A Study of English Major Students' Attitudes Towards GAI-Assisted Academic English Writing

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Abstract

Generative artificial intelligence (GAI) is increasingly influencing academic English writing in higher education. While existing studies mainly focus on general student populations, the English majors, a distinctive group of language learners, has been overlooked. Thus, this study investigates English majors' attitudes toward GAI-assisted academic English writing. Based on a questionnaire survey of 207 English majors, the study shows that most students hold generally positive yet cautious attitudes toward the use of GAI. They recognize its value in writing efficiency, language accuracy, structural organization, and feedback support. At the same time, they also show their concerns about academic integrity, originality and over-reliance. There are differences between different grades and English proficiency levels also shows differences in usage intention and emotional experience. Despite favorable evaluations, the overall frequency of GAI use remains moderate, indicating that its integration into academic English writing has not been normalized.

Index term—Generative Artificial Intelligence; Academic Writing; English Majors; Learner Attitudes; AI-assisted Writing.

1 Introduction

In recent years, more and more college students are used to using generative artificial intelligence (GAI) and have begun to use it in academic English writing. Traditional writing apps or software mainly focus on grammar correction. However, nowadays, generative artificial intelligence are capable of more functions. AI tools such as ChatGPT and DeepSeek help students generate ideas, organize arguments and refine language expressions during the academic writing process. Consequently, GAI is gradually working as a supportive tool in many higher education writing activities.

Academic research has increasingly discussed the role of GAI in students' writing practices. These studies show that GAI can help students write faster, correct grammar mistakes and support the organization of complicated academic ideas. Meanwhile, their widespread use has led to concerns and debates. A comprehensive review reports GAI's challenges and limitations. They can be divided into five aspects: ethics and safety, educational implementation, assessment and evaluation, equity and access, and quality control and expertise [3]. And there exists unclear authorship boundaries between GAI and the author. At the same time, a large number of researchers worry that too much use of GAI may weaken students' critical thinking. There concerns show that GAI is seen as double-edged sword. How to balance its benefits and risks has become an important issue in academic writing instruction.

As for research subjects, most current research focuses on general college students or pays attention to the teachers' perspective. But English majors are paid little attention. As a distinctive group, English majors receive systematic training in language, literature and culture. Their academic writing is closely tied to language itself. And their academic writing emphasizes originality and stylistic awareness. Therefore, the use of GAI in academic English writing is likely to influence not only efficiency but also professional identity and disciplinary development.

Based on the factors mentioned above, this study investigates English majors' attitudes toward GAI-assisted academic English writing. The research hopes to clarify the opportunities and challenges of integrating generative artificial intelligence into academic English writing instruction and to provide practical implications for its rational application.

2 Current Application Status of GAI in Academic English Writing

2.1 Application Scenarios in Academic Writing Practice

Generative artificial intelligence is becoming more popular in academic English writing. When students need to generate ideas, clarity arguments, refine language or revise drafts, they choose to ask GAI for help. GAI can give instant answers and suggest argumentative directions.

When facing different tasks, such as literature review, research proposals, or course papers, GAI tends to give diverse and multiple answers in the writing process. For example, at first, students may draw on it early to develop and clarify ideas. But later, their drafts need revising with its assistance to improve clarity and textual flow. What's more, for English majors in China, it is more difficult for them to write academic paper in one foreign language. Thus, GAI can provide feedback and lower linguistic barriers to make their academic genres more manageable.

The influence of GAI is not limited to individual writing activities. In some classrooms, teachers have begun incorporating AI-supported tools into teaching activities. GAI can create vivid pictures or videos to attract students' attention. Teachers often seem them as supplementary resources that require careful use. In this sense, GAI is gradually moving from a technological aid toward a more embedded element within contemporary academic writing practice.

2.2 Emerging Benefits in Writing Performance

Current studies show that GAI offers several notable advantages in academic English writing. It is acknowledged that GAI can accelerate brainstorming and expand ideas. Therefore it improve students' writing efficiency. Students can generate preliminary structures quickly and allocate more tome for revision and refinement.

