

How Do Higher Education Students In Israel Perceive The Impact Of Artificial Intelligence (AI) On The Effectiveness Of The Educational Process?

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Abstract

The research investigates how students in higher education in Israel perceive the impact of Artificial Intelligence (AI) on educational process effectiveness. This study had two main motivators; the growing use of AI technology in higher education settings, and the limited research of student perspectives in the Israeli context. The study focused a qualitative method and used a sample of 50 students who participated in semi-structured interviews and focus groups were recruited to the study through snowball sampling from higher education institutions. The study discovered six significant themes, including the positive effects of AI on efficiency in learning, personalization of learning, and academic performance. The study also addressed the ethical implications of AI which contained student perspectives on privacy, equity, and implications for critical thinking. The study provides recommendations for institutional policies and practice including guidelines for equitable AI use, development of formal AI literacy programs, and training education and students. Theoretically, the research study has developed as one of the few studies that help expand knowledge of the educational implications of AI, and practically supports development of policies that protect academic integrity while maximizing benefits of holistic learner-centered experiences.

Keywords: Artificial Intelligence in Education, Higher Education Students, Student Engagement, Learning Efficiency, Adaptive Learning Technologies, ChatGPT in Education, Personalized Learning Tools.

1. Introduction:

Artificial Intelligence (AI) has established itself as a disruptive innovation in a range of fields, and the transformative impact AI is having on education has become more apparent in the last years, inspiring a new wave of research into education, including postsecondary education in particular (Fombona et al., 2025; McDonald et al., 2025). This research explored how higher education students in Israel understand the impact of AI on the effectiveness of the educational process. The primary goal was to explore the benefits and challenges of AI use from the perspective of higher education students in Israel by focusing on areas for them as learners, such as learning efficiency or academic performance, personalization, and ethical concerns. Through a qualitative approach, using 50 students through interviews and focus groups, the research focused on six salient themes from AI's impact on educational outcomes to access and responsibility considerations. The research highlights that generally students' orientation towards AI is positive, and the issues of digital equity, privacy, concerns, and institutional readiness are challenges.

To appreciate the depth of this area, it is relevant to consider the context around defining AI and how it can align with education. AI refers to technology that mimics human intelligence using algorithms, which allow them to learn, reason, and recognize problems (Ali et al., 2024; Morandín-Ahuerma, 2022). AI in education typically refers to the types of tools which allow for adaptive learning, automated assessments, content generation, and personalized feedback and learning experiences (Fitria, 2021; Wang et al., 2024). AI creates opportunities for

students to have various types of academic supports that can modify and tailor academic work in real-time, as well as engage learning materials in unique ways (Samuel, 2024; Joshi, 2024). However, research by Çela and others (2024) and Haji and Djeumeni (2025), exposes that AI tools can also create concerns related to data privacy, critical thinking, along with equity of access. As such, it is critical that institutional stakeholders approach the utilization of AI ethically, as humans consume psychical forms of authentic knowledge acquired through learning .

This research contributes to the increase of research literature on AI by listening to students within a geographical context that is neglected in the larger literacy of the global discourse. The qualitative approach allowed for in-depth descriptions of how students connect with AI in their learning environments. This research discusses how higher education institutions need to explore the development of guidelines on ethics, create opportunities for formal AI literacy, and provide equitable access to AI technologies. Students reiterated they would like AI as a supportive tool, not a surrogate for a human educator; often referencing a teacher 'presence' and the emotional connection to education. This research presents the need for policy and educational leaders to deliberate on responsible AI use in curricula, along with institutional strategies. This approach will help institutions address such opportunities for their regulated use of AI, while safeguarding academic integrity, inclusivity, and the human element of learning.

2. Literature Review

2.1 Artificial Intelligence (AI) Overview

Artificial Intelligence (AI) is a subdivision of computer science that concerns programming devices to perform tasks that typically require human intelligence (Ali et al., 2024). AI allows computers and devices to analyze, process and learn from data through the use of specific algorithms (Sasubilli et al., 2020; Richey Jr et al., 2023). AI technology today can automate devices, such as cameras, to recognize faces and programs, such as computer applications, to translate text from one language to another (Sasubilli et al., 2020). After being recognized as an area of academic inquiry in the 1950s, the study of AI has expanded to focus on areas such as natural language processing (NLP), learning, reasoning, and, knowledge. It is worth noting that AI has extended research possibilities beyond computer science since the 1970s by incorporating ideas from sub-disciplines such as psychology, linguistics, and philosophy (Ali et al., 2023).

