

# Beyond English Hegemony: AI Academic Writing Tool Usage Among Non-Native English Speakers and International Teams

Ziyang Xu

University of Oklahoma, USA

Ziyang.Xu-1@ou.edu

## ABSTRACT

AI tools are disrupting the English-dominated academic writing paradigm, by enhancing efficiency and supporting tasks from grammar checking to content generation. However, little is known about how cultural and linguistic diversity shapes the use of these tools. This study analyzes 168 AI usage declarations from 8859 papers to explore how non-native English speakers and international teams utilize AI tools in academic writing. Findings reveal that non-native scholars rely more heavily on tools like DeepL and Grammarly for translation and grammar checking, while international teams prioritize grammar consistency to unify cross-cultural communication. These patterns highlight the unique needs of multilingual and globally collaborative researchers. The study calls for tailored AI tool designs and journal policies to better support linguistic diversity and equitable access in academia. By bridging the gap between technology and cultural context, this research contributes to ongoing discussions on the ethical and practical implications of AI in academic writing.

## ALISE RESEARCH TAXONOMY TOPICS

Information policy; Information ethics; Education; Artificial Intelligence.

## AUTHOR KEYWORDS

Generative AI; Academic Writing; Non-Native English Speakers; Journal Policies

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# INTRODUCTION

The rise of generative AI, led by ChatGPT, has transformed academic writing by assisting researchers in drafting manuscripts, improving efficiency, and supporting tasks from idea generation to data analysis (Thomas et al., 2023). More importantly, AI tools are disrupting the English-dominated academic writing paradigm. Non-native English speakers have long faced contextual biases and financial pressures in an English-centric academic environment (Yuan et al., 2024). However, concerns about AI undermining critical thinking, authorship attribution, and data privacy have emerged (Mrabet & Studholme, 2023; Storey, 2023). In response, publishers like Elsevier have introduced AI usage disclosure templates, requiring authors to specify AI tools and purposes (Ganjavi et al., 2024). Despite growing ethical debates, limited research exists on how authors use AI tools and how this relates to their backgrounds. This research examines the differences in AI tool usage among people from diverse linguistic backgrounds by analyzing AI usage declarations, aiming to provide a more equitable and inclusive academic writing environment for multilingual scholars and international collaborative teams.

## Research Questions

This paper aims to address the following types of research questions:

- (1) How are researchers currently utilizing AI tools to assist in academic writing, specifically in terms of the tool types employed and the tasks accomplished?
- (2) What are the unique needs of non-native English speakers and international teams in using AI tools for academic writing?

# METHODOLOGY

## Journal selection and data acquisition

This study analyzes AI usage declarations in academic writing through a mixed-methods approach. Data were collected from 8859 papers published in 2024, focusing on journals ranked highest by CiteScore across 27 Scopus subject categories. After manual inspection, 168 articles containing AI declarations were identified. These declarations describe the AI tools used (e.g., ChatGPT, Grammarly) and their purposes (e.g., grammar checking, translation).

## Design of the study

The author manually extracted the main data from 168 AI use statements, including the primary AI tools, the purpose of AI use, whether the first author is a native English speaker, and whether the team is an international team. In the categorization of AI tools used, the main divisions were ChatGPT, ChatGPT-4, ChatGPT-3.5, Grammarly, DeepL, Claude, Copilot, and others. In the categorization of the purposes of use, the main divisions were improving readability, grammatical modification, grammar checking, proofreading, data analysis, and translation. To determine if the first author was a native English speaker, this paper used the

author's surname as an initial indicator and verified this by examining their curriculum vitae (CV). The determination of whether a team was international was based on whether the authors' institutional affiliations were in different countries. After extracting quantitative data through content analysis, this paper conducts correlation analysis to understand how cultural and linguistic diversity shapes AI tool adoption in academic writing.