GAI also improves the accuracy of language and the organization of structures. GAI's suggestions help students write texts that are grammatically correct and logically organized. This is especially helpful for writing in academic English, where clarity, cohesion, and a formal style are important.

When students critically look at AI-generated suggestions and make changes to their drafts based on what they learn, interactive exchanges with GAI may help them think more deeply. Moderate and guided use can thus serve as a form of cognitive support, aiding learners in enhancing arguments and elevating text quality.

2.3 Key Concerns and Challenges

Even though these are good things, the rise of GAI has made a lot of people worried. One big problem is being honest in school. It's hard to understand what originality and plagiarism meant in the past because it's not clear what the difference is between content made by people and content made by AI.

Another thing that worries people is relying too much on something. If students depend too much on AI-generated suggestions, they may not be able to write on their own as well. This might also make it harder for them to think critically for a long time. People might not think as deeply about AI answers if they don't check them out first.

Also, problems with content accuracy, algorithmic bias, and unequal access to AI tools make learning even more risky. Variations in the effective utilization of GAI may stem from disparities in students' technological proficiency and the quality of guidance provided by the school. These challenges show that even though GAI has some useful benefits, it needs strict rules and careful teaching when it is used in academic English writing.

3 Empirical Investigation

3.1 Participants

The empirical study was conducted with English majors at a university specializing in law. We kept 207 valid questionnaires for analysis after going through the data.

The largest group was postgraduate students (53.14%), followed by first-year undergraduates (18.84%), fourth-year undergraduates (13.53%), third-year undergraduates (10.63%), and second-year undergraduates (3.86%). The distribution indicates that academic English writing assignments gain significance as students advance in their academic pursuits.

When it came to gender, 79.23% of the sample were girls and 20.77% were boys. This fits with the general gender breakdown of English majors.

The sample included people with different levels of English proficiency. 38.16% of the students had passed TEM-8, while the rest had passed CET-4, CET-6, TEM-4, or had other certificates like IELTS or TOEFL. Some students had not yet received formal certification. In general, the fact that there were a lot of advanced-level students means that the participants had enough language skills to judge GAI-assisted academic writing fairly.

3.2 Instrument and Measurement

This study utilized a questionnaire survey to examine English majors' attitudes towards GAI-assisted academic English writing. The instrument was modified from a recognized attitude scale created by [1] in the article *A Study on College Students' Attitudes toward Generative Artificial Intelligence-Assisted Academic English Writing*, published in *China Educational Technology*. The original questionnaire was created in Chinese, and this study kept the original Chinese items to make sure the language was consistent and the ideas were valid.

The scale was based on the three-dimensional attitude framework, which includes cognitive, affective, and behavioral parts.

The scale consisted of 19 items: 1) 4 cognitive items assessing perceived value and functional benefits; 2) 5 affective items examining emotional responses and trust; 3) 5 behavioral items measuring usage intention and willingness. 4) 5 open-ended questions for in-depth investigation.

There were 14 items rated on a five-point Likert scale, with 1 being "strongly disagree" and 5 being "strongly agree."

The analysis of the data was done with SPSS27.0. We used Cronbach's α coefficient to check for reliability. Exploratory factor analysis was used to test construct validity. Before factor extraction, the Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy and Bartlett's Test of Sphericity were conducted to evaluate the appropriateness of the data. Principal component analysis was used to extract the factors. The total variance explained by the extracted factors was used as another way to judge whether the structure was good enough.

These steps made sure that the measurement tool was accurate and reliable.

3.3 Data Analysis Procedures

SPSS was used to do the statistical analyses. The analysis consisted of three stages: data preprocessing, descriptive statistics,

and testing for reliability and validity.

During the first period, we got rid of questionnaires that were not valid or were not filled out completely. We coded all the items using the Likert scale format.

In the second period, descriptive and accurate statistics were used to show the background information of the participants and how they generally used GAI in academic English writing.