AI technology is being incorporated across a range of industries, such as education, e-commerce, healthcare, agriculture, the military, and gaming. This article shows that successful AI applications include Google search engines, the recommendation system in Netflix, self-driving cars in Tesla vehicles, Siri and Alexa voice assistants, etc. Four areas of AI include machine learning, robotics, natural language processing (NLP), computer vision, and big data (Hossen & Karmoker, 2020).

In terms of data, another area of AI, machine learning, provides two main methods: classification and clustering which can be found in data input as numbers, text, image, or video (Jahan & Tripathi, 2021). Classification algorithms, like neural network, decision tree, and Bayesian network, use large datasets to train and are categorized as supervised or unsupervised learning methods. Supervised learning uses labeled data at training, while unsupervised learning does not. These two methods are similar in that they both require class labels in the testing phase. Clustering algorithms are unsupervised learning methods that do not require class labels, while prediction algorithms take a historical dataset, they create models to predict an outcome. There are many algorithms in classification, clustering, and

predictive (Elbasi et al., 2021).

AI and the subfields of AI, or robotics, Internet of Things (IoT), and machine learning, have changed the world in many ways. AI technologies change the quality of life, doing things safer, easier, and often more productive (Chaturvedi et al., 2023) with many AI applications. For example, facial recognition for security, industrial automation and IoT, language translating through NLP, and home robotics make life a bit easier. AI has brought society into the Industry 4.0 era taking advantage of IoT, cloud computing, robotics, and machine to machine communication. Utilized and invested wisely, such innovative progression allows for better time savings, flexibility in work, and more productive collaboration (Ahsan & Siddique, 2022).

2.2 Artificial Intelligence (AI) in Education

Artificial Intelligence (AI) is shifting education to become far more efficient, accessible, and also more personalized. AI provides more ways for both students and teachers to gain from these tools in many facets of learning. While AI can produce many benefits, it does also raise many challenges that should be considered .

Fitria (2021) investigation examined the role of Artificial Intelligence (AI) impacts how education by enhancing teaching and learning. It specifically outlines numerous AI, including virtual mentor or voice assistants, smart content organizer, presentation translator, global course platforms, automated assessments, personalized learning resources, educational games, and intelligent tutoring systems. All of these provide easier and accessible, personalization enabling more accessibility to tasks such as responding to learners' feedback and organizing materials, to adaptive learning size in line with people's capacity to succeed. Overall, this study identifies ways where AI cannot replace teachers in facilitating emotional development of learners, students able to actively create their characters and moral education confirms the inimitable position that teachers have to motivate and inspire learners.

Another study conducted by Ali and colleagues (2024) discussed the integration of AI tools in education, discussed ChatGPT in education - benefits and challenges. It reviewed 69 academic articles and identified five primary areas of concern; user experience and practicality, costs and efficiencies, environmental efficiencies, technological efficiency, and ethics. The review identified ChatGPT potential as an assistant, but also describe concerns with a reliance on them, not being creative, reliance on data/being a content generator, costs and maintenance down the line, and concerns for use and privacy on use of learners' data. The Union (2024), suggest successful commitment addressed to issues and provides examples of how to address ChatGPT which are pure AI tools-manual with idea and recommendation theme, and outlines a way forward for future through research for stakeholders, education-makers and educators.

In the further study, by Wang and colleagues (2024), suggested four main areas of uses of Artificial Intelligence in Education (AIED): adaptive learning and personalized tutoring, the task of AI to tailor learning materials and modelling tasks to suit students' needs; intelligent assessment and management - this area focuses on automated grading and tracking progress; profiling and predicting-using historical data to predict outcomes and to guide levels of support; emergent technologies - robots, virtual reality (VR), and augmented reality (AR), which are beginning to enhance more active forms of learning. Authors state that, most research has focused on system design, AIED can impact learning, as well as challenges including ethical concerns and user uptake to using AIED. There are some applications for higher education and use in K-12 schools, but very few studies in the area of preschool education.

