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Embracing AI in English Composition: Insights and Innovations in Hybrid Pedagogical Practices

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Abstract: In the rapidly evolving landscape of English composition education, the integration of AI writing tools like ChatGPT and Claude 2.0 has marked a significant shift in pedagogical practices. A mixed-method study conducted in Fall 2023 across three sections, including one English Composition I and two English Composition II courses, provides insightful revelations. The study, comprising 28 student respondents, delved into the impact of AI tools through surveys, analysis of writing artifacts, and a best practices guide developed by an honors student. Initially, the study observed a notable anxiety and mistrust among students regarding the use of AI in writing. However, this apprehension gradually subsided as students increasingly integrated these tools into their writing processes, indicating a shift from skepticism to practical application. The analysis of writing artifacts, particularly early drafts, revealed distinct patterns of AI tool usage, differentiating between students utilizing the tools effectively and those attempting to shortcut the writing process. The final papers, while not overtly indicating AI usage, demonstrated nuanced integration of AI in iterative and recursive tasks like refining arguments and developing ideas at the paragraph level. This suggests a trend toward a hybrid model of writing instruction, where traditional methods are complemented by strategic use of emergent technologies. The study underscores the importance of revised instructional strategies that blend conventional writing techniques with guidance on effective and ethical AI tool usage. It highlights the potential of AI tools in supporting the writing process while also cautioning against over-reliance. The findings of this study offer valuable insights for educators and institutions aiming to develop a balanced and effective hybrid writing instruction model, catering to the needs of contemporary English composition classrooms while maintaining academic integrity.

Keywords: English composition, writing process, generative AI (GAI), AI integration, hybrid instruction model

1. Introduction

The impact of generative AI on the writing process, particularly in educational settings, has been profound and multifaceted. At the outset of January 2023, these AI tools, including the likes of ChatGPT, were met with skepticism and even outright banning in many colleges and school districts (Yu, 2023). Educators and administrators were wary of the potential for misuse, such as plagiarism and the erosion of fundamental writing skills (Kishore et al., 2023). However, as the year has progressed, the same institutions began to recognize the potential benefits of these tools and shifted toward embracing AI literacy and integration into the classroom (Famaye et al., 2023). The evolution in perspective underscores a significant shift in attitudes toward technology in education, reflecting a broader trend of digital transformation across various sectors (Moraes et al., 2023).

More specifically, the field of English composition is undergoing a radical transformation, mirroring changes brought about by previous technological advancements. The advent of generative AI tools has prompted educators to rethink traditional strategies for teaching writing (Fitria, 2023; Imran & Almusharraf, 2023). The future of sentence-level writing instruction, as well as the stages of the writing process – from idea generation to drafting and organization – is being reevaluated in light of these new tools (AlAfnan et al., 2023). Not surprisingly, this disruption is particularly evident in English composition classrooms, where the use of AI writing tools continues to be viewed with suspicion by some, while others have outright banned their use (Tlili et al., 2023). Despite this, the continued integration of these tools into various writing platforms, including mainstream applications like Microsoft Office, suggests that their presence at a foundational level in word processors is inevitable (Jo, 2023).

The potential for a fundamental pedagogical shift in the teaching of writing is already reflected in literature on using the large language model (LLM) ChatGPT in writing pedagogy. Studies have shown that ChatGPT generally motivates learners to develop reading and writing skills, indicating its potential positive impact in educational settings (Ali et al., 2023). However, there

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are concerns about the authenticity and reliability of content generated by ChatGPT. For instance, a study found that while the generative aspects of the LLM can generate content that appears believable, human-written articles score better in terms of completeness, credibility, and scientific content (Haq et al., 2023). Furthermore, the use of the tool in various domains including education and training has been documented, but its effectiveness and appropriateness in these contexts remain subjects of ongoing research and debate (Arif et al., 2023). Another study highlighted that while ChatGPT can assist in creative and essay writing, its use did not significantly improve essay quality compared to control groups (Bašić et al., 2023). Overall, these studies suggest a complex and nuanced view of ChatGPT's role in writing pedagogy, highlighting both its potential benefits and challenges.

As we navigate this new generative world in the Digital Age, this study seeks to uncover effective strategies for incorporating AI into writing instruction, balancing the benefits of technological advancement with the need to maintain core writing skills and academic integrity. Given the growing body of research on the use of generative AI tools like ChatGPT in writing pedagogy, it presents a compelling case for further exploration into their pedagogical applications (Hutson & Plate, 2023; Shidiq, 2023). This study aims to elucidate the specific use cases of integrating such generative writing tools, particularly focusing on the English composition classroom. By examining the integration of these tools in educational settings, the study seeks to uncover the nuances of how AI can complement and potentially transform traditional writing instruction methods.

The methods of the study involved a detailed examination of student interactions with AI writing tools, their impact on writing processes, and the subsequent effects on student learning outcomes. Through surveys, analysis of writing artifacts, and pedagogical evaluations, the study provides a comprehensive view of the role of AI in writing pedagogy. The results indicate a complex interplay between AI tools and traditional writing instruction, revealing both the potential advantages and limitations of AI in enhancing writing skills. These findings are crucial for educators and curriculum designers in understanding how to effectively integrate AI tools in writing courses, balancing technological innovation with essential writing competencies. The study's insights contribute to the evolving landscape of writing pedagogy, offering guidance on leveraging AI tools to enrich the English composition classroom experience while maintaining academic integrity and fostering critical writing skills.

2. Literature Review

The current state of scholarship on the impact of AI on writing pedagogy highlights the growing influence of digital technologies on educational practices. Research indicates that digital writing syllabi often align with pedagogical scholarship in practices like direct instruction and critical analysis, although some divergence exists in reflective pedagogy (Hamilton, 2019). This suggests that while digital tools are increasingly integrated into writing instruction, they also necessitate a reevaluation of traditional teaching methods. At the same time, AI technologies in writing instruction and assessment are reshaping material-discursive relations of difference, impacting teaching and learning with racializing assemblages (Dixon-Román et al., 2020). The use of these new tools underscores the need for educators to consider the broader social and ethical implications of implementing AI in educational settings. Additionally, AI in education has been noted to improve administrative functions, curriculum personalization, and overall learning quality, signifying a shift toward more individualized and efficient educational practices (Chen et al., 2020).