In the third period, the quality of the measurements was checked by looking at their reliability and validity. The overall Cronbach's α coefficient was 0.919, which means that the data was very consistent within itself. We used exploratory factor analysis to check the validity of the structure. The KMO value was 0.936, and Bartlett's test of sphericity was significant ($p < 0.001$), which showed that the data was good for factor analysis. The scree plot made it clear what the factors were, which supports the construct validity of the tool.

Table 1: Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	Number of Items
.919	.927	19

These results demonstrate that the measurement scale possesses satisfactory psychometric properties and is appropriate for subsequent statistical analyses.

4 Empirical Results and Group Differences

4.1 Usage Frequency of GAI in Academic English Writing

Descriptive statistics were used to look at how often students actually used GAI in order to see how involved they were with it.

The results show that 33.82% of students said they used GAI often (a few times a week), and 30.92% said they used it sometimes (a few times a month). A smaller percentage (15.94%) said that they used GAI for almost all of their writing tasks. At the same time, 14.98% said they used it rarely, and 4.35% said they had only tried it once or twice.

The average score for how often people used it was 2.58, which means they were moderately engaged. Most English majors have used GAI-assisted writing tools, but they are not yet fully accepted as the norm. This gives us important context for understanding the attitude analyses that follow.

4.2 Reliability and Validity Results

The internal consistency of the attitude scale was high, with a Cronbach's α coefficient of 0.919, exceeding the recommended threshold of 0.70.

Exploratory factor analysis further confirmed structural validity. The KMO value reached 0.936, and Bartlett's test of sphericity was significant ($\chi^2 = 3068.670$, $df = 153$, $p < 0.001$), indicating strong inter-item correlations and suitability for factor analysis.

The high KMO value and the significant Bartlett's test result confirm that the data were appropriate for factor analysis. These results provide strong evidence of the scale's structural adequacy and construct validity.

4.3 Differences Across Academic Levels

To explore whether academic level influences attitudes toward GAI-assisted academic English writing, one-way ANOVA was conducted.

Significant differences were found in self-evaluated academic writing confidence. For the item measuring familiarity and confidence in academic English writing, differences across levels were statistically significant ($F = 3.276$, $p = 0.013$). Similarly, for confidence in completing an academic paper, the difference was highly significant ($F = 6.671$, $p < 0.001$).

Descriptive results indicate that postgraduate students reported higher confidence levels than lower-grade undergraduates, reflecting the accumulation of academic writing experience over time.

However, for most attitude items related to GAI acceptance, emotional response, and usage intention, no significant differences were observed across academic levels ($p > 0.05$). This suggests that while writing confidence increases with academic progression, overall attitudes toward GAI remain relatively stable across grades.

4.4 Differences Across English Proficiency Levels

Further analysis examined whether English proficiency levels affect attitudes toward GAI. One-way ANOVA revealed significant differences in several areas.

Students with higher proficiency levels, e.g., TEM-8, reported significantly greater confidence in academic English writing. Differences were statistically significant for familiarity and confidence in academic writing ($F = 6.502$, $p < 0.001$), familiarity with writing conventions ($F = 4.942$, $p < 0.001$), and confidence in completing academic papers ($F = 10.302$, $p < 0.001$).

In addition, significant differences were found in usage intention and behavioral tendencies. Higher-proficiency students demonstrated stronger willingness to seek AI assistance ($F = 2.792$, $p = 0.012$), accept AI suggestions ($F = 2.712$, $p = 0.015$), use AI correction functions ($F = 2.432$, $p = 0.027$), and share related experiences ($F = 2.799$, $p = 0.012$).

Emotional responses such as excitement ($F = 2.495$, $p = 0.024$), perceived ease ($F = 2.643$, $p = 0.017$), and satisfaction with usability ($F = 2.479$, $p = 0.025$) also showed significant differences across proficiency levels.

However, evaluations of GAI's overall effectiveness and accuracy did not differ significantly ($p > 0.05$), indicating general agreement regarding its functional value.

