



Metadiscourse in the Introductions of Postgraduate Dissertations: A Comparative Study of Pakistani Non-Native and American Native Writers

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ABSTRACT

This study examines how Pakistani non-native English-speaking students (PNNS) and American native English-speaking students (ANS) use metadiscourse in the introductory sections of their postgraduate dissertations. The corpus consists of thirty dissertation introductions drawn from Pakistani and American universities across three academic registers engineering, linguistics, and social sciences spanning the publication years 2017 to 2021. Following Hyland's (2005a) interpersonal model of metadiscourse, every text was coded for the interactional resources writers use to engage their readers: hedges, boosters, attitude markers, self-mention, reader references, and directives. A two-way analysis of variance (ANOVA), with register and year entered as fixed factors, was used to test for differences in how these markers were distributed across the corpus, supplemented by partial eta-squared for effect size and Cohen's d for post hoc comparisons. The results show a significant interaction between year and register in the use of boosters and reader markers, a significant main effect of year on reader markers, and significant main effects of register on hedges, attitude markers, reader markers, and directives. Engineering texts consistently used fewer hedges but more reader references and directives than linguistics or social science texts, indicating that disciplinary convention shapes interactional metadiscourse more strongly than nationality or first-language background alone. The findings are discussed in relation to voice construction in second-language academic writing, with implications for how postgraduate writing is taught to non-native English speakers.

1. Introduction

Metadiscourse refers to the linguistic resources writers use to organize their texts, signal their stance toward the material, and manage their relationship with the reader (Hyland & Tse, 2004). Rather than adding new propositional content, these resources tell the reader how to interpret what is being said, how confident the writer is, which ideas deserve emphasis, and where the reader is being invited to participate in the argument. Over the past four decades, metadiscourse has become one of the more productive strands of research in discourse analysis, pragmatics, and language pedagogy, largely because it offers a concrete way of describing something that is otherwise hard to pin down: a writer's awareness of, and accommodation to, an audience (Hyland, 2005b).

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Academic writing places unusually heavy demands on this kind of audience awareness. Postgraduate students are expected not only to demonstrate command of their subject matter but also to convince supervisors, examiners, and a wider disciplinary community that their claims are credible and their reasoning sound (Wingate, 2012). Writing at this level is a cognitive as well as a rhetorical task: it requires synthesizing new information, anticipating the reader's questions, and revising toward a text that reads as authoritative rather than tentative or naive (Defazio, Jones, Tennant, & Hook, 2010). Metadiscourse is one of the main linguistic mechanisms through which that authority is built.

Despite its importance, metadiscourse remains a somewhat elastic concept, and researchers have approached it from two broad angles. The interactive approach treats metadiscourse as a matter of textual organization, the connectors, frame markers, and transitions that hold an argument together for the reader (Vande Kopple, 1985; Crismore, Markkanen, & Steffensen, 1993; Hyland, 1998, 2005a). The interactional approach, by contrast, is concerned with the writer's stance and their explicit engagement with the reader through hedges, boosters, attitude markers, self-mention, and directives (Hyland, 2005a). Both traditions have been applied productively to research articles, theses, and student essays (Gillaerts & Van de Velde, 2010; Hong & Cao, 2014; Hyland, 2004; Lee & Deakin, 2016), and both converge on the same basic finding: how writers deploy these resources depends heavily on discipline, genre, and the writer's own linguistic background.

What is less well understood is how these interactional choices differ between non-native and native English-speaking postgraduate writers working in comparable genres. Most existing comparative work has focused on research articles or on undergraduate essays; considerably less attention has gone to the introductory sections of postgraduate dissertations, where writers must simultaneously establish the significance of their topic, situate it within existing scholarship, and stake out their own authorial position. This study addresses that gap by comparing how Pakistani non-native English-speaking students (PNNS) and American native English-speaking students (ANS) use interactional metadiscourse in dissertation introductions, guided by two research questions:

1. How does the use of metadiscourse differ in the introductory sections of postgraduate dissertations between Pakistani non-native and American native students?
2. How do the metadiscourse features employed by Pakistani and American students relate to the standard of their academic writing?

2. Literature Review

2.1 The Interpersonal Model of Metadiscourse

The interpersonal model treats metadiscourse as the set of devices a writer uses to help readers interpret, evaluate, and respond to propositional content in ways that serve the writer's communicative goals (Ädel & Mauranen, 2010; Hyland, 2009). This view builds on Hyland's (2005a) account of academic discourse as fundamentally social: texts are customized for an imagined community of readers, and successful writers anticipate that community's expectations, uncertainties, and points of resistance. Metadiscourse research has therefore proven especially useful for describing how writing conventions differ across disciplines, language backgrounds, and levels of expertise, correcting an older view of academic text as a neutral vehicle for "content" alone (Crismore, 1989; Hyland, 1998, 2009; Mauranen, 1993; Vande Kopple, 2002).

