TEXTUAL TAPESTRIES: WEAVING THROUGH METADISCOURSE IN DIFFERENT ACADEMIC GENRES BY TURKISH AND NATIVE ENGLISH ACADEMICS IN DISCUSSION SECTIONS

(Master's Thesis)

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Yüksek Lisans tezi olarak hazırladığım "*Textual Tapestries: Weaving Through Metadiscourse in Different Academic Genres by Turkish and Native English Academics in Discussion Sections*" adlı çalışmanın öneri aşamasından sonuçlandığı aşamaya kadar geçen süreçte bilimsel etiğe ve akademik kurallara özenle uyduğumu, tez içindeki tüm bilgileri bilimsel ahlak ve gelenek çerçevesinde elde ettiğimi, tez yazım kurallarına uygun olarak hazırladığımı, bu çalışmamda doğrudan veya dolaylı olarak yaptığım her alıntıya kaynak gösterdiğimi ve yararlandığım eserlerin kaynakçada gösterilenlerden oluştuğunu beyan ederim.

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ABSTRACT

TEXTUAL TAPESTRIES: WEAVING THROUGH METADISCOURSE IN DIFFERENT ACADEMIC GENRES BY TURKISH AND NATIVE ENGLISH ACADEMICS IN DISCUSSION SECTIONS

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This thesis presents a comparative analysis of interactional metadiscourse markers (IMDMs) in the discussion sections of doctoral dissertations, master's theses, and research articles by native English-speaking academic writers (NAWEs) and Turkish-speaking academic writers of English (TAWEs). The study analyzes a corpus of 76,680 words from NAWE-authored Ph.D. dissertations, 42,466 words from NAWE-authored master's theses, 25,070 words from NAWE-authored research articles, 190,475 words from TAWE-authored Ph.D. dissertations, 114,854 words from TAWE-authored master's theses, and 30,098 words from TAWE-authored research articles, using Hyland's (2005) taxonomy of metadiscourse.

Quantitative findings reveal that NAWEs use a higher frequency and diversity of IMDMs in their master's theses (635.10 per 10,000 words) compared to Ph.D. discussions (541.60 per 10,000 words) and article discussions (615.08 per 10,000 words). TAWEs show a more consistent application across genres, with frequencies of 509.20 in Ph.D. discussions, 519.62 in master's discussions, and 520.96 in article discussions, indicating a uniform metadiscursive approach.

Further analysis highlights distinct strategies between the groups. NAWEs employ a wider range of IMDMs to navigate complex scholarly discourse, enhance reader engagement, and assertively present research claims. In contrast, TAWEs use a narrower range, possibly due to different rhetorical preferences or instructional backgrounds. This differential use may impact the global communicability and academic integration of TAWE-authored texts (Ädel, 2006).

The findings underscore significant cultural and educational influences on academic writing practices, particularly in the use of metadiscourse, echoing Mauranen's (1993) observations of non-native speakers' challenges. These insights advocate for targeted enhancements in academic writing curricula for TAWEs, aiming to bridge gaps

and equip these writers with the skills needed to succeed in international academic forums. By addressing these discrepancies, educational institutions can better support TAWEs in achieving a higher standard of scholarly communication, ensuring their contributions are effectively articulated and received on par with their native English-speaking counterparts.

Keywords: Academic Discourse, Authorial Voice, Discussion Sections, Interactional Metadiscourse Markers

ÖZET

METİNSEL DOKUMALAR: TÜRK VE ANADİLİ İNGİLİZCE OLAN AKADEMİSYENLERİN TARTIŞMA BÖLÜMLERİNDE FARKLI AKADEMİK TÜRLERDE ÜSTSÖYLEM ÖĞELERİ İŞLEMELERİ

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Bu tez, ana dili İngilizce olan akademik yazarlar (NAWEs) ve İngilizce yazan Türk akademik yazarlar (TAWEs) tarafından yazılan doktora tezleri, yüksek lisans tezleri ve araştırma makalelerinin tartışma bölümlerindeki etkileşimsel üstsöylem öğelerinin (IMDMs) karşılaştırmalı olarak analiz etmektedir. Çalışma, Hyland'ın (2005) etkileşimsel üstsöylem öğeleri taksonomisini kullanarak, NAWE yazarları tarafından yazılmış doktora tezlerinden 76.680 kelime, yüksek lisans tezlerinden 42.466 kelime, araştırma makalelerinden 25.070 kelime; TAWE yazarları tarafından yazılmış doktora tezlerinden 190.475 kelime, yüksek lisans tezlerinden 114.854 kelime ve araştırma makalelerinden 30.098 kelimelik bir korpusu analiz etmektedir.