2.3 Artificial Intelligence (AI) in Higher Education

Artificial intelligence (AI) is quickly changing how higher education supports teaching, learning, and administrative systems. Recent research has presented evidence of the ability for AI to offer personalized learning and adaptive systems, automate grading tasks, and provide insights and predictions on student academic outcomes, assumption is that it would make education more efficient and accessible (Chetry, 2024). Although AI offers substantial opportunities, especially related to modernization of curricula and facilitating knowledge production/innovation within higher education systems, opportunities to address challenges through ethics, equitable access, and training for teachers remain significant issues. The study highlights the need to advance an ethical and responsible comprehension of AI technology to support inclusive and ethical learning practices while avoiding disparities such as underrepresentation of geographic locations and graduate studies. Importantly, there exists a need to examine how to balance potential opportunities with the challenges of effective adoption within higher education.

Further, Santos and Serpa (2023) investigate how artificial intelligence (AI) is disrupting higher education and the educational context of teaching and learning, research, management, and relationships externally. There is value in acknowledging the advantages of AI in promoting personalized learning, adaptable AI systems, automated grading of student submission, and enhanced data analytics. AI can also ease administrative functions and enhance accessibility. Santos and Serpa (2023) also acknowledge related challenges of AI use for teaching and learning in relation to ethics, equity, teacher training and organizational resistance. The distinctive challenge of integrating AI in higher education calls for a more conscious, nuanced practice of AI literacy among the various stakeholders. The authors call for a need to transform rather than replace traditional practices to leverage the areas where AI can be effectively integrated in the learning experience while addressing associated limitations, and teachers need to willing and actively try to be prepared for an innovative learning experience.

Additionally, Crompton and Burke (2023) studied the way Artificial Intelligence (AI) is changing the nature of higher education and the activity of learning in higher education and environments through analyzing the number of published documents. AI in higher education is rapidly increasing along with the growth of online learning and the pandemic has also accelerated increased use of AI. In summary, the studies focused mostly on undergraduate students, in particular, language learning; researchers used AI particularly for assessment, predicting student outcomes, and tutoring and managing student learning. With AI teachers are able to ensure more learning is done through grading, providing personalized feedback, and identifying students at-risk for dropping out. The majority of research is published in the top high- income countries, which is dominated by an enormous majority from China. While the field is growing, there are gaps, notably in the number of studies being conducted with the graduate population outside of North America, and a noticeable lack of studies coming out of any low-income countries. These gaps will constrain diverse and innovative understandings of AI in education.

Additionally, Borisov and Stoyanova (2024) also look at how Artificial Intelligence (AI) changes the nature of the activity and use of higher education, and as part of the future of education. They provide strengths, limitations, opportunities and threats (SWOT) for considering AI in higher education. Using SWOT, they consider the strengths of the AI as improving personalized learning, improving efficiencies in administration, and supporting innovation in research, and the weaknesses of AI as its use leading to an over-reliance, and

limited trust in its actions. Opportunities exist for AI, such as creating more engaging learning experiences and making education broadly available, including modernizing educational curricula, but there also remain threats to AI that limit its uptake and its use in higher education; ethical concerns, data misuse and security, limited human interaction, and an uncertain future. The conclusion should be easily digestible, and potential would have substantial upside if we can ethically and responsibly use AI/philosophical commitment to values in education and human rights and equality in education context.

3. Material and Methods

The present research used qualitative research design, because this approach allows a deep exploration of the complex, subjective experiences of higher education students in Israel, with relation to the effect of Artificial Intelligence (AI) on the educational process. Qualitative research is particularly advantageous when researchers want to get a deep understanding of students' perceptions, emotions, and attitudes, as opposed to quantifying variables (Tilman, 2025). Tenny and colleagues (2022) argue that qualitative research methods are necessary when an investigation involves understanding the way in which individuals interact with their environments, in this case, the student's interaction with AI in an academic context. Qualitative research allowed the researcher to access rich perspectives about the integration of AI tools and technologies into teaching and learning, including perceived successes, threats, and contextual factors influencing the student's experience and viewpoints.