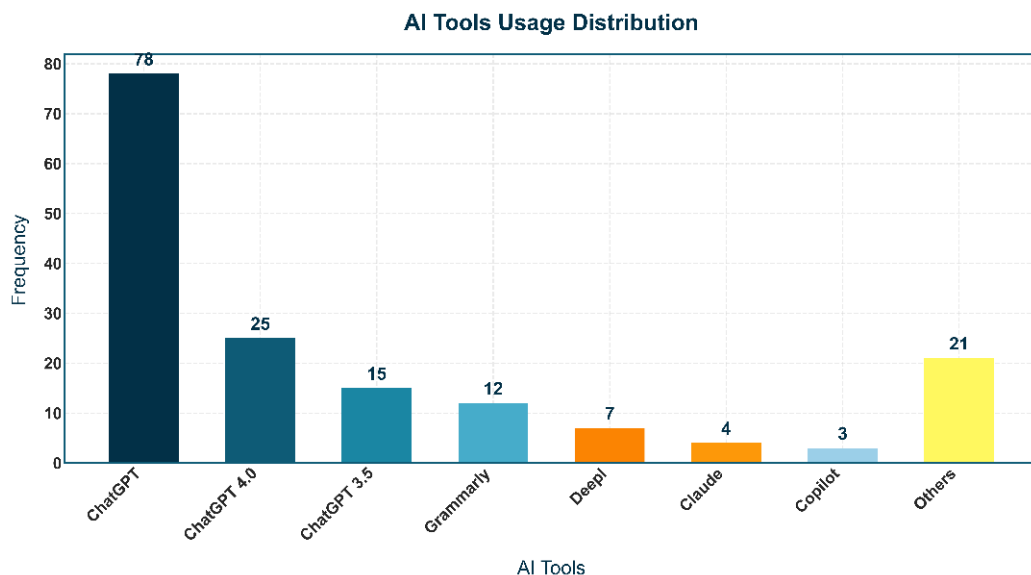
## Finding

In the academic writing environment, ChatGPT by OpenAI maintains its dominant position. Figure 1 shows that 117 authors use ChatGPT (including GPT-3.5 and GPT- 4) to assist writing, accounting for 77% of total usage. However, non-native scholars show a greater diversity in tool adoption. Compared to native speakers, non-native speakers tend to use a more diverse range of tools. Certain tools (DeepL and Claude) are almost exclusively used by non-native speakers. For instance, one declaration states: “During the preparation of this work the author(s) used ChatGPT in order to translate and paraphrase due to being non-native speakers.” This reflects the unique linguistic challenges faced by non-native speakers.

According to the Figure 2, the purposes of AI tools usage are classified in nine ways, ranging from readability, grammar, proofreading, statistical analysis, translation, paraphrasing, generating titles or abstracts, searching literature, and brainstorming. The main reason that authors use AI tools is to improve the readability of manuscripts, accounting for 51%. Grammar-checking is the second most common purpose, with 22% of authors declaring that they used AI tools to check grammar. It is noteworthy that some scholars utilize AI tools for statistical analysis and content generation. While these various applications primarily serve auxiliary functions during the academic writing process, researchers also employ tools like ChatGPT for brainstorming and literature searches in the preliminary stages of academic writing.

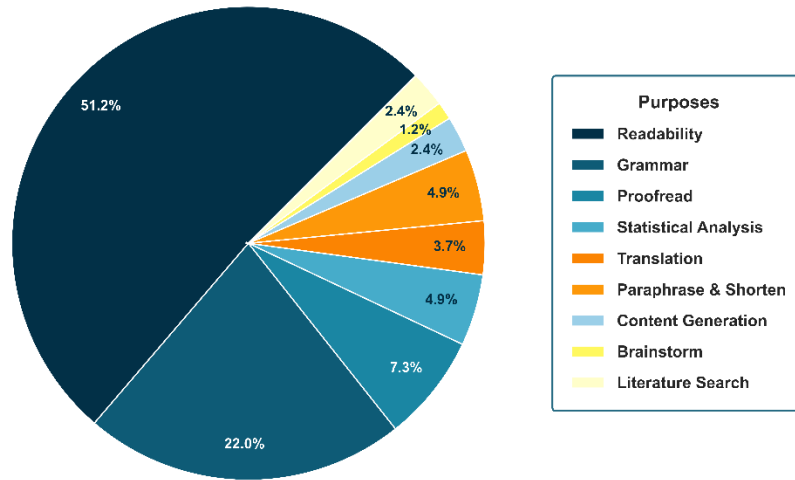
**Figure 1**

*AI tools usage distribution*



**Figure 2**  
*Distribution of AI usage purpose*

**Distribution of AI Tools Usage Purpose**



As shown in Table 1, there is a relationship between the authors' backgrounds and their purpose for using AI tools. Panel A shows some differences between native and non-native speakers regarding their purposes for using AI tools. Although the most common use for both groups was to improve text readability, non-native speakers were more inclined to use AI tools for grammar correction and translation, whereas native speakers had a higher proportion of use for proofreading and data analysis. In Panel B, authors in international teams have a higher proportion of use for grammar checking, whereas authors in non-international teams more frequently use AI tools for proofreading and data analysis.