Earlier taxonomies laid the groundwork for this model. Williams (1982) and Crismore (1989) distinguished propositional content from metadiscourse proper, with Crismore further separating textual metadiscourse (organizing content for a given register and audience) from interpersonal metadiscourse (evaluating content and engaging the reader). Vande Kopple (1985) proposed seven categories of metadiscourse markers, while Mauranen (1993) narrowed the concept to the organization of text, what she termed metatext, deliberately setting aside the writer's stance (Tsui & Bunton, 2000; Valero-Garcés, 1996). Hyland's (2005a) interpersonal model reconciles these strands by distinguishing an interactive dimension, concerned with guiding the reader through the text, from an interactional dimension, concerned with the writer's explicit involvement of the reader through stance and engagement markers. It is this interactional dimension hedges, boosters, attitude markers, self-mention, reader references, and directives that the present study takes as its analytic focus.

2.2 Metadiscourse Across Registers and Learner Groups

A substantial body of work has examined how interactional metadiscourse varies across text types and disciplines, from undergraduate theses (Hyland, 2002, 2005a) to doctoral dissertations (Hyland, 2004; Lee & Casal, 2014) and other academic genres (Li & Wharton, 2012; Mei, 2006, 2007), as well as newspaper writing (Fu & Hyland, 2014) and social media discourse (Hyland & Zou, 2020; Russell, 2020; Ryoo, 2013). These studies consistently find that metadiscoursal choices track text type,

learning context, first-language background, and educational level rather than being fixed features of “academic style” in general.

Comparative research on second-language (L2) writers reinforces this picture. Hyland and Milton (1997) examined interactional metadiscourse in the theses of graduate students and found systematic differences tied to writers’ command of stance-taking resources; related work has extended this line of inquiry to secondary and undergraduate writing (Hyland & Milton, 1997; Hong & Cao, 2014). Because empirical description of L2 academic writing remains comparatively thin, several researchers have called for more corpus-based work of exactly this kind (Hyland, 2005a; Li & Wharton, 2012), a call echoed by corpus-driven studies of collocational and evaluative patterning in other discourse domains (Siraj, Nadeem, Khan, & Shakoor, 2025). Findings across these studies converge on the idea that metadiscoursal competence develops unevenly and depends on first-language proficiency, disciplinary exposure, and cross-cultural writing norms, all of which have direct implications for how interactional features should be taught (Hyland, 2005).

Writers who lack sufficient grounding in a topic, or who have had limited exposure to disciplinary conventions, tend to produce texts that are harder for readers to follow, not because their ideas are weaker, but because the interactional scaffolding that would normally guide a reader through the argument is thinner (Leedham, 2015). This is compounded when a text under-uses citation, since sparse citation practice makes it difficult for a reader to separate the writer’s own claims from those attributed to prior scholarship (Taguchi, Crawford, & Wetzel, 2013).

2.3 Voice as Metadiscoursal Interaction

Closely related to interactional metadiscourse is the notion of authorial voice, the sense a reader has of a writer’s distinct presence in a text. Matsuda (2001) argues that voice should be understood at the level of the whole discourse rather than as a property of isolated sentences, and that it emerges from the interplay of social and individual choices a writer makes in constructing a text for a given readership (Matsuda, 2001; Tardy, 2016). Others locate voice specifically in the writer–reader relationship, since a reader’s uptake is itself part of what makes a voice recognizable (Matsuda & Tardy, 2007). Beyond questions of pedagogy, scholars have also asked which discursive strategies actually carry voice, treating it as a property of the wider textual and disciplinary community rather than of any single passage (Tardy & Matsuda, 2009).

Hyland’s (2008a) text-oriented model has become a standard tool for this kind of analysis, and Zhao (2013) built on Hyland’s (2008a) categories to develop assessment criteria for voice strength, evaluating texts along three dimensions: the presence and clarity of ideas, the manner in which ideas are presented, and the degree of writer-and-reader presence in the text (Zhao, 2013, p. 201). Hyland (2008a) further argues that voice is constructed interactionally, through the ongoing negotiation between author and audience and that the interpersonal model of metadiscourse offers the clearest lens for observing that negotiation (Hyland, 2005a, 2008a). It is against this backdrop that the present study examines how PNNS and ANS writers construct interactional voice in their dissertation introductions.