The target population for this study was higher education students across higher education institutions in Israel. The sample comprised 50 participants who were recruited using snowball sampling, or chaining sampling, which is a technique that is appropriate when trying to reach groups of people who have a shared experience, as well as a way to build trust and rapport when working with participants in qualitative research (Ting et al., 2025). Because snowball sampling is essentially a word-of-mouth approach, it was particularly appropriate for this study because it allowed the researcher to recruit students who were currently using AI technologies as part of their academic processes (e.g., AI tools for writing papers) to better understand what the topic has to share about the phenomenon. Fifty participants is a sufficiently large sample size to reach thematic saturation, allowing for rich, in-depth data. Utilizing both individual and group approaches for data collection was desirable. Semi structured one-on-one interviews, where participants were assured that they could speak freely and openly, were necessary to have honest discussions about ethical concerns or differences in accessibility to AI tools that students may have faced. Focus groups with ideally 7 to 10 participants allowed students to share their experiences and perspectives together in a safe space. Each session lasted between 60 to 90 minutes in length and was audio recorded (with participant consent). This multi- method approach helped to provide deep information about how students perceive AI's role as a tool for transforming their educational landscape in a way that will support the objectives of this study in developing pedagogies using AI and addressing issues of equity in accessing learning tools through AI technologies.

4. Results

The key findings from a qualitative study on students' perceptions of artificial intelligence (AI) in higher education. Several key themes emerged from the thematic analysis of data collected in one-on-one interviews with participants, demonstrating both the positives and concerns regarding AI inside of learning contexts. The themes capture students' experiences and desirability of AI tools in strengthening learning effectiveness, personalisation, academic success, and accessibility; as well as students' ethical concerns related to AI and expectations

of the future. The analysed key themes offer depth of insights towards how AI is changing the educational process based on students' perspectives.

Theme 1: The Impact of Artificial Intelligence (AI) on the Effectiveness of the Educational Process

Observations and feedback from participants overwhelmingly indicated that AI is having a meaningful impact on the education process as it relates to accessibility and efficiency. One student said, *"AI changed how I learn-it saves me time and allows me to concentrate on the main points instead of being submerged in information."* This student view is consistent with Chetry (2024), where the author documented how AI systems have the potential to innovate education through automating endless tasks, giving continuous adaptive feedback, and the ability to analyze student progress as it relates to all of one's academic learning. Another student said, *"I think it gives me more control of my studying with AI tools-it's like having a personal assistant."* These perceptions indicate that there is growing sentiment that AI, when properly integrated into learning functions, adds to the structure, timeliness, and content delivery of learning materials, and supports Santos and Serpa (2023), that AI use has the potential to pass off academic workflows and modify academic connectivity of learning into more personalized experiences in a college or university experience.

Theme 2: Benefits of Integrating AI Tools and Technologies in Teaching and Learning in Higher Education

Multiple students pointed out distinct benefits of artificial intelligence tools such as ChatGPT, Grammarly, and summary generators in their academic work. *"ChatGPT helps me brainstorm and write faster it's gives me ideas when I'm stuck,"* said one participant in the focus groups. Ali et al. (2024) noted that ChatGPT was practical and saved students' time. Additionally, one student remarked, *"Grammarly is like a second pair of eyes—I don't submit a paper without running it through first."*

These technologies support productivity as well as clarity, and confidence, in the writing. Samuel (2024) concurs, underscoring the benefit of smart content organizers, and automated assessments in improving learning efficiencies and accessibilities. Students described feelings of empowerment, where they could accomplish work independently but quickly adjust and modify actions.

Theme 3: AI Enhancing Personalized Learning Experiences and Addressing Individual Student Needs

The study participants indicated that AI-enabled tools allowed them to interact with course content in personalized ways that matched their individual learning preferences. *"For instance, I use AI-enabled flashcard apps, which adjust to what I forget-it's as if the app knows me,"* a student said. Some participants reported benefits from adaptive quizzes, and intelligent tutoring systems, too. One said, *"The AI system at our college gives me more practice on areas I am weak-this is something a traditional lecture can never do."* These opinions support the work by Joshi (2024), who suggested that AI technologies such as adaptive learning platforms assist in providing personalized content based on the learner's pace and abilities, which provides opportunities for personalization. Vieriu and Petrea (2025) also indicated that these tools foster individual support and proactive intervention for students. More specifically, the tools were valuable for identifying at-risk students and improving learning achievement.

Theme 4: Challenges and Ethical Concerns Associated with the Use of AI, Including

Privacy and Equity

Despite recognizing the benefits, students also voiced several ethical concerns. One participant stated, *"I always wonder who sees the data I put into AI systems—do they store it? Can it be misused?"* Another noted, *"Not all students in my program can afford the premium tools—that creates an unfair advantage."* These comments reflect growing anxiety about data privacy and inequality of access. Haji and Djeumeni (2025) confirmed that ethical dilemmas, especially related to data usage and equity, remain significant obstacles in the widespread adoption of AI in education. Similarly, Çela and others (2024) warned that overreliance on AI tools could reduce critical thinking and creativity, raising concerns about the long-term consequences of AI integration without proper safeguards. The students in this study echoed those issues, calling for clearer institutional guidelines and more equitable access.

