Negotiating Certainty in Human and AI Academic Writing: A Comparative Analysis of Hedges and Boosters by student, expert, and GenAI

Hedges and boosters, integral to Hyland's (2005) interactional metadiscourse model, play an interpersonal role in the interaction between writers and readers. Building on Hyland's (1998) framework of hedges and Hyland's (2005) model of interaction in academic discourse, this study investigates the frequency, form, and rhetorical function of hedges and boosters in the introduction sections of four types of academic texts within the field of applied linguistics. (1) Chinese MA theses, (2) Chinese PhD dissertations, (3) international published research articles, and (4) AI-generated academic introductions produced by large language models (LLMs) such as ChatGPT.

The study addresses the following questions: (1) How do hedges and boosters differ in frequency, form, and rhetorical function across human-authored MA theses, PhD dissertations, and international research articles? (2) How do AI-generated academic introductions compare to human-authored texts in their use of hedging and boosting strategies? (3) How do Chinese students perceive hedges and boosters, and what challenges do they face in using these resources effectively? (4) What roles do digital tools—such as corpora and generative AI models—play in supporting students' use of hedging and boosting in academic writing?

Using a combination of qualitative and quantitative (corpus-based) methodological tools, this study analyzes corpora compiled from MA and PhD theses from five top-tier Chinese universities specializing in applied linguistics and high-impact journals such as *Applied Linguistics*. A parallel corpus of AI-generated introductions, based on the same research prompts, is compiled using ChatGPT. Additionally, semi-structured interviews and questionnaires explore students' experiences with rhetorical strategies and the use of digital tools—such as corpora and large language models (LLMs)—to support hedging and boosting in academic writing.

Preliminary findings reveal that while international journal articles use hedging and boosting more frequently and strategically than student texts, AI-generated introductions display a hybrid rhetorical pattern—mirroring the booster-rich assertiveness of published articles, but lacking the nuanced rhetorical control characteristic of experienced human authors. Notably, no significant difference was observed in hedges and boosters use between MA and PhD theses, pointing to broader challenges in academic socialization. Interviews and questionnaires further illuminate

how Chinese students perceive and navigate these rhetorical resources, and how they are beginning to incorporate tools such as corpora and AI assistants to enhance their academic voice.

The study highlights the pedagogical implications of these findings, offering strategies to improve EAP writing instruction and foster cross-cultural academic literacy in the era of artificial intelligence. This research contributes to understanding the interplay between rhetorical choices and cultural influences in academic writing, addressing critical gaps in comparative studies of Chinese and international academic contexts.

Keywords: Hedging, Boosting, Academic Writing, AI-Generated Texts, Cross-Cultural Communication, Rhetorical Strategies, Digital Tools, LLMs, EAP Pedagogy