Overall, English proficiency primarily influences students'

confidence and proactive engagement rather than their fundamental evaluation of GAI's usefulness.

Table 2: KMO and Bartlett's Test

Kaiser–Meyer–Olkin Measure of Sampling Adequacy		.936
Bartlett's Test of Sphericity	Approximate Chi-Square	3068.670
	Degrees of Freedom	153
	Significance (p-value)	.000

5 Discussion and Practical Implications

The results of the study show that English majors generally have a good but cautious opinion of academic English writing that uses GAI. Many students agree that these tools can help them write faster, make their writing more accurate, and help them organize their school papers. On the other hand, the moderate level of use shows that people who have positive opinions don't always use something a lot or a lot. This trend could indicate that students possess a balanced perspective, signifying their awareness of both academic and professional obligations.

The results are somewhat consistent with the Technology Acceptance Model (TAM) [2]. Perceived usefulness (PU) and perceived ease of use (PEU) are the most important factors that affect behavioral intention (BI). In the current study, assessments of GAI's overall utility exhibit relative consistency across proficiency levels, suggesting stable perceived usefulness. But behavioral intention is very different, especially between groups of people with different levels of English proficiency. Students with higher levels of proficiency are more likely to want to use GAI in their writing.

This divergence indicates that although perceived usefulness is widely acknowledged, behavioral intention is affected by supplementary psychological and contextual factors beyond the fundamental constructs of TAM. Subsequent expansions of TAM underscore that external factors and user attributes may influence the correlation between perceived usefulness and behavioral intention [8]. In this study, English proficiency seems to act as a facilitating factor that enhances the conversion of perceived usefulness into intention. Students possessing enhanced linguistic proficiency may perceive themselves as more adept at critically assessing AI-generated content, resulting in an increased sense of control and a diminished perception of risk.

Self-efficacy theory further clarifies this pattern [4]. The results indicate that students with superior writing skills typically exhibit greater confidence in academic writing and show increased engagement with GAI tools. This pattern indicates that writing self-efficacy may substantially impact the utilization of these technologies. Students who are confident in their writing skills often use AI to make their work better and more polished. People who aren't as sure of themselves might use these tools more carefully because they don't know how to tell if AI-generated answers are good or bad. In this context, the desire to use GAI appears to be influenced not only by its perceived usefulness but also by students' self-evaluation of their writing abilities.

Cognitive Load Theory also gives us a way to understand things [7]. Writing in academic English is hard because it requires a lot of mental effort to understand its structure and analyze it. GAI's help with language improvement and organizing structures may lower unnecessary cognitive load, which would free up cognitive resources for higher-order thinking. But relying too much on AI could lower the cognitive load that is relevant to building knowledge [5], which could make it harder to get deeply involved in learning. The moderate frequency of usage noted in this study may indicate students' instinctive attempt to reconcile efficiency improvements with substantive cognitive engagement.

Furthermore, from a technology amplification standpoint, technology frequently augments existing competencies instead of addressing deficiencies [6]. The findings indicate that students possessing superior writing skills are more likely to interact actively with GAI and exhibit more favorable emotional responses to its utilization. This pattern suggests that GAI may function less as a compensatory aid and more as a mechanism that enhances existing competencies. In other words, students who are already more skilled seem to be able to get more out of these technologies. This evidence challenges the presumption that AI inherently diminishes ability disparities, indicating instead that technological tools may exacerbate existing differences among learners.

From a practical perspective, these theoretical interpretations yield several implications.

Writing instruction should not presume that merely enhancing perceived utility will guarantee responsible adoption. Pedagogical design ought to enhance students' evaluative skills and writing self-efficacy to foster critical engagement with AI rather than passive interaction.

It may be necessary to use different teaching methods. For students with higher levels of proficiency, AI can be used in tasks that involve advanced revision and improving the structure of writing. For students with lower skills, guided scaffolding is important to keep them from relying too much on others and to help them learn new skills on their own.