Theme 5: The Role of AI in Improving Academic Performance, Knowledge Retention, and Skill Development

Multiple students said AI tools contributed positively to academic performance and retention of difficult content. *"When I use AI to explain something I did not understand in class, it sticks better,"* one student said. Another added, *"AI quizzes let me practice and remember concepts much faster than traditional study methods."* The students' comments align with the work of Elshall and Badir (2025), who noted the role of AI in intelligent assessment and feedback that allows for repeated practice and personalized support to aid memory and performance, and the way in which AI supports the progression of knowledge through scaffolded tasks at developmentally appropriate levels. Shin and others (2025) pointed to the potential of AI to monitor student learning progress and improve performance in a personalized way by identifying learning gaps early and offering relevant content. In this study, the students identified similar benefits from the use of AI to help them remain on-track.

Theme 6: Students' Preferences and Expectations for the Future Use of AI in Educational Settings

Participants demonstrated both optimism and wariness when discussing the future of AI in the educational system: *"I think AI needs to be used as a tool instead of being used to replace teachers,"* one student remarked. Another student stated, *"I want to learn to use AI in a more responsible way - it should be included in what we learn in university."* This clearly demonstrated a desire for AI literacy and ethics, in addition to technical use. Borisov and Stoyanova (2024) echoed this sentiment by calling on higher education systems to not only implement responsible AI practices, but also promote human-centered values. Participants expressed they also expected universities to provide equitable access to AI tools, in addition to training for not only students, but also staff. *"If AI is the future, we all need to learn how to use it, not just people who can pay for it,"* one participant stated. These expectations pointed to welcome areas for change to policy, and curriculum aimed at encouraging ethical, equitable, and pedagogically appropriate use of AI across and within academic life.

5. Discussion

The research focused on how higher education students in Israel perceive the role of Artificial Intelligence (AI) on the effectiveness of the educational process. Overall, students view AI as a powerful force for systemic change in education, substantially and positively influencing their learning opportunities, academic successes, and agency in personalizing their educational tools. The thematic analysis identified six interrelated themes that highlight an

orientation towards understanding the complexity of AI and how benefits and challenges may co-occur, reinforce or appear divergent in academic contexts.

To outline the findings, students characterized the influence of AI as meaningful in improving educational efficiency and accessibility. For many, AI changed their study routines they reported spending less time on repetitive activities to focus on critical academic content. One participant stated that AI helped them "focus on the essentials instead of getting buried in information" which echoed the perspective of Chetry (2024). Chetry (2024) found that AI systems automate tasks to support and generate adaptive feedback to improve learning. Santos and Serpa (2023) found that AI enables students to access flexible and personalized learning environments, which support that students benefit from improvements in academic structure and efficiency. Overall, these findings demonstrate that AI lowers the administrative burden of learning and increases students' cognitive engagement by improving the access to relevant content.

Additionally, the use of important AI technologies like ChatGPT and Grammarly were seen as especially beneficial for students in regards to support for academic productivity and writing improvements. Participants also described that these tools helped them brainstorm, fix their grammar, and assured that they felt confident in their submissions. This is consistent with the findings of Ali and others (2024), who reported ChatGPT provides real, practical support to students as they save time and are able to generate ideas and Samuel (2024), who noted that smart content organizers and automated assessment systems are effective in supporting student learning with improved outcomes. All these findings illustrate that the students perceived that AI tools provided both technical and psychological support to help students work independently while still being mindful of the quality and clarity of academic work.

Equally important, were the ways in which the students understood AI as being involved with their personalized learning, whereby they spoke about their experiences of using adaptive quizzes, flashcards, and intelligent tutoring systems that adjusted the content based on their performance. Joshi (2024), further supports this point by stating that, AI systems can provide tailored content to suit each individual student, improving engagement and comprehension. This is consistent with Vieriu and Petrea (2025), whose discussion of personalized learning technologies highlights the role of these technologies in identifying learning gaps in a subject area, and providing tailored support. These findings highlight the transformative potential of AI in moving education away from a one size fits all model and instead delivering a more student- centered approach.