Nicel bulgular, NAWE'lerin yüksek lisans tezlerinde (10.000 kelimede 635.10) doktora tartışmalarına (10.000 kelimede 541.60) ve makale tartışmalarına (10.000 kelimede 615.08) kıyasla daha yüksek bir IMDMs çeşitliliği ve sıklığı kullandıklarını ortaya koymaktadır. TAWEs ise, doktora tartışmalarında 509.20, yüksek lisans tartışmalarında 519.62 ve makale tartışmalarında 520.96 sıklıkla daha tutarlı bir uygulama göstermektedir, bu da akademik seviyeye veya türe bakılmaksızın tekdüze bir etkileşimsel üstsöylem öğeleri yaklaşımını işaret etmektedir.

İleri analiz, gruplar arasındaki farklı stratejileri vurgulamaktadır. NAWE'ler, karmaşık akademik söylemi yönetmek, okuyucu katılımını artırmak ve araştırma iddialarını belirgin bir şekilde sunmak için daha geniş bir IMDMs yelpazesi kullanmaktadır. Buna karşılık, TAWEs daha dar bir yelpaze kullanmakta, bu durum farklı retorik tercihleri veya İngilizce akademik yazıdaki yabancı dil statüsünden kaynaklanan eğitim geçmişlerini yansıtabilir. Bu farklı kullanım, TAWE tarafından yazılan metinlerin küresel iletişim ve akademik entegrasyonunu etkileyebilecek potansiyel boşlukları ortaya koymaktadır (Ädel, 2006).

Bulgular, özellikle etkileşimsel üstsöylem öğelerinin kullanımı konusunda, akademik yazma uygulamalarında kültürel ve eğitimsel etkilerin önemli olduğunu

vurgulamaktadır. Bu bulgular, TAWEs için özel olarak tasarlanmış akademik yazma müfredatlarında hedeflenen iyileştirmeleri savunmaktadır ve bu yazarları uluslararası akademik forumlarda başarılı olmaları için gerekli becerilerle donatmayı amaçlamaktadır. Bu farklılıkları anlayarak ve ele alarak, eğitim kurumları TAWEs'i daha yüksek bir akademik iletişim standardına ulaşmalarında daha iyi destekleyebilir ve katkılarının ana dili İngilizce olan meslektaşlarıyla eşit şekilde ifade edilmesini ve kabul görmesini sağlayabilir.

Anahtar Kelimeler: Akademik Söylem, Etkileşimsel Üst Söylem Öğeleri, Tartışma Bölümleri, Yazar Duruşu

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ABBREVIATIONS

AW	Academic Writing
CA	Contrastive Analysis
CNWE	The Corpus of Native Academic Writers of English
CTWE	The Corpus of Turkish-speaking Academic Writers of English
IMDMs	Interactional Metadiscourse Markers
MD	Metadiscourse
NAWEs	Native Academic Writers of English
TAWEs	Turkish-speaking Academic Writers of English

THESIS TEXT

CHAPTER 1
INTRODUCTION

Writing, as a form of communication, has become unreplaceable since the globalization of the world. As a global medium of communication, English has achieved preeminence as the leading language of the twenty-first century. The vast body of scientific research, academic publications, and cross-cultural dialogues have converged upon English as the preferred mode of discourse, making it the language of choice for scholars, researchers, and academics in international contexts (Alhasnawi, 2021). Having stated that as a medium of communication, writing in English, an internationally accepted language, covers a big deal of communication, thus calling for close attention.

