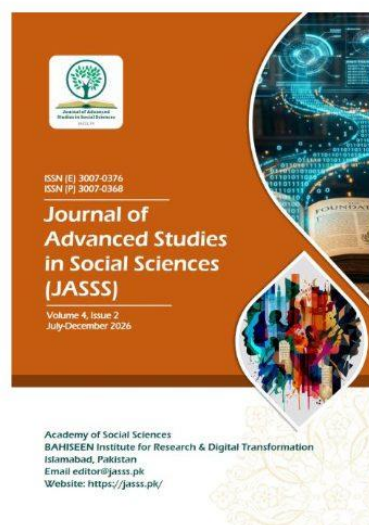


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The Impact of AI on Education and Careers: US Students' Perceptions

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Abstract

The growing use of Artificial Intelligence (AI) tools in higher education and the workplace has sparked both optimism and concern among educators, policymakers, and employers. These changes directly affect students, but their voices receive less attention than those of faculty members and institutions. This study examines key aspects of student-AI interaction, including familiarity, usage patterns, and perceived career impact. The study used a qualitative design based on semi-structured interviews. Respondents included six undergraduate students in the business administration department of a major state college in Nebraska, USA. The thematic analysis revealed two main themes. The findings suggest that students hold a cautious but positive view of AI. They support clear institutional guidelines and a more deliberate effort to include AI literacy in coursework. The findings have significant implications for stakeholders seeking to enhance learning and prepare students for future careers where AI plays a major role.

Keywords: Artificial Intelligence (AI), Higher Education, Student Perception

Introduction

In both higher education and the workplace, AI tools have become increasingly important. In higher education, AI's role has expanded in key academic activities including teaching, learning, assessment, and student support (Crompton & Burke, 2023; Lo, 2023). Stakeholders, including educators, policymakers, and employers, recognize both the benefits and risks of using AI. Debate continues over how AI can shape personalized learning, assessment, academic integrity, and institutional policy (Cotton et al., 2024; Francis et al., 2025).

While students are very important stakeholders in this debate, their views receive less attention in institutional debates dominated by faculty and administration (Chan & Hu, 2023; Johnston et al., 2024). Therefore, it is important to examine various aspects of student-AI interaction, including familiarity, usage patterns, and AI's perceived impact on their academic work and future careers. This knowledge can help relevant stakeholders improve student learning, create clear AI-related policies, and better prepare students for the future workforce.

In their study of health sciences students, Fawaz et al. (2025) identified two major themes related to students' AI use. The first theme focused on AI benefits. These benefits included self-paced learning, personalized support, improved writing and language skills, idea generation, and increased efficiency. The second theme was focused on students' concerns regarding AI. These concerns included inaccurate information, overreliance, unequal access, and ambiguous institutional policies.

Other studies have reported similar findings. For example, Johnston et al. (2024) found that students often viewed AI positively and believed it could improve productivity and help provide personalized support. At the same time, students raised concerns about accuracy, ethics, access, and proper use of AI (Chan & Hu, 2023). Farrokhnia et al. (2024) found that students viewed AI as a useful educational tool. At the same time, the literature cautions that irresponsible AI use may negatively impact academic integrity, independent thinking, and active learning (Farrokhnia et al., 2024; Lo, 2023). In their study of STEM students, Choudhuri et al. (2026) found that routine, trust-based AI use was linked to less reflection and less desire to understand. They reduced critical thinking. Similarly, increased dependence on AI was linked to lower critical thinking scores, with cognitive fatigue partially mediating this relationship (Tian & Zhang, 2025). This suggests that students can learn to use AI more reflectively and responsibly. Cognitive offloading is another concept that helps explain concerns about dependence on AI. Cognitive offloading occurs when individuals use external tools to reduce the mental effort required to complete a task (Risko & Gilbert, 2016). While offloading itself is not inherently harmful, excessive reliance on external support may reduce opportunities for problem-solving and critical reasoning. This concept provides a useful basis for examining how students balance the convenience of AI use with the need for active involvement in learning.

AI accessibility is also related to the concept of the digital divide. Warschauer (2003) argued that the digital divide involves more than physical access to technology. Meaningful access also depends on skills, social support, institutional resources, and the ability to use technology effectively. This perspective matters for AI because access to AI tools alone may not ensure students receive equal educational benefits.

Regarding AI use, international policymakers also stress the need to protect privacy, support equal access, preserve human control, and strengthen institutional capacity. Institutions must address these issues so that students can benefit from AI fairly and responsibly (Miao & Holmes, 2023). A national US faculty survey found that most instructors are concerned about AI's effects on critical thinking (American Association of Colleges and Universities, 2026). Without clear AI governance frameworks, students do not benefit equally from AI use. Data privacy, algorithmic bias, and the digital divide remain major concerns (Mimoudi, 2025).

