how students use it, the reasons for which it is used, whether it acts as a complement or a substitute for human support, and the circumstances within the institution regarding its use. As recent reviews suggest, GenAI has the potential to promote personalized learning and well-being, but it can also pose risks related to loneliness, reduced interpersonal interaction, dependence, privacy concerns, and psychological well-being (Jukiewicz, 2025; Klimova & Pikhart, 2025).

3.1 GenAI as an Augmentative Rather Than Substitutive Technology

A key conclusion is that GenAI is likely to be most valuable when used to supplement, rather than replace, human and educational resources. It can offer instant feedback, personalized explanations, language assistance, information, and low-intensity well-being resources (Jukiewicz, 2025; Nyakhar & Wang, 2025). On the other hand, overuse or reliance on AI for these purposes may lead to decreased independent cognitive engagement and fewer opportunities for interaction with lecturers, peers, advisers, and mental health professionals (Crawford et al., 2024; Klimova & Pikhart, 2025).

The key issue is not merely whether students use AI, but how that use influences their involvement in both learning and people. For instance, students might employ AI to help them understand course material, formulate questions for an adviser, or learn about campus resources before asking a human for help. In this supportive capacity, AI can help reduce informational barriers and enhance students' ability to interact with the institution's resources. On the other hand, if AI replaces academic, social, or professional relationships, it might lead to feelings of isolation and increased dependence. Similarly, recent evidence indicates that generative AI outcomes depend on the level of cognitive engagement, how feedback is evaluated, and the degree of self-regulated learning (Liu et al., 2026; Wang, 2026).

3.2 AI Use, Wellbeing, and Human Connection

The connection between the use of generative AI and well-being also seems to be reciprocal rather than one-way. Those students who are anxious, feel lonely, are under academic stress or are uncertain might use AI since it is always available and is seen as private and nonjudgmental. On the other hand, becoming too dependent on it could reduce opportunities for face-to-face interaction and independent problem-solving, thereby possibly worsening their existing difficulties (Huang et al., 2024; Yang et al., 2026). The fact that this is possible highlights the limitations of cross-sectional research and underscores the need for longitudinal studies that can examine whether changes in AI use precede changes in well-being, whether changes in well-being affect AI use, or whether both are influenced by other factors.

Human connection is so important since higher education goes beyond the acquisition of information. The sense of belonging, academic identity, professional development, and the ability to persist are all developed through one's relationships with faculty members, peers, advisors, mentors, and other members of the university community. The fact that evidence links AI substitution to feelings of loneliness and poorer student outcomes supports the idea that AI should be evaluated by its ability to enhance or undermine these social systems (Crawford et al., 2024; Klimova & Pikhart, 2025). Institutions must therefore look not only at the level of AI adoption and its efficiency but also at the impact on students' sense of belonging, willingness to seek help, engagement, and relationships.

3.3 Academic Success and Cognitive Agency

GenAI can enhance academic efficiency by providing explanations, facilitating brainstorming, offering feedback, providing language assistance, and delivering personalized learning support. It must not, however, be assumed that efficiency is the same as genuine learning. If students hand over cognitive tasks to AI, they may finish their academic work more quickly without acquiring the reasoning, metacognitive, and problem-solving skills that assignments are intended to develop. As a result, cognitive agency should remain at the heart of AI-supported learning.

AI literacy is therefore essential; students should not only have technical skills but also be able to assess AI-generated information, identify uncertainty and bias, verify outputs, protect their privacy, and recognize when it is inappropriate to use AI. AI literacy must therefore be seen as an extension of academic agency and not merely as a technological skill.

3.4 Mental Health Support and Human Oversight

AI-powered mental health support offers both opportunities and risks. Such AI tools could enhance access to psychoeducation and information about well-being, and help navigate resources, especially for students who have difficulty accessing traditional services (Nyakhar & Wang, 2025; Reyes-Portillo et al., 2025). Yet the existing evidence does not justify using general-purpose generative AI as a substitute for professional mental health care; concerns remain about inaccurate responses, insufficient ability to identify crises, privacy risks, algorithmic bias, and a lack of cultural sensitivity (Jukiewicz, 2025; Paulus, 2026).