The primary objectives of writers during the writing process include the expression of personal thoughts and ideas through language, fostering engagement with readers via targeted content and specialized communities, and ultimately establishing a meaningful rapport with the audience (Peng & Jiang, 2021). To do so, pragmatic aspects in the written material become one of the important factors. Writing poses significant challenges for native speakers, which can be magnified for individuals who speak English as a second language. Thus, it is crucial to be competent in English and communicate with it by expressing 'one's ideas with people from different cultures and backgrounds (Gupta et al., 2022).

For cross-cultural communication, a common language is a must-have. English, being a common language for both spoken and written delivery, has an influence on published works that exchange information, experiments, and knowledge. It is crucial that we learn how to convey our thoughts in written English in order for non-native writers to share knowledge.

In the age of international collaboration and the dissemination of knowledge, the role of English in written communication cannot be overstated (Sofyan, 2021; Wang, 2022; Dash, 2022; Gotti, 2020). Academic writing, a cornerstone of scholarly discourse, now unfolds predominantly in English. Yet, writing is not solely a product of eloquence and vocabulary; it is a complex process. The complexity of writing goes beyond just eloquence and vocabulary, involving significant pragmatic elements that shape how effectively a writer can communicate with their audience (Allan & Jaszczolt, 2012). Pragmatic aspects are intertwined with the craft of writing, shaping the writer's ability to communicate effectively and meaningfully with their readers. In the written medium, pragmatic elements play a pivotal role in conveying the author's intentions, engaging the reader, and fostering effective communication (Owtram, 2010).

The global academic community's reliance on English necessitates a nuanced understanding of the intricate web of linguistic choices, a deep appreciation of cultural sensitivities, and a keen awareness of how language is used to facilitate effective communication (Alhasnawi, 2021b). In this intricate process, pragmatics emerges as an indispensable facet of academic writing. It delves into the complexities of language in use, exploring the subtle nuances that underlie effective communication (Jackman, 2016).

Pragmatics, as a field of study, investigates how language is employed to convey meaning beyond the literal interpretation of words. It addresses the intricacies of linguistic choices, context-driven language use, and the interplay of speaker and listener intentions. In the realm of academic writing, where precision, clarity, and the expression of scholarly intent are paramount, pragmatics serves as a guiding force (Biber & Gray, 2015).

Academic research often finds its culmination in written form, with master's theses, doctoral dissertations, and research articles standing as pillars of knowledge dissemination. These documents encapsulate the dedication, the intellectual rigor, and the collaborative effort that characterize academic scholarship. Moreover, the effective communication of research findings and scholarly ideas is not only a measure of the writer's skill but also a testament to the importance of linguistic and pragmatic choices in academic writing (Khany et al., 2019).

In this context, the current study delves into a specific subset of academic research—namely, research on teaching foreign languages. The focus on interactional metadiscourse markers in the writings of master's students, doctoral candidates, and expert scholars in this field underscores the pivotal role of language in transmitting knowledge, establishing a scholarly presence, and engaging with readers. The choice to concentrate on English language teaching is particularly pertinent, as English serves as a global lingua franca and is the predominant medium of instruction and scholarly communication worldwide. This focus allows for a comprehensive analysis of how metadiscourse is utilized in a widely influential and internationally relevant context, providing insights that can be applied across various linguistic and educational settings.

As the journey continues through the chapters of this thesis, the exploration of interactional metadiscourse markers unfolds within the broader narrative of academic research and scholarly communication. It underscores the need for proficient and

pragmatic use of language in the globalized academic arena. The main objective of the present study is to illuminate the intricacies of how writers deploy interactional metadiscourse markers to enhance the power of written English as a medium of global interaction. It examines how interactional metadiscourse markers, crucial pragmatic tools of written communication, are utilized within the realm of academic writing dedicated to foreign language education. Understanding writers' deploy interactional metadiscourse markers becomes imperative as the world embraces English as the medium for international academic discourse (Deng et al., 2021b; Irvin, 2017).

The goal of this research is to unravel the intricate tapestry of how interactional metadiscourse markers are used by writers from diverse linguistic backgrounds. Through a meticulous analysis of academic documents authored by both Turkish and native English-speaking writers, this research aims to illuminate the sophisticated strategies these writers use to articulate scholarly concepts, engage their audience, and carve out their space within the academic community.