Studies specifically on using AI to teach writing, however, have been limited to areas outside of the composition classroom. For instance, research by Tang (2021) has investigated the growing popularity of AI-based writing algorithms in business writing practices. The study explores the integration and impact of these tools, emphasizing their strengths and potential drawbacks. It provides an empirical basis for understanding how AI is reshaping professional writing practices and what this means for the future of writing education. Previous applications of AI in higher education, on the other hand, including profiling, prediction, assessment, and adaptive systems, are gaining traction, but the involvement of educators in these developments remains crucial (Hutson et al., 2022; Zawacki-Richter et al., 2019). The potential impact of AI on learning, teaching, and education, Tuomi (2022) previously noted, necessitates policy-oriented work, research, and forward-looking activities to address both opportunities and challenges. Moreover, the impact on writing pedagogy is influenced by learning management systems (LMS) and academic analytics, affecting how computers and composition scholars consider writing instruction and assessment (Duin & Tham, 2020). These developments highlight the intersection of technology and pedagogy, calling for a nuanced understanding of how AI tools can be effectively integrated into writing instruction while considering their broader educational implications.

These previous studies were, however, pre-generative AI. The research landscape since 2023 regarding the use of ChatGPT and other AI writing tools in English composition classrooms has been dynamic and insightful. Whereas previous uses of AI were generally confined to a select group of staff within organizations that operated student information systems and LMS, the use of these new generative tools has democratized their access and has seen a proliferation across all areas of academia from faculty, staff, and, of course, students. As such, a notable trend is the growing effectiveness of these tools in enhancing student capabilities in reading, writing, and critical thinking. Alharbi (2023) highlights the categorization of AI-powered writing assistance tools into four main groups: automated writing evaluation tools, corrective feedback tools, machine translators, and GPT-3 automatic text generators. The research suggests that these tools can significantly improve students' writing skills by providing varied types of support tailored to learner needs. The study points toward the increasing sophistication of AI in providing personalized and effective writing assistance in foreign language classrooms. These findings are echoed in the study by Nazari et al. (2021), whose work delves into the application of AI-powered digital writing assistants in higher education, revealing improvements in student engagement, self-efficacy for writing, and emotional responses compared to non-equipped AI environments. This study points toward the multifaceted benefits of AI in fostering a more engaging and effective learning experience. Ali et al. (2023) and Purnama et al. (2023) highlight that ChatGPT motivates learners to develop their writing skills and improves student engagement in online writing courses. In a broader educational context, Zhao and Nazir (2022) discuss how AI-based applications are enhancing the educational system by promoting English language learning and inclusivity. Their work underscores the role of these new tools in creating multimode production and usage, which sustains the effectiveness of learning experiences, especially in the post-COVID-19 era where digital learning tools have become increasingly vital. The study supports previous research on the topic. For instance, a study by Mohamed Haggag (2021) indicates

that AI-powered tools can significantly improve reading and writing skills for TOEFL-ITP test-takers, suggesting their broader applicability in language learning and test preparation. This research underscores the potential of AI in enhancing students' language proficiency, providing a compelling case for the integration of such tools in academic environments.

However, this burgeoning field of research also surfaces critical concerns and nuances. While ChatGPT and other generative writing tools have been praised for their accurate and reliable inputs in areas like creative writing, essay writing, and prompt generation (Taecharungroj, 2023), there is a pressing need to address the authenticity of the content it generates. Studies by Haq et al. (2023) and Perkins (2023) indicate that while the content produced by ChatGPT is often believable, it may lack the completeness, credibility, and scientific rigor found in human-written compositions. Moreover, academic integrity concerns loom large, as the adoption of these tools in educational settings, especially in digital writing and composition, needs transparent guidelines and ethical considerations (Perkins & Roe, 2023). While ChatGPT shows potential in boosting student performance and aiding in various aspects of writing, educators have found themselves navigating a changing landscape to ensure that the use of AI complements rather than compromises academic integrity.

These studies reveal that while the use of ChatGPT and other AI writing tools in English composition classrooms has been explored in various studies since 2023, these investigations remain somewhat limited in scope and depth. The existing research provides valuable insights into the potential benefits and challenges of integrating AI into writing pedagogy, highlighting the need for further exploration in this area. Consequently, this study aims to address the gaps identified in the current literature by conducting a more comprehensive investigation into the use of AI writing tools in English composition teaching and offer actionable steps to integrate new strategies into writing pedagogy furthering work by McKnight (2021). In her pre-generative AI study, "Electric Sheep? Humans, Robots, Artificial Intelligence, and the Future of Writing," thought-provoking questions were raised about the future of writing education in an era where AI and humans coexist. Her research espoused a shift toward a posthuman perspective, with humans needing less input in the writing process due to the advancement of AI language models. The hypothetical future is upon us and educators can no longer ignore these new tools in writing instruction. Therefore, by delving deeper into the practical applications, ethical considerations, and pedagogical outcomes of these tools, this study seeks to contribute a more nuanced understanding of their role and efficacy in enhancing writing instruction in educational settings.

3. Methodology

This study utilizes a mixed-methods research design to investigate the use of AI writing tools in English composition classrooms comprehensively. The qualitative component includes detailed analysis of student writing artifacts and interviews, while the quantitative component comprises surveys designed to capture a broad spectrum of student perceptions and experiences. The combination of these methods aims to provide a holistic view of the impact of AI tools on writing pedagogy.

The study involved 28 students from three different English composition courses, one English Composition I and two English Composition II courses. The participants were selected based on their enrollment in these courses during the study period, ensuring

a varied range of experiences and perspectives on the use of AI in their writing process.

Surveys were administered at the beginning and end of the courses to gauge students' initial perceptions and track changes over time. The survey consisted of both closed-ended questions for quantitative analysis and open-ended questions for qualitative insights. Questions were designed to capture students' attitudes toward AI writing tools, their experiences using these tools, and their perceptions of the impact on their writing skills and processes.

Before delving into the specific questions about the use of AI in the writing process, the survey gathered essential demographic information from the participants. This included age, gender, ethnicity, major, and first-generation status, among other factors. Collecting such data provides a context for understanding the diverse backgrounds and perspectives that might influence student experience and attitude toward AI in their coursework.

The following questions were then posed to gather insights specifically about student interactions with AI in their writing process:

1. Did you like the AI generator essay exercises being part of the writing process in class?
2. How willing were you to experiment with AI during your writing process?
3. How challenging did you find working with AI to be in the writing process?
4. At what stage of the writing process do you naturally think to use AI for? (Select all that apply)
5. How do you perceive AI in the writing process: as a collaborative tool or do you feel alienated from the writing process?
6. What types of interaction do you desire from an AI writing assistant?
7. Do you prefer AI to be self-reflective or to offer advice during the writing process? In other words, do you want it to help you reflect on your own writing or suggest ways to make it better?
8. For the final paper, did you choose to utilize AI in the writing of it?
9. Why or why not?
10. Please provide any further insight into your experience and the usefulness of AI essay generators for college composition classes.

These questions were designed to explore various aspects of AI use in the writing process, from general attitudes and willingness to experiment with the technology to perceptions of its challenges and benefits. By addressing specific stages of the writing process and the desired types of interaction with AI tools, the survey aimed to capture a comprehensive view of how students integrate AI into their academic work and their overall satisfaction with the experience. The responses provide valuable insights into the effectiveness and impact of AI writing tools in enhancing the educational experience in composition classes.