The debate about AI also resembles earlier debates about educational technology. New technologies have often been introduced with expectations of radical transformation in teaching and learning. However, research shows that these technologies' benefits depend heavily on how they are integrated into teaching and institutional practices (Cuban, 2001; Selwyn, 2011). As such, the debate about AI should therefore be viewed as both a new technological development and part of a longer history of educational technology adoption.

Purpose of the Study

This study examines undergraduate students' awareness, perceptions, and use of AI tools in education and future careers. Understanding their views can help colleges and universities develop clearer policies and guidelines for AI use. Student perspectives can also guide the design of teaching strategies focused on responsible AI use. These perspectives may help institutions prepare students with the skills needed in an AI-supported labor market. AI is changing job tasks and skill requirements. As a result,

technological literacy, analytical thinking, adaptability, and human skills that complement AI are becoming more valuable (Organization for Economic Co-operation and Development [OECD], 2023; World Economic Forum, 2025). Students are the main users of these technologies in the classroom. They will also enter a workforce in which AI is becoming more common. Their experiences and concerns can therefore bring an important perspective to institutional discussions often shaped by faculty and administrators.

Objectives of Study

Three primary objectives of this study included:

Objective 1: Assess students' familiarity and use of AI tools.

Objective 2: Examine students' perceptions of AI's role in their academic work and employability.

Objective 3: Evaluate students' awareness and understanding of institutional AI policies.

Research Method and Data Collection

Design

This study used a purely qualitative design based on semi-structured interviews. This approach provides an in-depth understanding of how students with different perspectives experience, evaluate, and think about AI tools when making academic and career decisions.

Participants

We recruited six undergraduate students from the business administration department through class announcements.

Interviews

Semi-structured interviews were conducted. The interviews included five key open-ended questions. These questions covered (1) general patterns and motivations for AI use; (2) perceived influence of AI on the learning process and academic performance; (3) students' views on AI's responsible use; (4) concerns about AI in education and society; and (5) expectations regarding AI's effect on future job opportunities and workforce skills.

Ethics

For this study, the Institutional Review Board (IRB) approved the study. Data collection complied with principles of the Family Educational Rights and Privacy Act (FERPA). Participants were informed of the purpose of the study. The interview transcripts were anonymized using participant labels.

Data Analysis

The interview transcripts were analyzed using a six-phase framework for thematic analysis (Braun & Clarke, 2006). The six phases included becoming familiar with the data, creating initial codes, searching for themes, reviewing the themes, defining and naming them, and completing the final analysis. The transcripts were reviewed several times, and important statements were coded. The codes were then grouped into subthemes and organized under two broad themes, i.e., benefits and concerns. Verbatim quotations were included to preserve the participants' voices.

Results

Participant Characteristics

The sample included six undergraduate students from the business administration department. Students reported different levels of AI use. Some participants described limited use, such as relying on smartphone assistants or media recommendations. Others reported more frequent use for specific tasks, including coding, spreadsheet automation, and academic writing. This range of AI use contributed to varied perspectives among students.

Theme 1: Benefits of Using AI

Alternative Explanation and Conceptual Understanding

Several students reported using AI to obtain alternative explanations for course material that was difficult to understand through lectures or textbooks alone. One student used AI "to describe the same topic in simpler language or compare it to something familiar," and referred to a situation in information systems where "the diagram in the textbook was confusing." Another participant described using AI "to explain the logic and avoid asking only for the final answer" when troubleshooting code or spreadsheet formulas. A finance student relied on AI "to provide the mathematical formulas necessary to compute homework problems" when textbooks did not offer guidance on real-world applications.

Academic Writing and Language Support

Several students described using AI for content editing and proofreading support. A finance student reported using ChatGPT "to proofread my assignments to check for any errors grammatically and mathematically," and emphasized completing assignments independently and generating original ideas. Another participant used AI "for feedback on whether a paragraph is understandable," but deliberately avoided including AI-generated sentences, preferring to maintain a personal voice in academic work.

Efficiency and Organization

Students identified time-saving benefits from using AI to organize study schedules, summarize readings, and structure exam preparation. One student requested "a seven-day review schedule" before exams. Another participant noted that AI "made me more willing to experiment because I can get feedback quickly," which reduced the time previously spent searching forums for coding solutions.