Institutional guidelines should clarify ethical boundaries and authorship standards. Aligning AI use with disciplinary values such as originality, analytical depth, and authorial voice is crucial for maintaining academic integrity.

All in all, integrating TAM, self-efficacy theory, and cognitive load perspectives provides a more comprehensive explanation of English majors' attitudes toward GAI-assisted academic writing. Technology acceptance in this context is competence-mediated and cognitively regulated rather than purely technology-driven. Structured and theory-informed implementation is therefore essential to ensure that generative artificial intelligence enhances rather than undermines academic writing development.

From a practical perspective, several implications emerge.

GAI should be seen as a helper for writing, not a replacement for thinking on your own. Writing instruction can in-

Table 3: ANOVA Analysis

Item	Source	Sum of Squares	df	Mean Square	F	Significance
I am familiar with and confident in academic English writing	Between Groups	31.407	6	5.235	6.502	$< .001$
	Within Groups	161.008	200	.805		
	Total	192.415	206			
I am familiar with the basic conventions of academic English writing	Between Groups	28.718	6	4.786	4.942	$< .001$
	Within Groups	193.717	200	.969		
	Total	222.435	206			
I feel confident in completing an academic English paper	Between Groups	55.657	6	9.276	10.302	$< .001$
	Within Groups	180.082	200	.900		
	Total	235.739	206			
I believe I face difficulties and challenges in academic English writing	Between Groups	3.248	6	.541	.521	.792
	Within Groups	207.863	200	1.039		
	Total	211.111	206			
I am willing to use generative AI to improve my academic English writing ability	Between Groups	13.326	6	2.221	1.824	.096
	Within Groups	243.544	200	1.218		
	Total	256.870	206			
I am willing to actively seek generative AI assistance when needed	Between Groups	18.470	6	3.078	2.792	.012
	Within Groups	220.486	200	1.102		
	Total	238.957	206			
I am willing to accept suggestions provided by generative AI and revise accordingly	Between Groups	17.245	6	2.874	2.712	.015
	Within Groups	211.973	200	1.060		
	Total	229.217	206			
I am willing to use the correction functions provided by generative AI during writing	Between Groups	15.563	6	2.594	2.432	.027
	Within Groups	213.307	200	1.067		
	Total	228.870	206			
I am willing to analyze my English writing experience and the experience of using generative AI	Between Groups	20.269	6	3.378	2.799	.012
	Within Groups	241.383	200	1.207		
	Total	261.652	206			
I feel excited about using generative AI tools for academic English writing	Between Groups	18.844	6	3.141	2.495	.024
	Within Groups	251.765	200	1.259		
	Total	270.609	206			
Using generative AI for academic English writing makes me feel relaxed	Between Groups	19.958	6	3.326	2.643	.017
	Within Groups	251.694	200	1.258		
	Total	271.652	206			
I am confident in the accuracy of generative AI-assisted academic English writing	Between Groups	11.517	6	1.919	1.683	.127
	Within Groups	228.087	200	1.140		
	Total	239.604	206			
I am satisfied with the ease of use of generative AI-assisted academic English writing	Between Groups	16.376	6	2.729	2.479	.025
	Within Groups	220.232	200	1.101		
	Total	236.609	206			
I am satisfied with the effectiveness of generative AI-assisted academic English writing	Between Groups	8.579	6	1.430	1.307	.256
	Within Groups	218.851	200	1.094		
	Total	227.430	206			
I believe generative AI can improve my academic English writing level	Between Groups	5.787	6	.964	.792	.577
	Within Groups	243.614	200	1.218		
	Total	249.401	206			
I believe using generative AI tools can help me organize ideas better	Between Groups	21.195	6	3.532	3.461	.003
	Within Groups	204.109	200	1.021		
	Total	225.304	206			
I believe generative AI can provide high-quality grammar and spelling checks	Between Groups	13.454	6	2.242	1.899	.083
	Within Groups	236.199	200	1.181		
	Total	249.652	206			
I believe generative AI can provide useful writing suggestions and feedback	Between Groups	12.289	6	2.048	1.980	.070
	Within Groups	236.199	200	1.181		
	Total	249.652	206			

clude guided use of AI, which encourages students to think critically about AI-generated suggestions instead of just accepting them.