Writing artifacts, including both rough drafts and final drafts of paper assignments, were systematically collected throughout the course. The collection process was standardized to ensure consistency. The analysis involved both qualitative and quantitative methods. Qualitatively, the study examined changes in writing style, coherence, and originality. Quantitatively, it assessed aspects such as the frequency and type of AI tool usage, improvements in grades or writing quality, and other measurable changes.

An honors student developed a best practices guide focusing on the pedagogical integration of AI tools in writing instruction. The development process involved a literature review, consultation with educators experienced in AI, and trial and error in applying various strategies in real classroom settings. The content of the

guide includes strategies for effectively combining traditional writing instruction with AI tools, ethical considerations, and tips for maintaining academic integrity.

In-depth interviews with selected participants were conducted to gain deeper insights into their experiences and opinions about using AI in writing. The interview questions were semi-structured, allowing for flexibility in responses while ensuring that all relevant topics were covered. The interviews provided valuable context to the quantitative data collected and helped identify themes and patterns not apparent in the survey or artifact analysis.

Quantitative data from the surveys were analyzed using statistical methods appropriate for the type of data collected. Qualitative data from open-ended survey responses, writing artifacts, and interviews were analyzed using thematic analysis to identify common themes and patterns. The results from both qualitative and quantitative analyses were then triangulated to provide a comprehensive understanding of the impact of AI on writing pedagogy.

By employing these detailed methods, the study aims to offer a well-rounded perspective on the use of AI writing tools in English composition classrooms, contributing valuable insights and strategies for the effective integration of technology in education. This approach enhances the replicability of the study and provides a solid foundation for future research in this area.

4. Results

4.1. Demographics

The demographic analysis of the participants revealed a diverse group in terms of academic standing, age, gender identity, ethnicity, and educational background. The cohort predominantly consisted of First-Year students, comprising 63.33% ($n = 17$) of the respondents, followed by Sophomores at 23.33% ($n = 7$), and Juniors at 13.33% ($n = 4$). There were no participants from Senior year or other categories (Figure 1). In terms of age demographics, the vast majority of participants fell into the 18–24 age group, accounting for 96.43% ($n = 27$) of the sample. Only one participant (3.57%) was in the 35–44 age bracket, with no participants in the other age categories. Gender identity among the participants was predominantly Male (60.71%, $n = 17$), with Female participants

Figure 1
Cohort-level status

making up 35.71% ($n = 10$) of the cohort. Only one participant (3.57%) preferred not to specify their gender identity.

Ethnicity data showed that a significant majority of the students were not Hispanic/LatinX (96.43%, $n = 27$), with only one participant (3.57%) identifying as Hispanic/LatinX. When asked about race/ethnic heritage, most identified as White/Caucasian (66.67%, $n = 20$), followed by American Indian or Alaskan Native (13.33%, $n = 4$), Asian (10%, $n = 3$), Black or African-American (6.67%, $n = 2$), and Native Hawaiian or Pacific Islander (3.33%, $n = 1$). Regarding their status as international students, the majority were not international students (82.14%, $n = 23$), while a minority were (17.86%, $n = 5$). As for their role as student-athletes, 60.71% ($n = 17$) were not student-athletes, whereas 39.29% ($n = 11$) were. In terms of family education background, the highest level of immediate family education attained varied, with 35.71% ($n = 10$) having family members with a Master's degree and 25% ($n = 7$) with some college credits but no degree. Additionally, 75% ($n = 21$) of the participants were residential students living on campus, and the predominant mode of class attendance was face-to-face (81.48%, $n = 22$).

4.2. Perceptions of use of AI

The survey responses revealed significant insights into students' perceptions and experiences with AI in the writing process within the classroom. A substantial majority of the students, 79% ($n = 22$), expressed that they liked having AI generator essay exercises as part of the writing process in class (Figure 2). This positive response suggests a general receptiveness and interest among students in integrating AI tools into their learning experience. The remaining 21% ($n = 6$) were uncertain, marked by their response "Maybe," indicating a degree of ambivalence or curiosity about the role of AI in their writing practice.

When asked about their willingness to experiment with AI during their writing process, a significant portion, 62.07% ($n = 17$), indicated they were "Very Willing" to engage with AI tools (Figure 3). An additional 27.59% ($n = 8$) reported being "Somewhat Willing," suggesting a general openness among the majority of students to incorporate AI into their writing routines. Only a small fraction, 6.9% ($n = 2$), were "Somewhat Unwilling."

However, in terms of the challenges faced while working with AI in the writing process, the responses were more varied (Figure 4). A group of students, 41% ($n = 11$), found it "Somewhat easy," while 34% ($n = 10$) considered it "Neither easy nor difficult," reflecting a range of experiences in adapting to AI tools. Interestingly, 14% ($n = 4$) found it "Extremely easy," suggesting that for some, AI tools were intuitive and user-friendly. However, 11% ($n = 3$) did find it "Somewhat difficult," indicating that challenges and learning curves were present for a minority of the cohort. In all, these results indicate a predominantly positive reception of AI tools in the English composition classroom, with a majority of students showing willingness and interest in integrating AI into their writing process. However, the variation in the perceived challenge of using AI highlights the need for tailored approaches to support all students effectively.