Idea Generation and Structural Support

Several students reported using AI at the beginning of assignments to generate ideas for structure. One participant asked AI for "several possible ways to organize the topic" before writing and used the suggestions to understand different structures. Another student described creating "a program where I would put the data in, but it would automatically sort it for me" for a data analysis assignment.

Theme 2: Concerns About Using AI

Accuracy, Verification, and Overconfidence

A recurring concern among participants was the risk of inaccurate AI output. One student reported that AI recommended "sources and quotations that I could not locate," leading them to stop assuming citations were authentic based solely on their academic appearance. Another participant observed that "an answer that sounds confident can still be wrong," and emphasized that "a small error can change the meaning of an entire concept" in technical subjects. A further participant noted AI's tendency to "provide an

answer even when the request is vague, or the available information is insufficient." These concerns align with evidence that habitual, trust-driven AI use may reduce reflective cognitive engagement (Choudhuri et al., 2026).

Overreliance and Loss of Independent Thinking

Nearly all students described setting personal limits to avoid overreliance on AI. Some participants reported that using AI too often made it harder to maintain their own skills. One student tested understanding "by closing the AI window and completing a similar problem independently," and found that following AI steps did not always mean real understanding. Another participant used AI to "do my work for me," which "hindered some of the ability to learn," and later changed this approach after noticing the effect.

Equity of Access and the Digital Divide

Students expressed concerns about unequal access to AI tools and supporting infrastructure. One student observed that "some students can pay for advanced versions, while others are limited to free tools," and cautioned that assignments assuming equal AI capability "could increase existing inequalities." Another participant highlighted school-level resource differences, noting that "schools with fewer resources may struggle to access high-quality AI tools."

Inconsistent Policy and Ambiguous Guidelines

Students reported frustration with unclear or inconsistent institutional and course-level AI policies. One student asserted that "colleges need clearer guidance," and recommended that policies "distinguish between tutoring, editing, idea generation, data analysis, and full content generation" and avoid blanket prohibitions. Another participant proposed "a short AI-use statement attached to assignments" to enhance transparency. A further participant critiqued restrictive policies, arguing that prohibition is largely unenforceable for take-home work and that institutions "should embrace the advancements in technology" rather than resist them.

Workforce and Future Skill Implications

All participants linked their concerns about AI in education to anticipated labor-market changes. One student predicted that "entry-level employees" performing repetitive preparatory tasks are most at risk of disruption, while roles requiring problem definition, ethical judgment, and communication would retain value. Another participant emphasized that skills such as "communication, trust, ethical judgment, physical observation" cannot be automated, and that verification skills and domain knowledge would become increasingly important. A further participant questioned the traditional college pathway, suggesting that if AI can teach necessary technical concepts, "college attendance could largely decrease" in certain professions unless curricula are modernized.

Discussion

This study's findings corroborate and extend prior research on student perceptions of AI in higher education. Fawaz et al. (2025) found that health sciences students identified benefits such as personalization, writing support, efficiency, and idea generation, alongside concerns regarding accuracy, overreliance, equity, and policy inconsistency. Similar patterns emerged in large, cross-disciplinary studies that report support for AI-assisted learning as well as reservations about reliability, ethics, academic integrity, equitable access, and impacts on personal and professional development (Chan & Hu, 2023; Johnston et al., 2024).

Broader reviews of AI in higher education similarly highlight personalized support, feedback, and efficiency as key affordances, while identifying misinformation, dependency, assessment validity, and governance as persistent challenges (Crompton & Burke, 2023; Farrokhnia et al., 2024; Lo, 2023). The consistency of these themes across student populations suggests that these perceptions are not confined to specific institutional or disciplinary contexts, but instead reflect broadly shared features of the current AI-in-education landscape.

A notable aspect of these findings is how participants developed personal, informal verification and self-testing strategies in response to negative experiences with AI inaccuracy, such as fabricated citations or oversimplified explanations. This self-corrective behavior aligns with recommendations that students treat AI output as provisional, verify claims against authoritative sources, and maintain active reasoning through independent problem-solving (Farrokhnia et al., 2024; Miao & Holmes, 2023). These experiences illustrate the cognitive paradox of AI-supported education: while AI can enhance access to explanations and reduce unnecessary cognitive burden, excessive cognitive offloading may diminish engagement, retention, and higher-order thinking (Jose et al., 2025). The literature further cautions that this protective effect is uneven. Students with higher initial confidence in their technical abilities may remain vulnerable to cognitive disengagement from routine AI use, indicating that self-reported vigilance may not fully prevent long-term erosion of critical engagement (Choudhuri et al., 2026). From the lens of cognitive offloading, the findings suggest that students used AI to reduce the effort required for assignment tasks (e.g., explanation and information retrieval). While cognitive offloading can improve efficiency, it may also reduce the mental processing learners perform when they use external support to replace independent thinking (Risko & Gilbert, 2016).