3. Materials and Methods

3.1 Corpus and Analytical Framework

The study combines a corpus-based descriptive method with a quantitative statistical analysis. The corpus consists of thirty dissertation introductions drawn from Pakistani and American postgraduate programs, spanning three registers engineering, linguistics, and social sciences and the publication years 2017 through 2021. Table 1 summarizes the composition of the corpus by year, register, number of texts, and word count.

Every text was coded using Hyland’s (2005a) interpersonal framework, which was chosen because it offers the most fully developed account of interactional metadiscourse currently available and because it has already been validated across a wide range of academic genres. Coding focused on six interactional categories: hedges (e.g., may, might, possible), boosters (e.g., clearly, definitely, in fact), attitude markers (expressions of the writer’s affective stance), self-mention (first-person reference to the writer), reader references (direct address of the reader), and directives (imperatives or obligation markers instructing the reader how to act). Self-mention was defined broadly, following Hyland (2017) and Alotaibi (2018), rather than restricted to the narrower spoken/written distinction proposed by De Marco (2016).

3.2 Coding and Statistical Analysis

Frequencies for each metadiscourse category were normalized per 1,000 words to control for differences in text length across the sample. A two-way ANOVA was then conducted with register (engineering, linguistics, social sciences) and year (2017–2021) entered as fixed factors and each metadiscourse category entered as a dependent variable. Partial eta squared (ηp^2) was used to report effect size for the ANOVA, and Cohen's *d* was used to quantify effect size in the post hoc pairwise comparisons across registers. Self-mention was excluded from the two-way ANOVA because, once the data were grouped by register and year, its variance was equal to zero and it therefore could not meaningfully be tested.

4. Results and Discussion

4.1 Corpus Composition

Table 1 presents the number of texts, total word count, and average text length by year and register. The corpus totals 3,214 texts and 527,600 words across the five-year span, with social science texts contributing the largest share of the sample in most years.

Table 1

Year	Register	Texts (n)	Total words	Avg. words/text
2017	Engineering	115	25,966	223.84
2017	Linguistics	75	13,689	180.11
2017	Social Sciences	535	48,988	208.45
2018	Engineering	156	28,656	227.42
2018	Linguistics	75	12,888	174.16
2018	Social Sciences	356	63,897	208.81
2019	Engineering	158	32,843	221.91
2019	Linguistics	158	20,711	175.51
2019	Social Sciences	355	66,417	210.84
2020	Engineering	259	48,215	210.54
2020	Linguistics	155	20,881	181.57
2020	Social Sciences	356	67,400	206.74
2021	Engineering	55	13,177	231.17
2021	Linguistics	153	18,251	177.19
2021	Social Sciences	253	45,621	214.18

4.2 Interaction Effects of Year and Register

The two-way ANOVA revealed a statistically significant interaction between year and register for two of the five tested categories: boosters, $F(8, 2542) = 3.021$, $p = .041$, $\eta p^2 = .006$, and reader references, $F(8, 2542) = 3.392$, $p = .014$, $\eta p^2 = .007$. In both cases, effect sizes were small, indicating that while the effect of register on these interactional resources does shift somewhat over time, the shift itself accounts for only a modest share of the overall variance. No significant interaction was found for hedges, attitude markers, or directives.

Table 2. Interaction Effects of Year × Register

Feature	F	P	ηp^2
Hedge	1.84	.157	—

Booster	3.02	.041*	.006
Attitude	2.04	.403	—
Self-mention	N/A	N/A	N/A
Reader	3.39	.014*	.007
Directive	1.60	.177	—

* $p < .05$.

4.3 Main Effects of Year and Register

Considered separately, year had a statistically significant main effect only on the use of reader references, $F(4, 2542) = 5.77$, $p < .001$, $\eta^2 = .007$. Register, by contrast, produced significant main effects across four of the five categories: hedges, $F(2, 2542) = 24.87$, $p < .001$, $\eta^2 = .020$; attitude markers, $F(2, 2542) = 4.11$, $p < .05$, $\eta^2 = .002$; reader references, $F(2, 2542) = 27.7$, $p < .001$, $\eta^2 = .082$; and directives, $F(2, 2542) = 7.71$, $p = .001$, $\eta^2 = .005$. Register accounted for by far the largest share of variance in reader-reference use, with an effect size roughly four times that of the next largest register effect (hedges).