4.3. Perceptions of AI in the writing process

The survey responses provided further insights into how students perceive and utilize AI during various stages of the writing process. Students reported using AI at different stages of the writing process. The most common stage was during Drafting, with 28.57% ($n = 14$) of students utilizing AI for this purpose
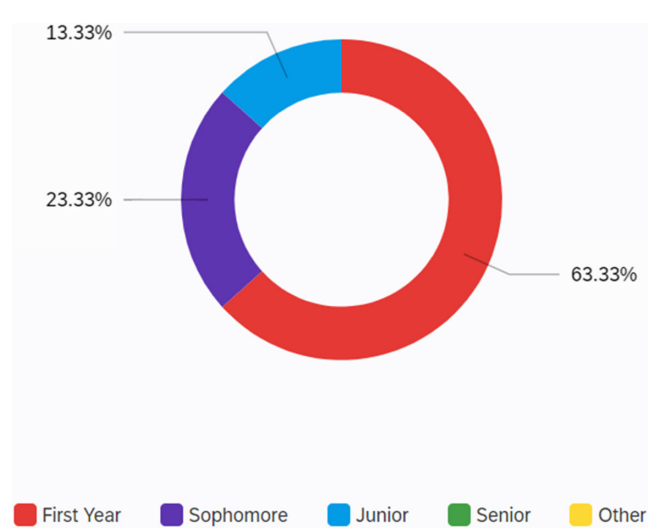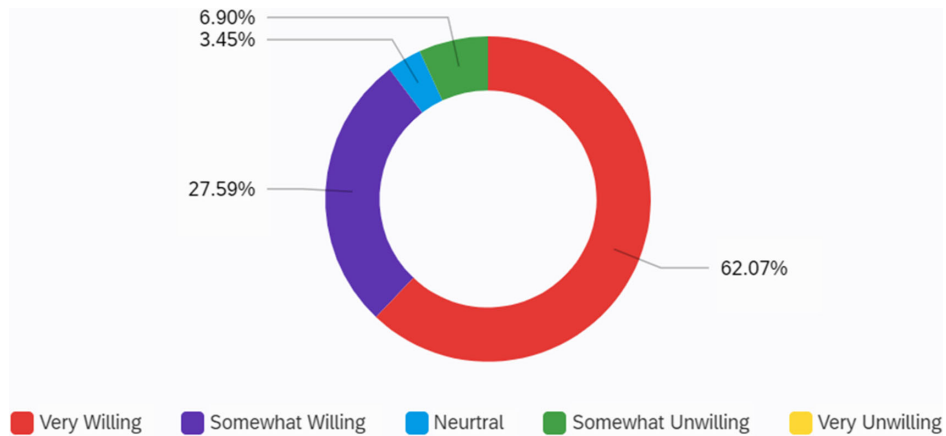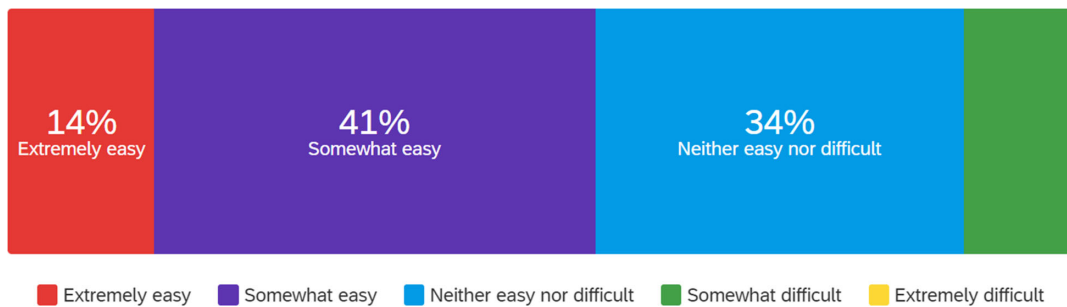
Figure 2
Perceptions of AI in class assignments
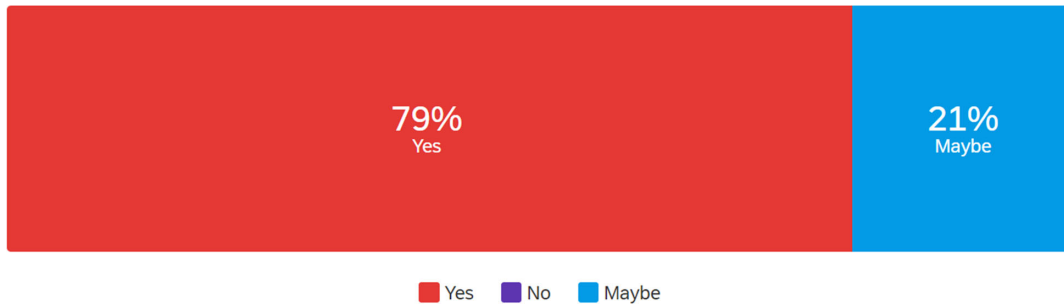
Figure 3
Willingness to experiment with AI

Figure 4
Perceived ease of use of AI in writing process

(Figure 5). This was closely followed by Brainstorming and Outlining, each cited by 24.49% ($n = 11$) of respondents. Editing was mentioned by 16.33% ($n = 7$), and a smaller number, 6.12% ($n = 3$), used AI for Finalizing their work. This distribution suggests that students find AI tools particularly useful in the initial and middle phases of writing, such as developing ideas and structuring their work.
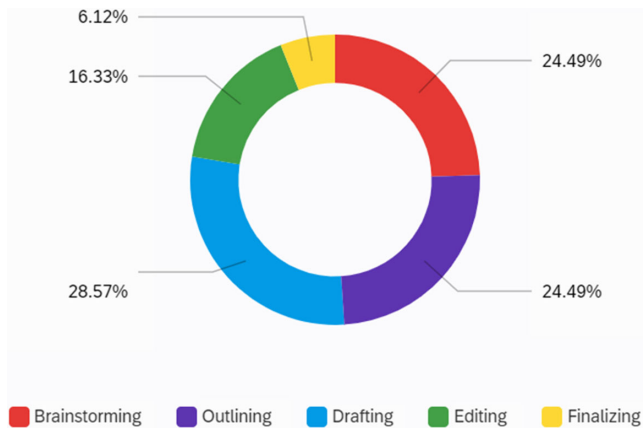
When asked about their perception of AI in the writing process, a significant number of students viewed AI as a collaborative tool (Figure 6). Specifically, 41% ($n = 12$) felt that AI was "Somewhat Integrated" into their writing process, while 21% ($n = 5$) described it as "Highly Integrated." However, 31% ($n = 9$) remained Neutral, and a small fraction felt alienated by AI, with 7% ($n = 1$) each for "Somewhat Alienated" and "Highly Alienated." This indicates a generally positive perception of AI as a helpful tool in the writing process, though not without some reservations.

Students showed diverse preferences for the types of interactions they desire from AI writing assistants. The majority,

Figure 5
Use of AI during writing process

other types of interaction (14.29%, $n = 4$), Syntax Suggestions (10.71%, $n = 3$), and Grammar Correction (7.14%, $n = 2$). These responses highlight a desire for these tools that offer more than just mechanical corrections, leaning toward creative and content-related assistance. Likewise, in terms of the role played by these generative tools, a large majority, 78.57% ($n = 22$), preferred a mix of both self-reflective capabilities and advice-giving during the writing process. This indicates a desire for AI tools that not only offer practical suggestions for improvement but also help students reflect on their writing. Only 14.29% ($n = 4$) preferred AI to exclusively offer advice, and a minority of 7.14% ($n = 2$) preferred AI to be self-reflective.

