

Research on College Students' Attitudes and Usage Behavior Toward AI Writing Tools: A Case Study of ChatGPT

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Abstract. With the rapid development of generative AI technologies, tools like ChatGPT are increasingly used by college students for various academic writing tasks. These tools assist with grammar correction, idea generation, and full-text drafting, but also raise concerns about academic integrity, over-reliance, and ethical boundaries. This study investigates students' motivations for using AI writing tools, their ethical perspectives, and disciplinary differences in usage patterns. Using a mixed-methods approach combining surveys (n=142) and semi-structured interviews, the research examines how generative AI reshapes students' academic behaviors and perceptions of authorship. Results reveal that while most students use ChatGPT to enhance writing efficiency and organization, they remain uncertain about ethical boundaries, particularly around rephrasing and idea generation. The study concludes by discussing implications for higher education policy and pedagogy, arguing that universities should integrate AI literacy into curricula while developing clear ethical frameworks to balance innovation with academic integrity.

Keywords: Attitudes; Usage Behavior; AI Writing Tools; ChatGPT; Ethical Frameworks.

1. Introduction

The rise of generative AI technologies has brought transformative change to the educational landscape. Tools such as ChatGPT are now widely used by college students to assist in academic writing. These tools provide support with grammar, organization, ideation, and even full drafts of papers. While they improve writing efficiency, their usage also raises ethical concerns regarding authorship and academic honesty. This study focuses on how and why students use AI writing tools and their perceptions of the ethical boundaries involved. The paper begins by outlining the context and benefits/risks of these tools, followed by a literature review and original research findings.

Importantly, the adoption of ChatGPT is not happening in isolation but within broader transformations in higher education. The COVID-19 pandemic accelerated digitization, increased reliance on remote learning technologies, and created fertile ground for the rapid adoption of AI writing tools. Students across disciplines report using these tools not just for academic work but also for professional development, personal communication, and even creative expression. This dual-use character makes AI tools both powerful and controversial in educational settings.

Building upon this context, the present study adopts a mixed-methods design to analyze college students' attitudes and behaviors toward ChatGPT. Quantitative surveys provide data on frequency and types of use, while qualitative interviews explore ethical ambiguity, motivation, and institutional influence. This study aims to answer three key research questions:

- (1) What motivates students to use AI writing tools in academic work?
- (2) How do students perceive the ethical boundaries surrounding AI-assisted writing?
- (3) How do disciplinary and institutional factors influence patterns of adoption?

The results facilitate understanding how generative AI transforms writing culture and offer insights for universities developing AI literacy and academic integrity frameworks.

2. Literature Review

2.1 Impact of AI Tools on Academic Performance

Studies show mixed results regarding the impact of AI tools on academic writing performance. While Liu et al. [1] observed improved grammar and structure, other scholars such as Holmes et al. [2] stress the importance of deeper learning processes beyond surface-level improvements. Recent works also highlight student reliance on AI for idea generation and timesaving [3].

Beyond these immediate findings, historical parallels provide useful context. The introduction of calculators in mathematics education raised similar debates: did they improve problem-solving efficiency or undermine fundamental skills? Likewise, the widespread adoption of spelling and grammar checkers in the 1990s was feared to erode students' mastery of language conventions, yet they ultimately became normalized as productivity tools. By comparing ChatGPT with such precedents, scholars can better understand whether AI writing tools represent a disruptive break or a natural continuation of technological aids in education.

2.2 Ethical Debates on AI Usage in Assignments

The boundary between support and misconduct is increasingly contested. Cotton et al. [4] note growing concerns about plagiarism and "contract cheating." Moreover, broader discussions emphasize the role of institutional policies and digital literacy in framing student behavior [5]. Some universities have adopted strict prohibitions, while others encourage experimentation within ethical limits. This divergence reflects broader tensions in society about automation and human authorship. Ethical debates also highlight the unevenness of student perspectives. For some students, using AI tools for grammar correction seems as innocuous as using spellcheck. For others, generating entire essay drafts feels closer to academic dishonesty. The gray area between these two extremes reveals the need for clearer guidelines. Cross-cultural research also shows variation: in some Asian universities, institutional tolerance toward AI writing appears higher than in many U.S. contexts, suggesting that cultural norms play a role in shaping ethical perceptions.

2.3 Technology Acceptance and AI Adoption in Education

Davis's [6] TAM model remains widely used to explain the adoption of new technologies. Its application in higher education contexts helps identify perceived usefulness and ease of use as key factors. Recent studies[5][7] have further extended TAM to AI tools in learning environments.

AI adoption also depends on peer influence, faculty encouragement, and institutional policy. Students are not merely rational actors weighing utility and effort; they are embedded in social and cultural environments that shape how technology is used. For example, if professors explicitly warn against ChatGPT, students may refrain from using it openly but continue to rely on it privately. Conversely, when instructors integrate AI into classroom activities, adoption becomes normalized.