Institutional rules are needed to make it clear what is and isn't okay to do in academic writing. Clear rules about citation, acknowledgment, and originality can help people be more responsible and less confused.

Differentiated instructional strategies may be beneficial. Since higher-proficiency students demonstrate stronger proactive engagement, pedagogical design can tailor AI-related tasks according to students' linguistic levels, ensuring that AI use supports skill development rather than replacing cognitive effort.

Overall, the findings suggest that English majors' interaction with GAI reflects a balance between technological openness and disciplinary responsibility. Effective integration requires structured guidance, ethical clarity, and pedagogical alignment to ensure that generative artificial intelligence enhances rather than undermines academic English writing development.

This study provides practical contributions in addition to descriptive findings. It adds to research on artificial intelligence in education that is specific to English majors, a group whose academic writing practices stress originality, stylistic awareness, and analytical depth. This study situates GAI within a language-specialized disciplinary framework, thereby expanding upon existing research that has predominantly focused on general student populations.

Adding proficiency stratification to the study of attitudes moves the field forward. This research illustrates that English proficiency influences behavioral intention and emotional engagement, challenging the notion of students as a uniform group and enhancing conventional technology acceptance discourse through a competence-oriented lens.

The study gives educational implications based on real-world evidence. The results show that structured guidance, differentiated instruction, and ethical clarification are all important for integrating GAI into academic English writing instruction because they show that positive evaluations and moderate usage frequency can happen at the same time.

The results suggest that using generative artificial intelligence in language education shouldn't just be seen as a technical problem, but as a process that is sensitive to the discipline and mediated by competence. As AI tools keep getting better, it's still important for English majors to keep a balance between getting help from technology and being honest in their work. This is important for maintaining their professional identity and writing quality.

6 Conclusion

The swift advancement of generative artificial intelligence has transformed the dynamics of academic English writing in higher education. This study investigated the attitudes of English majors, a unique cohort of advanced language learners, towards GAI-assisted academic English writing through empirical research.

The results show that English majors generally have positive but realistic views of GAI. Students recognize its utility in enhancing efficiency, linguistic precision, and structural clarity. The moderate level of use and students' worries about academic integrity and possible over-reliance show that people are being careful about GAI in their professional lives. Differences between academic levels mostly show up in how confident students are in their academic writing. On the other hand, English proficiency seems to be more closely related to both the desire to use GAI and the feelings that come with it. Despite these differences, students' overall assessments of the utility of GAI remain relatively consistent.

References

[1] J. Chu. A study on college students' attitudes toward generative artificial intelligence-assisted academic english writing. *China Educational Technology*, 8:123–130, 2025.

[2] Fred D Davis. Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS quarterly*, 13(3):319–340, 1989.

[3] Seyfullah Gökoğlu. Challenges and limitations of generative ai in education. *Transforming education with Generative AI: Prompt engineering and synthetic content creation*, pages 158–181, 2024.

[4] Edwin A Locke. Self-efficacy: The exercise of control. *Personnel psychology*, 50(3):801, 1997.

[5] Fred Paas, Alexander Renkl, and John Sweller. Cognitive load theory and instructional design: Recent developments. *Educational psychologist*, 38(1):1–4, 2003.

[6] Gavriel Salomon and David Perkins. Do technologies make us smarter? intellectual amplification with, of, and through technology. In *Intelligence and technology*, pages 95–110. Routledge, 2005.

[7] John Sweller. Cognitive load during problem solving: Effects on learning. *Cognitive science*, 12(2):257–285, 1988.

[8] Viswanath Venkatesh and Fred D Davis. A theoretical extension of the technology acceptance model: Four longitudinal field studies. *Management science*, 46(2):186–204, 2000.