Regarding the final paper, a significant majority of the students, 71.43% ($n = 20$), chose to utilize AI in writing it, while 28.57% ($n = 8$) did not. This usage rate suggests a high level of acceptance and integration of AI tools in the completion of significant academic tasks. In order to determine why they did or did not use said tools for the final paper, an open-ended question followed. The sentiment analysis of these responses reveals a diverse range of opinions and experiences. A notable number of students expressed positive sentiments, highlighting the utility of the tools in facilitating various aspects of the writing process. For instance, one student appreciated the initial structure it provided:
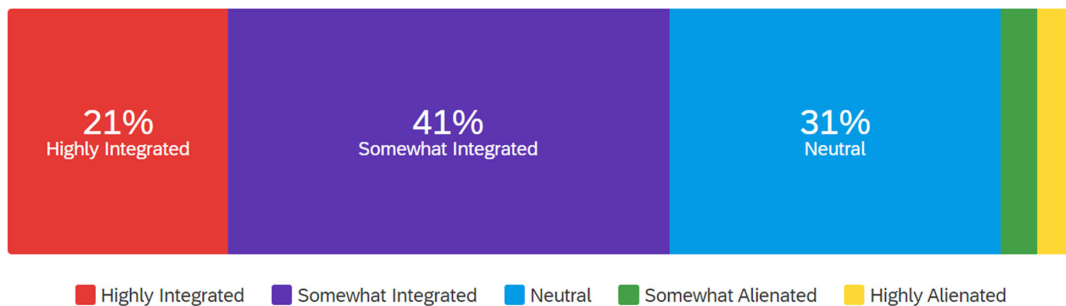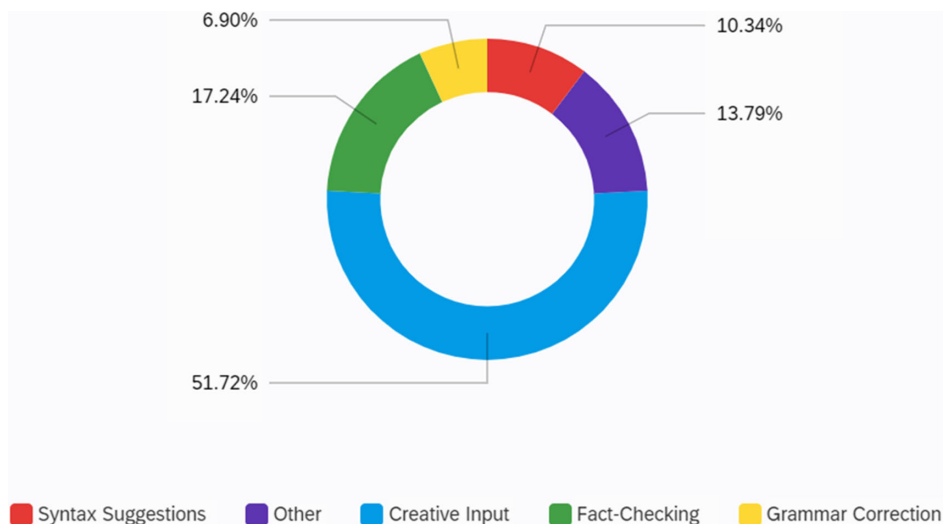
50% ($n = 14$), desired Creative Input from AI, indicating a preference for AI assistance in generating ideas or content (Figure 7). This was followed by Fact-Checking (17.86%, $n = 5$),

Figure 6
Perception of AI integration in writing process

Figure 7
Desired interaction with AI during writing process

"I like using AI as a way for me to see an outline and then I am able to build on that outline myself and fine tune it to suit my ideas." The sentiment was echoed by others who found AI particularly helpful in overcoming challenges in starting and organizing their papers. Use was also credited for enhancing enjoyment and interest in writing, with one student stating, "I was interested in what it was going to be like being given the option to use AI and I thoroughly enjoyed it, it actually made me enjoy English as I have never been a big fan but this changed that."

Conversely, some students expressed neutral to mixed feelings about using AI. While they acknowledged the benefits of AI in assisting with brainstorming and structuring, they still preferred a more personal touch in their writing. A student captured this sentiment by saying, "I think overall I still like doing the paper by myself more." This perspective suggests a preference for individual effort and a desire to maintain a personal connection with their work.

Negative sentiments were also present, primarily centered around concerns regarding authenticity, personal relevance, and the depth of AI-generated content. Some students felt that relying on AI might reduce the effort and authenticity of their work, as one mentioned, "Because it feels like I put no effort into it." Others were wary of AI's ability to convey personal experiences or emotional depth, with a student expressing, "I did not because I felt that AI could not portray the emotional message I was trying to make." Many of the same sentiments resurfaced in the last open-ended question.

The final question of the survey asked students to "provide any further insight into your experience and the usefulness of AI essay generators for college composition classes." The sentiment analysis of these responses once again reveals a range of attitudes and insights. For instance, several students expressed a positive outlook on the use of AI, appreciating its ability to enhance the writing process. One student highlighted the tool's capacity for idea generation: "It greatly sped up the writing process . . . it comes up with ideas my mind just hadn't gotten to yet." This sentiment of AI as a facilitator in the creative process was echoed by others, with one noting the AI's utility in helping transition from just passing grades to potentially achieving A's. The flexibility and variety of AI tools were also appreciated, as one student mentioned liking "being able to test and experiment with various AI models."

However, the responses were not uniformly positive. Some students offered more nuanced views, acknowledging both the advantages and disadvantages of AI. For example, one student candidly stated, "I didn't hate it. It has its advantages and disadvantages," suggesting a balanced perspective. Another student reflected on their journey of integrating AI into their work, "I later got more used to integrating it rather than exploiting it so it felt like it was actually my own work and thoughts," indicating a shift from mere reliance to a more thoughtful application of AI. There were also insights into how students perceive the role of AI in their learning process. Some saw AI as a valuable tool for struggling students or for learning basic writing principles, while others viewed it as a temporary aid rather than a permanent solution. One student remarked, "I think it's a fine tool to learn how to use . . . I don't think it should be required."

Overall, the responses from students about using AI in their writing process are varied, showing that while many see its value, a significant number approach it with caution. This diversity in viewpoints highlights the importance of adopting a nuanced approach to incorporating AI in educational contexts. Such an approach should acknowledge the advantages of AI, particularly in providing creative and structural support in writing, while also addressing concerns related to authenticity and personal input in student work. The results reflect a general inclination among students to value AI for more than just grammatical assistance, seeing it as a tool that can enhance the overall quality and creativity of their writing. The widespread use of AI in crafting final papers underscores its perceived effectiveness and utility in academic writing, suggesting its growing significance in the educational landscape.

4.4. Analysis

The survey results from the study reveal several key themes and implications regarding student engagement with AI tools. The overwhelming majority of students reported positive engagement with AI essay generators, as indicated by their willingness to experiment with these tools and incorporate them into various stages of the writing process. The high percentage of students who found AI useful for drafting and brainstorming suggests that AI tools are particularly valued for their ability to facilitate the initiation and organization of ideas. This observation aligns with current pedagogical trends that emphasize the importance of scaffolding in writing instruction, where AI can play a supportive role. Along the same lines, students predominantly perceived AI as a collaborative tool in the writing process, viewing it as an integrated part of their writing strategy. This perception reflects a growing trend in educational technology where digital tools are seen as partners in learning rather than mere aids. The ability of AI to provide creative input and assist in brainstorming and drafting resonates with the students' need for dynamic support in their writing journey.