A human-in-the-loop approach is therefore the more suitable option. Although AI can assist in navigating information and resources, it is still qualified professionals who must carry out assessment, intervention, crisis response, and complex decision-making. In this way, the advantages of AI in terms of accessibility are retained without transferring responsibility for students' well-being to automated systems.

3.5 Equity and Institutional Implications

The advantages of GenAI are also dependent on unequal access to technology, the availability of paid AI services, the level of AI literacy, the resources available for different languages, provisions for people with disabilities, and support from institutions. Although AI can help reduce certain barriers by offering language assistance and individualized support, it might also reinforce inequalities if students lack sufficient access or if the systems exhibit linguistic, cultural, or demographic biases (Ni & Li, 2026). Institutions should therefore include equity in their approach to AI by ensuring that it is accessible and affordable, provides multilingual support, includes AI literacy education, and involves continuous assessment of algorithmic bias.

All of these findings point to the need for GenAI to be incorporated into a wider student-success ecosystem rather than seen as a standalone technological intervention. For student success to be achieved, it is necessary to take into account academic achievement, wellbeing, a sense of belonging, engagement, self-efficacy, help-seeking behavior, persistence and retention. Hence, universities should assess their AI initiatives based on outcomes such as cognitive engagement, academic confidence, feelings of loneliness, sense of belonging, help-seeking and the quality of their relationships with both faculty and peers, not just on measures relating to adoption or time saved. In an ideal situation, AI should take over repetitive informational tasks so that faculty members, advisors, counselors, and student affairs professionals can focus more on the more complex relational and developmental needs.

3.6 Implications for Future Research

The body of evidence remains limited due to methodological heterogeneity, short follow-up periods, and the predominance of cross-sectional studies. Future research should focus on using longitudinal, experimental, and quasi-experimental designs to compare AI-assisted methods with human-only methods and hybrid approaches. It should also take into account the various ways AI can be used including tutoring, brainstorming, translation, information-seeking, emotional support, and social interaction—since these different uses might yield different outcomes.

Just as much attention should be paid to groups that are still underrepresented in the literature, such as international students, graduate students, multilingual students, first-generation students, disabled students, and students from the Global South. Research in this area is needed to determine whether the benefits and risks of GenAI are distributed fairly.

The literature as a whole indicates that the main issue is not whether generative AI is inherently good or bad for students, but rather under what circumstances it enhances or hinders their ability to learn, make connections, seek help, maintain their well-being, and persist in higher education. For this reason, a human-centered approach treats generative AI as a complement rather than a replacement for the academic, psychological, social, and institutional resources that support student success.

3.7 Implications for Higher Education Practice

Higher education institutions ought to take a human-centered approach to GenAI, one in which the technology supports rather than replaces faculty members, advisors, counselors, and student affairs professionals. They should offer AI literacy education so that students can critically assess AI-generated outputs, safeguard their privacy, uphold academic integrity, and continue learning independently. AI projects should also be evaluated on student success indicators such as academic engagement, well-being, sense of belonging, help-seeking behavior, and persistence, not just on measures of adoption or efficiency. Moreover, institutions must promote equity by ensuring that AI tools are accessible, affordable, culturally appropriate, and suitable for students with diverse linguistic, socioeconomic, and disability-related needs. In summary, GenAI should help expand access to support while preserving the human relationship essential to students' well-being and success.

4 CONCLUSION

Generative artificial intelligence (GenAI) is having an impact on higher education that goes beyond improvements in academic productivity, with consequences for students' well-being, learning, sense of belonging, social connections, stress levels, and equity. While GenAI has the potential to increase access to personal academic help, mental health information, feedback, and low-intensity wellbeing support, an overreliance on it could lead to feelings of loneliness, less human interaction, cognitive offloading, and dependence. These effects might also be mutual, since students who are going through psychological distress may use AI more often.

The real question, then, is not whether institutions should use GenAI, but how to put it into practice without damaging human relationships, student autonomy, equity, and professional responsibility. A human-centered approach must treat AI as something that complements, not replaces, educational and student-support services. Further research should assess whether the responsible integration of AI ultimately leads to improvements in students' well-being, sense of connectedness, academic success, autonomy, persistence, and graduation outcomes.

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