Participants' views align with evidence that AI's benefits are not automatically or evenly distributed and require deliberate institutional governance to avoid widening existing achievement gaps (Johnston et al., 2024; Miao & Holmes, 2023). The concerns raised by participants also reflect the broader "AI divide" in higher education, in which unequal access to infrastructure, advanced tools, institutional support, and AI literacy may reinforce existing educational and completion gaps (Complete College America, 2023). From a digital equity perspective, access should not be defined only by whether students can use an AI tool. Meaningful access also depends on reliable technology, AI literacy, institutional support, and the ability to use the technology effectively (Warschauer, 2003).

The divergence in participant opinion regarding institutional policy - from calls for more granular guidance to calls for wholesale deregulation - reflects a broader unresolved tension between innovation, academic integrity, and learner protection. Current scholarship favors transparent policies that distinguish legitimate assistance from substitution of student work, support AI literacy, and align assessment design with clearly communicated expectations (Chan, 2023; Cotton et al., 2024). This tension also appears in national faculty surveys, where most instructors anticipate negative effects of AI on critical thinking. However, no consensus method for balancing access and safeguards has emerged (American Association of Colleges and Universities, 2026).

Practical Implications for AI Policymakers and Teachers

The findings suggest several practical implications for policymakers and teachers. They could consider these implications when developing AI policies and revising the curriculum. First, for each assignment, teachers should clearly identify the extent of allowed AI use. To reduce uncertainty, teachers should attach a short AI-use statement to each assignment that sets clear expectations (Chan, 2023; Miao & Holmes, 2023).

Second, students should be required to disclose AI use. Such disclosure could identify the tool used, the purpose of its use, and the extent to which AI contributed to shaping the final work. Such transparency may be more useful than attempting to detect AI use (Cotton et al., 2024).

Third, faculty should ensure that assignments reflect students' independent reasoning and learning. For example, instructors could require reflections, source verification, and explanations of decisions. These practices will support appropriate AI use while preserving students' critical thinking ability (Cotton et al., 2024; Miao & Holmes, 2023).

Fourth, institutions need direct interventions to address concerns about AI accuracy and verification. They should teach students to verify claims in AI-generated content against reliable sources before using it in academic work. As such, both effective use and critical evaluation of AI output should be part of the AI literacy program for students (Miao & Holmes, 2023).

Fifth, AI policies should consider differences in access. For assessment items that require AI, institutions should either provide reasonable access to approved AI tools or offer an alternative. Students should not be disadvantaged simply because they cannot afford approved AI tools that require payment (Miao & Holmes, 2023).

Finally, institutions need to regularly review these AI policies. AI tools and their capabilities continue to advance rapidly. Institutions should update their AI policies regularly by using feedback from relevant stakeholders (such as students, faculty, and administrators) (Chan, 2023; Miao & Holmes, 2023).

Limitations

This exploratory study used a small, purposive sample of six undergraduate students from one academic discipline. As such, the findings of this study may not be generalized to other student populations. The self-reported interview data also introduce the potential for social desirability bias. Because this is a qualitative study, the findings are not statistically generalizable; instead, they provide context-dependent insights into how business students experience and evaluate AI. Future research may include larger and more diverse samples from a wider range of academic disciplines. Future studies may also conduct comparative analyses across disciplines and institutions. Such studies may help identify whether students' AI perceptions, usage patterns, and concerns differ by academic context.

Conclusion

This study finds that undergraduate business students perceive AI as a valuable yet double-edged academic tool. Participants consistently reported using AI to improve efficiency, comprehend challenging concepts, and refine writing, while also expressing concerns regarding accuracy, overreliance, unequal access, and inconsistent institutional policies. Participants also reported developing their own verification and self-testing practices to balance AI's convenience with their ability to think and learn independently. These findings

support calls in the literature for higher education institutions to move beyond ad hoc, department-level regulations toward clear, consistent, and pedagogically grounded AI policies that foster independent critical thinking and equip students with AI-related skills relevant to an increasingly AI-integrated labor market. These findings support developing clear, consistent AI policies. These policies should identify acceptable uses of AI, require appropriate disclosure, support verification of AI-generated content, preserve opportunities for independent thinking and learning, and address unequal access. Combined with AI literacy initiatives, these policies may help institutions prepare students for a labor market where AI is increasingly integrated across occupations.

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