In conclusion, the journey that unfolds in the pages of this thesis speaks to a broader narrative—a narrative of effective scholarly communication in a globalized world. It highlights the necessity for academics to not only present their ideas but also to resonate with and relate to their audience within an English-dominated scholarly environment.

This exploration into the linguistic landscape examines the significant impact of interactional metadiscourse markers on foreign language teaching. These markers, subtle yet powerful, serve as bridges linking the writer’s intent to the reader’s understanding, thus boosting the clarity and impact of English in international scholarly communication (Franzosi & Vicari, 2018; Hyland & Jiang, 2018; Pérez-Llantada, 2010; Qin & Uccelli, 2019; Sanderson, 2008). This study adds to the ongoing conversation about optimizing academic interactions, seeking to refine how knowledge is exchanged and understood in the global academic setting of the twenty-first century.

This research contributes to the scholarly dialogue within the field of applied linguistics, especially in terms of foreign language education, and highlights the universal importance of effective academic writing in a globally interconnected world where ideas and knowledge freely transcend borders. The subsequent chapters will delve deeper into the exploration of interactional metadiscourse markers, aiming to provide insights,

understanding, and a roadmap for navigating the complexities of effective scholarly communication in the global academic landscape.

1.1. BACKGROUND TO THE STUDY

Writing has a substantial purpose of communication; therefore, merely presenting information, articulating ideas and emotions, or summarizing the findings of a study in written form is inadequate for achieving this purpose (Fang, 2021). So, the written text should have communicational aspects for readers to follow. Involving readers in the text is crucial; to accomplish that, writers use certain markers like metadiscourse markers (Hyland, 2017). With the aid of metadiscourse, writers can connect with their audience, and it is useful when organizing the discourse, engaging the readers, and signaling the 'writers' attitudes (Zarei, 2011). The use of metadiscourse aids the writer in controlling their part in adopting a relationship with the reader and the content viewed as textual (Hyland, 2005). Textual refers to the method by which a text is meticulously organized and coded to produce coherence and structure (Guziurová, 2017). This relationship is also seen as interpersonal because it enables writers to communicate their attitudes and feelings toward readers (Halliday, 1994). Furthermore, metadiscourse is viewed as an integral component of academic rhetoric, and it is recognized that it can be shaped by the writer's cultural background (Halliday, 1994; Jackman, 2016).

Additionally, metadiscourse elements serve to indicate the level of responsibility of the writer or reader, the author's disclosure of their own perspective, and the organization of writing or the reader's process of comprehension (Zarei, 2011; Guziurová, 2017b; Farahani, 2021). Consequently, they contribute to making the text more accessible to readers. Added to that, Perez-Ltanada (2003) concentrates on metadiscourse in spoken language and proposes that through the use of textual metadiscourse, listeners can reestablish the discourse's structure, discern the logical relationships between ideas, better understand the flow of information, and activate the mental frameworks involved in communication. Based on this perspective, it becomes apparent that employing metadiscourse features may be helpful in preventing reader misunderstanding, much like how spoken discussion can aid in the processing of information.

While the use of metadiscourse is crucial in written texts and should be taught to writers or used thoughtfully to enhance communication, excessive use of these elements can have the opposite effect on a writer's intention (Kobayashi & Rinnert, 2023;

Hyland, 2005a). Additionally, Hyland and Tse (2004, p. 167) posit that *"metadiscourse represents the 'writer's awareness of the unfolding text as discourse: how writers situate their language use to include a text, a writer, and a reader"*. Based on their research, they developed a taxonomy for metadiscourse, which they termed "a model of metadiscourse in academic text.".

The process of writing transcends mere transcription; it embodies a profound purpose – communication. Written text serves as a medium through which ideas, emotions, and research findings are not just recorded but effectively communicated (Crismore, 1983; Hyland, 2018).