**Table 1**  
*Association between Author Background and AI Tool Usage Purposes*

<b>Panel A: Native Speaker Status</b>						
	Read.	Gram.	Proof.	Anal.	Trans.	Other
Native (n=32)	16 (50.0%)	5 (15.6%)	4 (12.5%)	3 (9.4%)	0 (0.0%)	4 (12.5%)
Non-native (n=136)	64 (47.1%)	35 (25.7%)	11 (8.1%)	5 (3.7%)	6 (4.4%)	15 (11.0%)
Exp. count	1.14-	1.14-	2.86-	1.52-	1.14-	3.62-
range	15.24	7.62	12.14	6.48	4.86	15.38
Fisher-Freeman-Halton test: $p = 0.0483^*$						
<b>Panel B: International Group Status</b>						

	Read.	Gram.	Proof.	Anal.	Trans.	Other
International (n=46)	21 (45.7%)	14 (30.4%)	0 (0.0%)	0 (0.0%)	1 (2.2%)	10 (21.7%)
Non-international (n=122)	59 (48.4%)	26 (21.3%)	15 (12.3%)	8 (6.6%)	5 (4.1%)	9 (7.4%)
Exp. count	1.64-	1.64-	4.11-	2.19-	1.64-	5.20-
range	21.90	10.95	10.89	5.81	4.36	13.80

Fisher-Freeman-Halton test:  $p = 0.0012^{**}$

Note: \* $p < 0.05$ , \*\* $p < 0.01$ . Read. = Readability, Gram. = Grammar, Proof. = Proofreading, Anal. = Analysis, Trans. = Translation.

Percentages in parentheses represent within-group proportions.

## DISCUSSION

The emergence of ChatGPT, as a pioneering generative artificial intelligence system, transformed conventional understanding of AI agents and generated extensive societal discussions. This first-mover advantage has caused ChatGPT becoming the most extensively utilized large language model. However, researchers, especially non-native speakers, also utilized other AI tools, such as DeepL and Grammarly, which had a huge number of users prior to the prevalence of ChatGPT, due to user loyalty and the support of Large Language Models.

There are different tool preferences between native and non-native speakers. Furthermore, team structure influences tool selection and purpose. The higher percentage of Grammarly usage in non-native groups reflects their greater attention to the need for language accuracy. The instant feedback provided by AI narrows the gap between non-native speakers and native speakers in academic writing. For non-native English-speaking researchers, AI tools can help translate literature to support their academic research. International groups prefer to utilize Grammarly more than the non-international group, which indicates specific challenges in cross-language communication. The unification of writing style through these tools leads to reduced communication costs arising from language differences. To provide differentiated support for researchers, academic journals are required to develop targeted guidelines for the use of AI tools. However, numerous academic journals lack established AI usage policies, not to mention differentiated support systems.

Although scholars have called for academic organizations, such as the APA, to generate AI usage guidelines in research, this guide does not focus on different hierarchical requirements. As a next step, AI policy is supposed to distinguish between basic language polishing and deep content generation. To improve the transparency of AI usage, publishers need to design templates for references. Many statements merely declare which AI tools were utilized, without specifying the tasks and scopes of application. The review system should not take a one-size-fits-all approach, but rather adopt different evaluation standards for various types of AI applications (such as translation versus content generation).

Researchers exhibit significant variations in their use of AI tools, reflecting uneven levels of familiarity and guidance across researcher groups. For example, non-native speakers rely more heavily on AI tools while lacking systematic AI usage guidelines. Therefore, AI literacy

should be incorporated into graduate courses. Although AI streamlines the research process, it sets higher standards for critical thinking (the ability to evaluate the reliability of AI outputs) and ethical awareness (understanding the scope and responsibilities of AI). ChatGPT usually provides fabricated references. The education of AI literacy should not be confined to the writing process. According to our findings, AI tools span the entire research cycle. The education of AI literacy needs to break from traditional frameworks and develop a comprehensive framework that addresses AI applications across different research stages, from literature review and data analysis to result interpretation and scholarly communication.

## **CONCLUSION**

This study reveals several key patterns in the use of AI tools in academic writing. The dominance of ChatGPT, coupled with the differential usage patterns between native and non-native English speakers, suggests a transformative shift in academic writing practices. The implications of this study are twofold. First, it calls for the development of AI tools tailored to the unique requirements of non-native scholars and international teams, such as enhanced translation capabilities and cross-cultural grammar support. Second, it underscores the need for clearer journal policies and AI literacy programs to ensure equitable access and responsible use of these technologies.

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