Despite the overall positive reception, the study also uncovered concerns about the authenticity and personal relevance of AI-generated content. A small yet significant number of students expressed reservations about over-reliance on AI, fearing it might diminish their personal effort and creative input. This concern highlights the need for a balanced approach in integrating AI into writing pedagogy, one that leverages its capabilities while fostering students' individual writing skills and creativity. The diverse ways in which students utilized AI tools, ranging from brainstorming to editing and finalizing, indicate the versatility of these tools in catering to different aspects of the writing process. This versatility suggests that AI tools can be adapted to a wide range of writing tasks and styles, accommodating various learning preferences and needs. Finally, several students reported improvements in their writing skills and overall performance in English composition classes, attributed to their use of AI tools. This finding suggests that AI can act as a catalyst in enhancing students' writing abilities, particularly for those who traditionally struggled with writing tasks. However, the extent to which these improvements can be solely attributed to AI use remains an area for further investigation.

One element that is crucial to discuss and had an impact on student perceptions of AI use in the writing process involves ethics. Given the predominantly negative academic narrative surrounding AI tools, there were several students who refused to participate and dropped the class due to the requirements. A review of the ethical considerations of academic integrity need to be considered here briefly before continuing with the instructor and student observations, especially considering the changes in content generation made possible by generative technologies. Several models have previously been proposed, such as Ashford (2021), who introduced the Academic Integrity Model (AIM), combining behavioral ethics and hybrid app-human agency to foster socio-techno responsibility among app-centric students. This model emphasizes the importance of developing ethical responsibility in students as they interact with AI and other digital tools in academic settings (Ashford, 2021). Likewise, Wong et al. (2018) also explored the use of mobile augmented reality trails on

university campuses to engage students in learning about academic integrity and ethics. Their findings suggest that such innovative approaches can effectively change student perspectives on ethical dilemmas and promote a deeper understanding of academic integrity.

The volume "Ethics and integrity in education and research" coordinated by Sanud and Popoveniuc (2019), as reviewed by Amanoloae (2020), serves as a comprehensive resource for stimulating rigorous debates on research ethics in academia. This work highlights the continuous need for critical discussion and ethical guidance in educational research and practice. On the other hand, Zawacki-Richter et al. (2019) call for more critical reflection on the challenges, risks, and ethical approaches to AI in higher education. Their systematic review underscores the need for a deeper understanding of AI applications' ethical implications in the educational landscape. Bozkurt et al. (2021) reflect on the revolutionary changes AI has brought to education, including personalization and online learning. However, they emphasize that ethics remains an understudied area, urging for more research and guidelines to ensure ethical use of AI in educational settings. Holmes et al. (2022) advocate for a community-wide framework for ethics in AI in education, combining multidisciplinary approaches and robust guidelines. This framework aims to address the complex ethical issues arising from AI use in education and ensure responsible student learning.

The ethical considerations surrounding the use of AI in education, particularly in writing instruction, have become increasingly prominent with the advent of new generative technologies. While previous models and studies, such as the AIM by Ashford (2021) and the augmented reality trails researched by Wong et al. (2018), provide a foundation for understanding the ethical implications of AI, the emergence of new generative forms of AI necessitates a reevaluation and expansion of these ethical frameworks. These advanced AI tools offer unprecedented capabilities in content generation, making it imperative to address the unique ethical challenges they present.

It is crucial to clarify that in this study, students were not using AI tools unsupervised or attempting to pass off AI-generated content as their own work. Instead, the study emphasized the importance of students' active role in the writing process, using AI as a tool to aid and enhance their writing rather than replace it. This distinction is essential in mitigating ethical concerns, as the responsible use of AI involves recognizing and crediting AI's contribution to the creative process. However, ethical violations can arise when the use of AI is not properly addressed or is outright banned. Such prohibitive measures may become increasingly untenable given the pervasive integration of AI into various forms of content creation and word processing tools. To navigate these ethical waters effectively, educators and institutions must develop clear guidelines that articulate the student's role in using AI, emphasizing collaboration, supervision, and transparency. By fostering an environment of ethical awareness and responsibility, students can learn to harness the power of AI in their writing while upholding the values of academic integrity and intellectual honesty. As AI continues to evolve, so too must our ethical frameworks and educational practices to ensure that they remain relevant and effective in guiding students through the complex landscape of digital learning and content creation.

4.5. Instructor and student observations

The instructor of record, along with a collaborating honors student, provided valuable insights into the use of AI in writing assignments. They observed that while all students initially experimented with AI, most of them gradually increased their reliance on it, with some papers being roughly 90% AI-generated. The honors student, in developing a best practices document, focused on guiding students on what not to do with AI, addressing concerns about over-reliance and loss of originality. A noteworthy observation was about a student who initially struggled with lower grades. After consultation and guidance on effectively using AI, this student's performance improved significantly, suggesting the potential of AI as a tool for academic enhancement when used appropriately.

A common sentiment among students was discomfort with the idea of AI taking over their writing, leading to feelings of lack of ownership and agency over their work. This concern about control was evident in their reluctance to fully embrace AI initially. Despite this initial discomfort, the survey results indicated a shift in perception, with most students expressing a liking for AI by the end of the course. Regarding the tools used, all students utilized ChatGPT 3.5, with some experimenting with Claude. However, some students faced limitations with Claude, such as running out of responses. The financial aspect also played a role, with students showing reluctance to pay for AI services given their initial apprehensions.

Over the course of the term, students' use of AI became more frequent and serious. Initially, there was anxiety about the effectiveness of AI, especially among Creative Writing students who remained anxious throughout. In contrast, Composition students were more practical in their approach. Most students preferred using AI for drafting, citing its efficiency in generating language and helping overcome the mundane aspects of writing an essay. However, they found it less effective for targeted editing and finalizing, as AI tended to rewrite rather than make precise edits. On the other hand, integrating AI into the writing process was a nuanced experience for students. Some felt disconnected, as though the words were not entirely their own. Others used AI as a tool for editing and developing ideas, maintaining a sense of ownership by being actively involved in the ideation process. This approach was likened to group work, where students felt it was essential to contribute to the idea generation to feel a sense of ownership over the final output.

These observations underscore the complexity of integrating AI into writing pedagogy. While AI can be a powerful tool for enhancing writing skills and efficiency, its use needs to be balanced with maintaining students' sense of ownership and originality in their work. The evolution of students' attitudes toward AI – from initial discomfort to eventual acceptance – reflects the potential for AI to become an integral part of the writing process, provided it is used as a collaborative tool rather than a replacement for student effort and creativity. The instructor and honors student's insights highlight the importance of guiding students in responsible and effective AI use, ensuring that AI serves as an aid to their writing process rather than undermining their development as independent and critical thinkers.