1.2. STATEMENT OF THE PROBLEM

Academic writing stands as a nuanced and intricate domain wherein the adept conveyance of ideas and active engagement with readers hold paramount importance (Freeling et al., 2021; Jiang & Ma, 2019). Within this context, scholars in applied linguistics and academic writing have notably directed their attention toward the utilization of metadiscourse markers. Metadiscourse markers, a key category of linguistic devices, are essential for indicating the author's viewpoint, navigating readers through the content, and promoting engagement between the writer and the readers (Hyland, 2005; Hyland, 2005a; Zou & Hyland, 2019). Clearly, proficiency in English writing is essential in the contemporary academic landscape. The domain of academic writing, central to knowledge dissemination and scholarly communication, heavily relies on the effective employment of interactional metadiscourse markers (Hyland, 2005a). Serving as linguistic devices, these markers assist writers in guiding readers, establishing their presence and stance, and conveying attitudes toward the subject matter. The strategic deployment of these markers becomes pivotal in shaping the success of academic writing, influencing both communication clarity and the author's efficacy in engaging with the reader (Hyland, 2005a; Livingstone, 2019; Deng et al., 2021).

This thesis aims to thoroughly explore the intricate landscape of metadiscourse markers, with a specific focus on a subcategory known as interactional metadiscourse markers. These markers are vital language tools utilized by authors to navigate their interactions with readers, manage reader engagement, and position themselves within the academic discourse community. (Hyland, 2018b; Dafouz-Milne, 2008)

By examining these markers, the study seeks to elucidate how authors establish their credibility, connect with their audience, and guide readers through their arguments. This research is pivotal as it bridges the gap between textual analysis and reader response, enhancing our understanding of academic writing's persuasive and rhetorical dimensions. The findings could offer significant insights for improving academic writing pedagogy and for writers aiming to refine their engagement strategies within scholarly communication.

Academics need to not only recognize the textual characteristics of various academic genres but also grasp their pragmatic uses. Especially for non-native speakers, Mauranen (1993) argues that they often lack awareness of the characteristics of universal scientific language, leading to the frequent use of inappropriate linguistic elements at the level of discourse, which can cause misunderstandings. Similarly, Biber and Conrad (2009) note that mastering the expected norms of different genres poses significant challenges for those who are not native speakers. As such, it is crucial for these individuals to identify and understand these features to write proficiently in English within the academic sphere. Al Fadda (2012) asserts that ESL learners must become proficient in both organizational aspects like grammar and vocabulary and the rhetorical structures specific to particular genres. They encounter challenges in adapting to academic English due to the differences between spoken and written forms of academic genres. Similarly, Çapar (2014) argues that second language writing instruction encompasses teaching precise grammar and structural organization. Yet, second language writers often struggle with employing linguistic strategies effectively to engage with their readers. To keep up with recent publications, effectively communicate in English, and disseminate their research findings, Turkish academic authors need to master the use of metadiscourse devices akin to native speakers. In another study, Chang (2015) explores doctoral students' perceptions of the author stance in academic research, finding that these students typically shy away from adopting a definitive stance, preferring instead to make cautious claims, reflecting a simplified and polarized view of the stance. They also tend to interpret their stance more through an epistemic and attitudinal lens rather than a dialogic perspective.

Despite the widespread recognition of the significance of interactional metadiscourse markers in academic writing, a crucial gap exists in understanding how these markers are utilized across various stages of academic development and within

diverse disciplinary contexts. This research problem is compounded by the necessity to consider the impact of linguistic and cultural backgrounds on metadiscourse usage, particularly in the comparison of writing produced by non-native and native academic writers. The scarcity of comprehensive studies on the usage of interactional metadiscourse markers in academic writing, specifically within the domain of foreign language teaching, leaves a void in our comprehension of how these markers contribute to effective written communication (Qiu & Ma, 2019).

In the broader context of academic language, metadiscourse encompasses a variety of linguistic tools that explicitly structure texts, facilitate author-reader interactions, and help present the author's ideas credibly and effectively. The academic study of metadiscourse has paid considerable attention to its role in various academic genres like research articles, postgraduate theses, and doctoral dissertations, particularly looking at how these roles manifest across different cultures and academic disciplines (Abdi, 2009; Blagojevic, 2004; Burneikaite, 2008; Mur-Duenas, 2011; Özdemir & Longo, 2014; Çapar, 2014; Cao & Hu, 2014; Dahl, 2004; Hyland, 1998b; Hyland, 1999; Hyland, 2004; Hyland, 2010b; Rezaei et al., 2015; Salas, 2015; Güçlü, 2020). Gender differences in metadiscourse use have also been explored (Yavari & Kashani, 2013; Zareifard & Alinezhad, 2014). While metadiscourse has been widely studied, its critical role in shaping the author stance toward the text and the readers has been less emphasized (Akbaş, 2012; Hyland, 1999; Hyland, 2004; Lafuente-Millán, 2010).