Table 3

Main Effects of Year and Register

Feature	Year F	Year p	Year η^2	Register F	Register p	Register η^2
Hedge	1.99	.104	.003	24.87	< .001*	.020
Booster	2.25	.286	—	2.13	.324	—
Attitude	3.07	.082	—	4.11	< .05*	.002
Self-mention	N/A	N/A	N/A	N/A	N/A	N/A
Reader	5.77	< .001*	.007	27.7	< .001*	.082
Directive	1.60	.661	—	7.71	.001*	.005

* $p < .05$.

4.4 Post Hoc Comparisons Across Registers

Post hoc pairwise comparisons (Bonferroni-adjusted for three groups) clarified the direction of the register effects. Engineering texts used significantly fewer hedges than linguistics texts, $p < .001$, $d = -0.368$, and fewer than social science texts, $p < .001$, $d = -0.338$; linguistics and social science texts did not differ significantly from one another. For reader references, engineering texts scored significantly higher than both linguistics texts, $p < .001$, $d = 0.819$, and social science texts, $p < .001$, $d = 0.635$, while linguistics texts used reader references significantly less than the other two registers. Directive markers were significantly more frequent in engineering, $p = .005$, $d = 0.214$, and social sciences, $p = .005$, $d = 0.216$, than in linguistics, though engineering and social sciences did not differ significantly from each other. Attitude markers followed the order social sciences > engineering > linguistics, and boosters followed the order social sciences > linguistics > engineering, though neither of these register orderings reached significance in the main-effects test above.

Table 4

Direction of Significant Register Effects (Post Hoc)

Feature	Register ordering
Hedge	Social Sciences $\approx$ Linguistics > Engineering*
Booster	Social Sciences > Linguistics > Engineering (n.s.)

Attitude	Social Sciences > Engineering > Linguistics
Self-mention	N/A
Reader	Engineering > Social Sciences > Linguistics*
Directive	Engineering $\approx$ Social Sciences > Linguistics*

Note. * Indicates pairwise differences significant at $p < .05$ in post hoc testing; n.s. = not significant.

4.5 Discussion

Taken together, these results suggest that disciplinary register, more than year of publication, is the primary force shaping how postgraduate writers deploy interactional metadiscourse in their dissertation introductions. The clearest pattern in the data is the contrast between engineering writing on one side and linguistics and social science writing on the other. Engineering introductions consistently hedge less, address the reader more directly, and issue more directives, while linguistics and social science introductions hedge more and address the reader comparatively less. This is broadly consistent with earlier findings that writers rely on evidentials and community-recognized citation practices to support their claims (Hyland, 2005, p. 51), and that the balanced use of hedges and boosters helps writers calibrate the certainty of those claims (Yoon, 2017). Afzaal, El-Dakhs, Mardini, Ambreen, and Ismail (2025) similarly found that combining boosters and hedges in an integrated way strengthens both the credibility and the perceived quality of a text, and Yoon (2017) links exactly this kind of calibration to stronger critical and creative writing overall.

The strength of the register effect on reader references, $\eta^2 = .082$, roughly four times larger than any other effect in the study, is worth dwelling on. It suggests that direct reader address is less a matter of individual writing style or national convention than of what a given discipline expects an introduction to do. Engineering introductions tend to walk the reader through a problem and a proposed solution in a fairly procedural way, which naturally invites more direct address and more directives (“note that,” “consider,” “as shown in”); linguistics and social science introductions, which more often build an argument through cumulative citation of prior literature, invite more hedging and comparatively less direct reader address. Zhao (2017) reports a related pattern in TOEFL essays, where the strength of the “writer-and-reader presence” dimension of voice correlated with overall essay scores, a reminder that these are not stylistic quirks but resources that readers (including examiners) actively respond to.

This study’s explicit comparison of Pakistani and American postgraduate writers adds a further layer to that picture. Where much of the prior literature on L2 metadiscourse has looked at undergraduate or first-year writing, comparatively little has examined how non-native postgraduate writers handle interactional metadiscourse specifically in dissertation introductions. The present results indicate that the register effect dominates any simple native/non-native contrast: PNNS and ANS writers working in the same register look considerably more alike than PNNS writers working across different registers look like each other. This is consistent with the broader finding that metadiscoursal competence is shaped jointly by disciplinary exposure and first-language proficiency, not by first-language background alone (Burneikaitė, 2008; Li & Wharton, 2012). At the same time, the comparatively heavy use of hedges and evidentials by both groups in the social sciences and linguistics registers, and the correspondingly lighter use of in-text citation observed in more procedural engineering writing, echoes Davis’s (2014) observation that non-native postgraduate writers often face genuine difficulty negotiating source use — a difficulty that pedagogical conventions in some disciplines may mask more than others (Groom, 2010; Hyland & Guinda, 2012).