5. Recommendations

5.1. Adopting a hybrid instructional approach

The study underscores the importance of a hybrid instructional model in English composition courses, blending traditional writing methods with AI tools. This approach should aim to develop the creative and analytical skills of students in tandem. Instructors may consider guiding students in using AI as an adjunct to their writing, especially during brainstorming and drafting phases. This

integration is crucial for leveraging the strengths of the tool in idea generation and language production while maintaining the rigor of traditional writing techniques. At the same time, it is essential for educators to instill a culture of critical engagement with AI-generated content among students. This involves training students not just to edit AI contributions for grammatical accuracy and stylistic coherence but also to evaluate the relevance and validity of the information provided by AI. Such critical engagement is vital for students to retain ownership of their work and to hone their evaluative and analytical skills.

Given the diverse levels of familiarity and proficiency with AI tools among students, comprehensive training on effective AI usage is vital. This training should encompass the technical aspects of navigating AI tools and the ethical implications, including avoiding plagiarism and upholding academic honesty. Instructors should motivate students to explore the creative potential of AI in their writing. This could involve assignments where students are tasked with rewriting their work in various rhetorical styles or employing AI for imaginative idea development. These activities not only make writing assignments more engaging but also demonstrate the enriching capacity of AI in creative endeavors.

In order to assist others in adopting AI tools for writing instruction, it is useful to provide examples of assignments that have been used successfully in first-year English composition classes. These assignments are designed to integrate AI into different stages of the writing process, helping students to understand and leverage the capabilities of AI tools while developing their writing skills. Here are some examples of standard assignments that can be adapted to include AI integration:

5.1.1. AI-Assisted topic selection and brainstorming

An initial assignment might involve students using AI tools like ChatGPT to brainstorm and select topics for their essays. Students can input their interests or general ideas into the AI tool, which then generates a list of potential essay topics or questions. Students can then refine these suggestions into a specific topic for their essay. This assignment helps students leverage AI for creative brainstorming and topic selection, a crucial first step in the essay writing process.

5.1.2. Developing outlines with AI

Once a topic is selected, students can use AI to help develop an outline for their essay. They can ask the AI tool to provide a basic structure for their selected topic, including potential thesis statements, main arguments, and supporting points. Students can then expand on this outline, adding their own ideas and research. This assignment helps students understand how to use AI to create a structured approach to their writing, ensuring that all necessary elements are included.

5.1.3. AI-Generated drafts and student revision

In this assignment, students can input their outlines into an AI tool, which then generates a rough draft of the essay. Students are then tasked with revising and improving this draft, adding their own analysis, examples, and personal voice. This process allows students to see how AI can aid in generating content but also emphasizes the importance of their own critical thinking and writing skills in producing a final, polished essay.

5.1.4. Peer review with AI insights

Students can use AI tools to provide initial feedback on their peers' drafts. By inputting their classmate's essay into the AI tool, they can receive suggestions on grammar, style, and content.

Students can then use this AI-generated feedback as a starting point for their own peer reviews, adding their own insights and suggestions. This assignment helps students understand how to critically evaluate writing and provides an opportunity for them to learn from both AI and human feedback.

5.1.5. Reflective essay on AI use

As a meta-cognitive activity, students can write a reflective essay on their experience using AI in their writing process. They can discuss how they used the AI tool, what they learned from the experience, and how they see AI tools influencing their future writing. This assignment encourages students to critically reflect on the role of technology in writing and education more broadly.

These assignments provide a structured way for students to interact with and learn from AI tools throughout the writing process. By integrating AI into different stages of essay writing, from brainstorming to revision, students can gain a deeper understanding of both the capabilities and limitations of AI, and how to best leverage this technology to improve their writing skills.

As AI technologies continue to advance, the curriculum should evolve accordingly. Educators must stay abreast of the latest AI developments and adapt their teaching strategies to include updated best practices and guidelines for AI use in writing assignments. Finally, educators must be conscious of the digital divide and strive to ensure equitable access to AI tools for all students. This might entail offering alternative resources or support for students who lack access to premium AI services, ensuring that no student is disadvantaged in their learning experience due to technological or financial constraints.

5.2. Best practices resource

As part of the study, an honors student developed a Best Practices document (Table 1), emphasizing the importance of editing AI-generated content. This practice helps students feel a sense of ownership over their work. The document also highlighted the preference for AI tools that provide creative input, serving as a catalyst for idea generation rather than just focusing on syntax and grammar corrections. These practices, developed by and for students, can be integrated into the curriculum to guide students in effectively and ethically using AI in their writing process.

An exceptionally effective application of ChatGPT is in crafting structured essay outlines. These outlines, tailored to specific essay genres such as persuasive or argumentative, provide students with a robust framework for their writing. This structured approach is instrumental in ensuring that all essential elements of the essay are methodically addressed. By leveraging the generative writing tool to lay out a clear structural blueprint, students can navigate the complexities of their essays with greater ease and precision. This methodical planning stage is critical in shaping an essay that is not only well-organized but also comprehensive in covering the necessary points.

Beginning the writing process with concrete sources marks another strategic use of ChatGPT. By feeding the AI tool with substantiated materials like scholarly articles or literary excerpts, students anchor their essays in factual and credible content. This tactic significantly diminishes the AI's tendency to generate fictitious quotations, thus upholding the essay's academic integrity. The infusion of factual sources into the AI-generated content ensures that the essay remains grounded in reality, enhancing both its credibility and scholarly value.

Table 1
Best practices for using ChatGPT for English composition

Best practices for writing full essays with ChatGPT		
Best practices	Description	Purpose
Ask questions	Interact with ChatGPT about your topic, make it relate topics, use as a brainstorming tool	To generate ideas and develop a clearer direction for the essay
Create an outline	Request ChatGPT to draft an outline for specific essay types and include desired information	Provides a structured approach and a clear direction for the essay
Start with a source	Input material and ask ChatGPT to create an essay based on it	Utilizes concrete ideas to pull quotes and information, enhancing authenticity
Analyze media	Instruct ChatGPT to analyze specific media, generating paragraphs that can be used as essay body	Helps add depth and developed ideas to the essay
Editing and personalization	Ask ChatGPT to edit out unfamiliar styles or change the tone to match personal writing style	Makes the AI-generated content align more closely with the student's own writing style
Warnings about writing full essays with ChatGPT		
Warning	Reason	
Avoid general instructions	Generic prompts lead to unimpressive and superficial responses	
Be specific with quotes	Vague instructions may result in AI fabricating quotes, raising ethical concerns	
Always read responses	Prevents repetitive and fluffy content in the essay	
Mandatory editing	Ensures the essay transcends mainstream thoughts and truly reflects personal ideas	
Personalizing AI-written essays		
Technique	Implementation	Effect
Edit unfamiliar parts	Remove or alter parts like metaphors or semicolons that are not typically used	Maintains consistency with personal writing style
Change tone or perspective	Adjust the tone to be conversational or switch to first person, as needed	Personalizes the essay to reflect individual expression
Match personal tone	Provide a personal passage and ask AI to match its tone in the essay	Aligns AI-generated content with the student's unique voice

The utility of the tool in producing detailed and content-rich paragraphs, especially for the body of the essay, cannot be overstated. Instructing the AI to analyze specific media or sources results in paragraphs that are not only well-crafted but also rich in analysis. This feature becomes particularly beneficial when constructing the core sections of the essay, where depth of content and thoroughness of analysis are paramount. By utilizing the LLM for this purpose, students can add substantial substance and complexity to their essays, elevating the quality of their arguments and discussions.