However, in addition to these advantages, there were ethical and equity concerns raised by students as well. Many voiced discomforts regarding data privacy and the possible exploitation of their personal data. Others pointed out differences in access and affordability in regard to not all students having access to premium AI tools, which creates an inequitable space for students. These concerns coincide with the work of Haji and Djeumeni (2025) who expressed the ethical dilemmas surrounding data and use around privacy. Similarly, Çela and others (2024) warned about using AI too much and not being able to think critically and creatively. Both sets of perspectives support the need for institutions to develop clear policies to improve clarity and eliminate ambiguity in providing a safe, and equitable teaching and learning context .

Moreover, students all acknowledged that the AI had a positive impact on their academic performance, skill acquisition, and knowledge retention. They went on to describe how the AI tools provided reinforcement of difficult concepts, opportunity for practice, and provided assistance toward more successful study. This viewpoint is further supported by Elshall and Badir (2025), who contended that intelligent assessment systems and customized feedback

loop-enhanced student outcomes as they were able to customize their approach to their individual learning styles. Similarly, Shin and others (2025) stated that AI tools could assist in gauging learning progress, and help in awareness of content gaps early, allowing for more adequate interventions. Overall, the studies reaffirmed that AI, when used responsibly, could improve educational outcomes, and assist learners in achieving their desired academic aspirations.

In the end, students expressed a clear preference for AIs' future integration to stem from ethical and educational values. While a sense of optimism was present for AIs' potential, there was also a caution to not displace educators. Some students called for training from the university for both students and teacher educators on how to utilize AI in an equitable and responsible manner. These perspectives align with the arguments of Borisov and Stoyanova (2024) who called for the development of AI literacy and the emphasis on human-centered values in educational systems. Participants also noted the importance of equal access to AI tools to avoid enhancing existing inequities in education. These expectations imply the need for universities to develop responsible AI policy while also addressing digital inclusion and construct ethical elements within the educational and institutional context.

6. Conclusion

To conclude, this study found that higher education students in Israel consider Artificial Intelligence (AI) a powerful, largely positive entity that enhances education by being more efficient, more personalized, and more supportive of their learning. The qualitative and exploratory nature of the research provided depth and rich details; students were able to articulate their experiences with AI tools such as ChatGPT, Grammarly, adaptive programs, etc., to describe how these AI education tools improved their efficiency when completing academic work, deepening their understanding of knowledge and content, and providing individual support when they required assistance in completing their projects. The results are congruent with earlier works (Chetry, 2024; Ali et al., 2024; Joshi, 2024), indicating AI can help create efficiencies in a student's learning experience if harnessed correctly. It was also clear from the results that students are increasingly envisioning AI as part of their education and the way they study and interact with their study materials and the academic world.

However, the study also surfaced important issues to consider. Participants cited ethical issues around privacy, data security, and the digital divide, as well as reliance issues, and students worried about using AI excessively, therefore limiting their critical thinking and creativity. These issues also echo similar results from previous studies (Haji & Djeumeni 2025; Çela et al. 2024), emphasizing students' concerns around how to implement AI responsibly, equitably, and transparently. It was also clear that students expect universities to offer formal training on AI literacy and for access by all, to be fair and equitable, which would suggest this is part of a bigger expectation for post-secondary institutions as they navigate the innovative nature of AI. Institutions must embrace new innovations while simultaneously developing AI policies that do not lose sight of inclusion that protects academic integrity and students' health and safety as learners.

While this research brings a number of issues to light, there are still many unresolved questions that will remain in the future. Of particular concern was how institutions can formulate and implement ethical policies, that ensure that in adopting AI, institutions will protect student information, as well as support fairness. Considering that some students will have less access to AI tools because of socio-economic access issues, there are many equity issues that arise. Future research can

imagine the facets of learning and teaching, in other words, whether faculty and institutional leaders are ready to support AI onboard in an equitable manner that develops inclusive learning environments. Future studies still need to identify the long-term cognitive and social consequences of using AI in higher education, specifically the impacts it will have on students' critical thinking, creativity and independence. As important, as AI continues to develop, reshape the higher education landscape into new ways of learning and doing business, values of equity, responsibility and learner-centered learning must be maintained to ensure that AI supports the unique learning needs of all learners.

7. References

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