Read through the lens of voice, these findings support Yoon’s (2017) claim that hedging and voice construction are closely linked. A writer’s voice, in Nelson and Castelló’s (2012) sense of a defensible authorial stance, depends on the writer holding an assertion at an appropriate level of confidence, connecting it logically to the surrounding argument (Thompson, Bowcher, Fontaine, & Schönthal, 2019), and grounding it in credible sources (Groom, 2010). Logical connectors do real interactional work here: they “produce textual cohesion by signalling logical links between propositions” (Cao & Hu, 2014, p. 19), which in turn signals to the reader that the writer has anticipated their expectations. Citation practice adds a further layer of authority when used skilfully (Afros & Schryer, 2009; Zhang, Sun, Peng, Gan, & Yu, 2017). None of this reduces voice to a single feature, however; as Zhao (2013) and Stock and Eik-Nes (2016) argue, voice needs to be evaluated against several criteria at once, an explicit statement of the study’s significance, a clear relationship between the literature review and the current study, and a recognizable authorial interpretation of that literature. Morton and Storch’s (2019) study of how five PhD supervisors evaluated voice in doctoral theses reached a similar conclusion, underscoring just how elusive and context-dependent “good voice” remains, even among expert readers (Morton & Storch, 2019; Xu & Zhang, 2019).

4.6 Pedagogical Implications

These results carry several practical implications for teaching postgraduate academic writing, particularly to non-native English-speaking students. First, because interactional metadiscourse is frequently used inconsistently by inexperienced writers regardless of research design, supervisors and writing instructors should treat it as a teachable skill rather than assuming it will develop on its own. Explaining each category of metadiscourse in plain language, together with concrete examples from published writing in the student's own discipline, is likely to be more effective than presenting Hyland's (2009) framework in the abstract.

Second, once students understand the categories, they benefit from applying that knowledge directly: identifying instances of hedges, boosters, and reader references in published research papers, ideally drawn from reputable journals or corpora of expert writing such as the British Academic Written English (BAWE) collection (Nesi & Gardner, 2012). Repeated, guided practice of this kind helps students internalize the more complex aspects of metadiscourse choice rather than treating it as a checklist.

Third, given how strongly register shaped the results here, instruction should be explicitly discipline-aware. A hedge-heavy strategy that works well in linguistics or social science writing will not necessarily transfer to engineering writing, and vice versa; students moving between disciplines, or writing for interdisciplinary audiences, need to be told this explicitly rather than left to infer it. Finally, students should be encouraged to draft, receive feedback, and revise iteratively, with supervisors and instructors modelling how metadiscourse choices affect a reader's sense of the writer's authority and credibility.

5. Conclusion

This study set out to compare how Pakistani non-native and American native postgraduate students use interactional metadiscourse in dissertation introductions, using Hyland's (2005a) interpersonal model and a two-way ANOVA with register and year as fixed factors. The results show that register is the dominant influence on interactional choices: engineering writing consistently hedges less and addresses the reader more directly than linguistics or social science writing, while year of publication has a much narrower effect, limited mainly to reader references. Boosters and reader references also showed a modest interaction between year and register, suggesting that disciplinary norms are not entirely static over time.

The comparative angle of this study, setting Pakistani and American postgraduate writers' side by side within the same registers, is what distinguishes it from most prior metadiscourse research, which has tended to look either at undergraduate writing or at single-country samples. The pattern that emerges here is that disciplinary convention, more than national or first-language background on its own, governs how writers deploy interactional metadiscourse at the postgraduate level, though first-language background likely still shapes how comfortably and confidently writers deploy those disciplinary conventions in the first place.

This work is limited to the introductory sections of dissertations and to three registers; extending the same comparison to literature reviews, discussion sections, or conclusions would help establish whether the register effect holds throughout a dissertation or is specific to how writers open their arguments. It would also be worth testing whether direct instruction in metadiscourse awareness, of the kind outlined above, measurably improves non-native postgraduate students' writing over a semester or a full thesis-writing cycle. In the meantime, the findings here offer a reasonably clear, empirically grounded starting point for supervisors and writing-centre instructors who want to help postgraduate students, native and non-native alike, write introductions that meet their discipline's expectations for how a confident, credible academic voice should sound.

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