3. Discussion

3.1 Motivations and Use Patterns

Students' motivations for using ChatGPT varied widely. Many described it as a 'time-saver,' particularly when facing tight deadlines. Others used it for brainstorming, outlining essays, or polishing grammar. Interestingly, STEM students were more likely to emphasize efficiency and correctness, while humanities students often highlighted idea generation. The use of ChatGPT for language support was especially common among international students, who valued it as a tool to reduce linguistic barriers.

Survey results showed that 68% of respondents reported using ChatGPT at least once for coursework, while 42% admitted to regular use. The intensity of use correlated with perceived workload, suggesting that students turn to AI most when under pressure. Interviews reinforced this:

one participant explained, *'ChatGPT helps me get started when I feel stuck. It's like having a study partner on call.'*

3.2 Ethical Tensions and Ambiguity

The findings revealed strong ethical tensions. While most students felt comfortable using AI for grammar and structure, only 22% said they would submit a draft generated entirely by ChatGPT. Ambiguity arose around the threshold between acceptable support and misconduct. Some students expressed anxiety: *'If I use ChatGPT to rephrase my paragraph, is that cheating?'*

Faculty perspectives also contributed to the uncertainty. Several interviewees noted inconsistent messaging from professors: some encouraged experimentation, while others issued blanket prohibitions. This inconsistency left students unsure of what behaviors were acceptable.

3.3 Technology Acceptance

Applying the Technology Acceptance Model (TAM), students generally rated ChatGPT as both useful and easy to use. Perceived usefulness was highest among those juggling heavy course loads, while ease of use was nearly universal. However, acceptance was tempered by concerns about accuracy and ethical boundaries. Students reported frustration when ChatGPT produced incorrect or outdated information, forcing them to fact-check outputs. Interestingly, peer culture influenced acceptance. In majors where ChatGPT use was common, new users quickly adopted it. In disciplines where professors strongly discouraged AI, students were more hesitant, even if they recognized its potential.

3.4 Institutional Responses and Faculty Perspectives

Institutional responses were fragmented. Rutgers University had not yet established a unified policy on generative AI use during the study period. Faculty responses varied widely: some designed assignments to minimize AI reliance, such as in-class writing or oral defenses, while others adapted by explicitly teaching students how to critique AI-generated text. Faculty interviews revealed ambivalence. Professors in the humanities expressed concern about originality and intellectual growth, while those in business and computer science were more open to integration, seeing ChatGPT as aligned with industry practices.

3.5 Cross-Cultural Considerations

Cross-cultural perspectives highlighted differences in tolerance and expectation. In the U.S., the focus was often on academic integrity. In contrast, in parts of Asia and Europe, institutions showed more flexibility, emphasizing AI as a literacy skill. For international students, navigating these divergent expectations was challenging. One Chinese student described feeling conflicted: *'Back home, my professors encouraged us to test new technologies. Here, I worry it could be considered cheating.'*

3.6 Risks of Overdependence

A recurring theme was concern about overdependence. Students feared becoming *'lazy thinkers'* if they relied too heavily on ChatGPT. Faculty echoed this, warning that reliance on AI might weaken critical thinking, research skills, and originality. Survey data showed that 39% of students worried about losing their *'personal voice'* when using AI, while 26% admitted they sometimes accepted ChatGPT's outputs without deep questioning.

3.7 Student Case Profiles

Case profiles illustrated diversity in experiences. One engineering student used ChatGPT weekly to simplify technical articles, while an English major used it sparingly, mainly to test alternative phrasings. A first-generation student explained that ChatGPT helped *'level the playing field'* by

providing quick access to examples of academic tone. These profiles highlight that motivations and consequences vary depending on background, discipline, and goals.

3.8 The "Disciplinary Adaptability Differences" of AI Tools

The findings suggest important pedagogical implications. First, educators should acknowledge the inevitability of AI use and shift focus toward guiding ethical, critical engagement. Second, writing assignments should emphasize reasoning, reflection, and personal perspective, which AI cannot easily replicate. Third, faculty development programs are needed to help professors adapt their teaching. By moving from prohibition to integration, universities can help students build AI literacy while maintaining academic integrity.

4. Policy Recommendations and Reflections

Based on the findings, several policy recommendations emerge. Universities should develop clear guidelines that distinguish between acceptable and unacceptable uses of AI writing tools. Policies should be transparent, consistently communicated, and adaptable as technology evolves. Institutions might also consider creating honor code updates that explicitly address AI. Another recommendation is to embed AI literacy training into curricula. Just as students are taught research skills and citation ethics, they should learn how to critically evaluate AI outputs, understand biases, and recognize limitations. By doing so, institutions can foster responsible and informed usage rather than leaving students to navigate these issues alone. Finally, collaboration between administrators, faculty, and students is vital. Policy-making should not be top-down but co-constructed, ensuring that diverse voices are included. Beyond the immediate need for policies, universities should also consider creating dedicated AI ethics committees that include faculty, students, and technology experts. These committees could evaluate emerging tools, provide regular updates to the academic community, and design training modules that evolve alongside technology. Another important measure is to integrate AI scenarios into academic integrity workshops, helping students understand how decisions about AI usage intersect with broader ethical frameworks.