Addressing the sense of alienation and lack of personal agency in writing is crucial in the effective use of ChatGPT. To mitigate these concerns, personalizing the AI-generated content is paramount. This involves adapting the AI's output to align with the student's distinctive writing style, be it through tonal adjustments or stylistic alterations. Editing out elements that are not characteristic of the student's writing or adjusting the AI's tone to mirror personal preferences are key strategies in this personalization process. Such customization not only ensures that the final essay resonates with the student's unique voice but also maintains a sense of ownership and individuality in their work.

However, it is critical for students to avoid excessive reliance on LLMs for their essay writing. General instructions to the AI often lead to generic and shallow responses, and there is a potential risk of AI-generated fictitious quotations, which raises ethical and academic concerns. Therefore, students must engage critically with the responses of the tool, rigorously editing and refining them to ensure the final essay transcends mere regurgitation of common thoughts and truly reflects their insights and creativity. The outline method, which involves creating a thesis, drafting an outline with the help of ChatGPT, and then elaborating on the essay with additional AI tools, stands out as a recommended approach. This method not only facilitates the development of well-structured and cohesive essays but also allows students to imbue their personal insights and creativity into their work.

The integration of AI tools like ChatGPT into English composition courses presents a range of practical implications for education and English language teaching, necessitating expanded discussion and more detailed recommendations for educators and policymakers.

One of the primary implications is the potential transformation of traditional pedagogical approaches. AI tools offer innovative ways to engage students in the writing process, from initial brainstorming to final editing. Educators should consider how to systematically incorporate these tools into their curriculum, such as through specific assignments or modules focused on AI literacy. However, this integration must be done thoughtfully to ensure that AI supports and enhances learning outcomes rather than undermining the development of critical thinking and writing skills.

The ethical use of AI in education is another critical area of concern. As AI becomes more prevalent, educators need to instill a sense of ethical responsibility in students. This includes

understanding the limitations of AI, recognizing the importance of original thought and effort in academic work, and ensuring academic integrity. Developing clear guidelines and ethical frameworks for using AI in academic settings is essential. Educators should also encourage students to critically engage with AI-generated content, teaching them to discern the quality and relevance of the information provided by AI tools.

Professional development for educators is crucial in realizing the benefits of AI in education. Training programs should be provided to help educators become proficient in using AI tools, understand their pedagogical applications, and stay informed about the latest developments and ethical considerations in AI. Encouraging a community of practice among educators can also facilitate the sharing of experiences, strategies, and best practices for integrating AI into teaching.

From a policy and infrastructure standpoint, ensuring equitable access to AI tools is paramount. Policymakers need to ensure that all students and educators have access to the necessary technology and training, regardless of their socioeconomic background. This might involve investing in digital infrastructure, providing subsidies or grants for purchasing AI tools, and ensuring that training programs are accessible to all educators. Moreover, as AI continues to evolve, ongoing research and monitoring are necessary to understand its long-term impacts on education and to continually update policies and teaching strategies accordingly. This includes examining how AI affects student learning outcomes, teacher–student interactions, and the overall educational experience. Policymakers should consider these factors when developing regulations and guidelines for AI use in education.

These recommendations offer a comprehensive framework for leveraging ChatGPT as an invaluable ally in the essay writing process. By engaging constructively with the AI tool, structuring essays through well-crafted outlines, initiating the writing process with factual sources, and personalizing the AI-generated content, students can harness the capabilities of ChatGPT while ensuring the authenticity and academic integrity of their work. Balancing AI assistance with creative input is imperative, enabling students to use ChatGPT not as a substitute for their efforts but as a powerful tool augmenting their academic endeavors.

6. Conclusion

The exploration of generative AI in educational writing processes, particularly through tools like ChatGPT, represents a pivotal advancement in academic research and pedagogy. This study's findings confirm that the integration of AI in English composition courses is not merely a technological trend but a transformative shift challenging and reshaping traditional teaching methodologies. By embracing AI tools, educators are reevaluating and innovating upon conventional writing instruction methods, thereby enriching the educational landscape.

The role of LLMs such as ChatGPT in writing pedagogy has been underscored by this research, demonstrating their capacity to effectively engage and motivate learners in developing reading and writing skills. Yet, this study does not shy away from the contentious nature of AI-generated content, addressing the critical debates surrounding the authenticity and reliability of AI in educational contexts. It is precisely this contentious nature that makes the balanced and ethical integration of AI into educational settings both a challenge and a necessity. The need for nuanced strategies that harmoniously blend AI's innovative capabilities with the preservation of core writing skills and academic integrity is more pressing than ever.

This study makes a substantial contribution to the ongoing discourse in the field of English language education and AI use. It provides a comprehensive analysis of student interactions with AI writing tools and their impact on the writing process and learning outcomes. The insights gleaned from this research offer a valuable roadmap for educators and curriculum developers, suggesting methods for effectively integrating AI into writing courses to enhance learning experiences while maintaining academic rigor.

As we look to the future, the imperative for continued research and validation in this field remains. There is a wealth of specific use cases for AI tools like ChatGPT in educational settings that remain unexplored. Further examination of their impact on student writing proficiency and broader pedagogical applications is necessary. Additionally, staying attuned to the rapidly evolving AI technology landscape and its educational implications is crucial for ensuring that writing pedagogy remains relevant and responsive to the needs of students in the Digital Age.

As this study emphatically asserts, the transformative potential of generative AI in writing instructions demonstrable and calls for educators to embrace the challenges and opportunities presented by AI, using it as a powerful tool to enrich writing instruction and foster critical thinking and effective communication skills in students. By adopting a balanced approach that emphasizes both the innovative aspects of AI and the importance of maintaining academic integrity, educators can ensure the continued value and integrity of academic writing in an increasingly digital world. This study thus serves as a clarion call for proactive adaptation and thoughtful integration of AI in English language education, setting a precedent for future research and practice in the field.

Ethical Statement

This study does not contain any studies with human or animal subjects performed by any of the authors.

Conflicts of Interest

The authors declare that they have no conflicts of interest to this work.

Data Availability Statement

Data sharing is not applicable to this article as no new data were created or analyzed in this study.

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