5. Looking Ahead: The Role of AI in Future Academic Writing

As AI technologies rapidly evolve, their potential to influence not just how students write, but also how they think, learn, and communicate will only grow. Future academic writing may include hybrid formats, where AI and human input are combined, documented, and assessed jointly. For instance, a student might use AI to generate a first draft but be evaluated on how effectively they revise and critique the output. This model mirrors how professionals may work with AI in future industries — as collaborators rather than mere consumers. Institutions could encourage the development of 'AI-editing' or 'AI-evaluation' skills, much like how students are taught peer review today. Additionally, instructors may increasingly design writing tasks that are less about producing polished language and more about demonstrating cognitive reasoning, reflection, and originality — areas where AI currently falls short.

Looking further ahead, it is possible that the very definition of writing will change. Instead of focusing solely on producing text, students may be asked to demonstrate their ability to curate, annotate, and reflect on AI-generated drafts. This would expand the scope of assessment from written output to intellectual process. Universities may also experiment with collaborative platforms where AI, faculty, and students co-construct knowledge artifacts, blurring traditional boundaries of authorship. Another forward-looking implication concerns interdisciplinarity. As AI becomes embedded in writing, communication, and data analysis, the walls between disciplines may erode. For example, engineering students may be required to practice reflective writing with AI tools, while humanities students may need to analyze technical prompts to better understand how algorithms generate content. Such cross-pollination could enrich higher education if guided thoughtfully.

6. Broader Societal Impacts and Ethical Reflections

The implications of AI writing tools in education ripple beyond the classroom. As students graduate into a world where generative AI is ubiquitous, their habits, values, and literacy around such tools will influence how future societies perceive authorship, originality, and intellectual labor. If institutions fail to address these developments now, we risk creating a generation of workers who either misuse AI or lack the critical literacy to use it ethically and effectively. Conversely, with thoughtful pedagogy and institutional support, universities can cultivate a new kind of academic and professional literacy that embraces AI while maintaining core intellectual values.

This will require interdisciplinary collaboration, continual feedback loops between educators and students, and a willingness to update long-standing academic conventions. Education must not only adapt to the presence of AI — it must help shape its responsible use. Moreover, AI literacy has implications for employability. Employers increasingly expect graduates to know not only how to use AI tools but also how to question them critically. In fields such as journalism, law, and healthcare, understanding the limits of generative AI can be the difference between responsible decision-making and harmful errors. Higher education thus serves as a critical training ground for instilling these habits of critical evaluation.

Finally, ethical reflections should also consider social equity. Access to advanced AI technologies is uneven across regions and institutions. Students at resource-rich universities may gain early exposure and skills, while others are left behind. If universities fail to address this gap, AI could exacerbate inequalities rather than reduce them. Therefore, policies must ensure not only ethical use but also equitable access.

7. Conclusion

This study explored how college students perceive and use generative AI writing tools, particularly ChatGPT, in their academic work. It sought to understand three key research questions: what motivates students to use AI tools, how they navigate ethical boundaries, and how institutional and disciplinary contexts shape these behaviors. The findings reveal that students approach AI writing tools with both enthusiasm and caution. They are primarily motivated by efficiency, time saving, and support for organization or language clarity, especially under academic pressure. However, many remain uncertain about the ethical limits of AI assistance—questioning whether rephrasing, summarizing, or generating content crosses into academic misconduct.

Across disciplines, usage patterns diverged. STEM and business students tended to view ChatGPT as a functional tool aligned with professional and technical applications, while humanities students emphasized creativity and authenticity, showing more hesitation toward AI use. International students, especially those from regions with more flexible AI policies, displayed greater openness to experimentation. These differences highlight how culture and discipline intersect to shape perceptions of acceptable use.

Ethical tension was another key theme. Students often expressed anxiety about unclear university policies and inconsistent guidance from faculty. Some professors encouraged critical engagement with AI, while others prohibited it outright, leaving students uncertain about what constitutes integrity. This inconsistency underscores the need for universities to develop clear, transparent policies and to embed AI ethics discussions into writing and research instruction.

Policy implications are significant. Higher education institutions should move from prohibition toward guided integration. Rather than banning AI, universities should teach students how to critically evaluate outputs, verify sources, and reflect on authorship responsibility. Building AI literacy, understanding both potential and limitation—will be crucial in preparing students for future academic and professional environments where AI collaboration is inevitable.

Despite its valuable insights, this study has limitations. Its single-institution scope restricts generalizability, and self-reported data may involve bias. Future research should conduct cross-institutional and longitudinal studies to examine how AI use evolves over time and how norms differ

globally. Investigating the long-term impact of AI on students' writing quality, creativity, and independent thinking would also be fruitful.

In conclusion, generative AI like ChatGPT is transforming not only how students write but also how they learn and define intellectual labor. The challenge for educators is not to resist this change, but to shape it responsibly by fostering a culture of ethical, informed, and reflective use. With thoughtful policies and pedagogy, AI can serve as a catalyst for deeper learning rather than a threat to academic integrity.

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