Specifically, the literature often lacks clarity on how authors construct their stances using metadiscourse devices within academic genres, such as articles, master's theses, and Ph.D. dissertations, particularly in the discussion sections. These sections are crucial parts of the writing process, as they are essential for interpreting and analyzing study results, transforming numerical data into practical information, and highlighting the significance of findings (El-Sobky, 2021). Despite their importance, discussion sections are in need of further study to understand the uses of metadiscourse markers (Akbaş, 2014). As Al-Shujairi and Al-Manaseer (2022) emphasize, a deeper examination of these sections can reveal how academic writers establish their scholarly presence and engage with readers through metadiscourse.

The discussion section is an integral part of a research manuscript, allowing authors to interpret results, highlight study virtues and limitations, discuss theoretical and practical implications, and provide a key "take-home" message. It has been likened to

closing arguments in a court case, as it is the last chance for authors to "sell" their paper. This section should be written in a focused manner, directly addressing the research question raised in the introduction, which helps make a lasting impression on readers. Unlike other sections that require orderly and simple logical writing, the discussion section demands logical thinking, reflection, and critical appraisal. A well-crafted discussion includes a statement of important results, references to relevant literature, comparisons with previous findings, explanations of results, elucidation of study strengths and weaknesses, interpretation of the evidence, impact descriptions, and future recommendations.

For doctoral dissertations, the discussion section involves complex argumentation, guiding the reader from data acceptance to the writer's knowledge claim. This is critical for demonstrating academic maturity and critical thinking (Parkinson, 2011). It allows Ph.D. candidates to engage in dialogue with the academic community, presenting their findings in a way that highlights their contributions and identifies gaps in the literature (Loghmani et al., 2019). For master's students, the discussion section is crucial for presenting claims based on research results and involves commenting on results to demonstrate understanding and engagement with the research community (Basturkmen, 2009). It helps students develop their authorial voice and engage critically with previous scholarship, which is important for their academic growth and preparation for advanced research (Fendri & Triki, 2022).

In research articles, the discussion section is vital for communicating the implications of the study and situating the findings within the broader academic context. It emphasizes the author's contributions to existing knowledge and discusses the study's strengths and limitations (Kosycheva & Tikhonova, 2022). A well-structured discussion helps make the research more accessible and impactful, enhancing the work's visibility and credibility (Skelton & Edwards, 2000). Thus, the discussion section is indispensable across all types of academic writing, including articles, master's theses, and Ph.D. dissertations. It plays a crucial role in interpreting findings, engaging with the academic community, and situating research within the broader scholarly conversation.

In academic writing, particularly within the structure of Ph.D. dissertations, the discussion section plays a pivotal role in articulating research findings and framing their implications. The discussion section is essential for interpreting study results, explaining their significance, and comparing them with previously published findings (Bavdekar,

2015). It transforms numerical data into practical information, making the findings accessible and meaningful for the reader (Bagga, 2016). Additionally, it addresses the theoretical and practical implications of the research, highlights contributions to the existing body of knowledge, and suggests future research directions (Niedergassel, 2011). A well-structured discussion section guides the reader through the interpretation of the results, ensuring a clear understanding of the study's contributions and broader implications (Skelton & Edwards, 2000). It helps make a lasting impression by summarizing the main findings, acknowledging the study's limitations, and providing a concise take-home message (Cals & Kotz, 2013).

This research seeks to delve into the specific use of interactional metadiscourse markers (IMDMs) within the discussion sections of dissertations authored by native English-speaking academic writers (NAWEs) and Turkish-speaking academic writers of English (TAWEs). The discussion section is crucial as it allows the author to interpret results, relate them back to the existing body of knowledge, and suggest further research paths, making the use of IMDMs integral in effectively shaping the discourse. Interactional metadiscourse markers, such as hedges, boosters, and engagement markers, are crucial in the discussion section for establishing the writer's stance, engaging with readers, and framing the discourse effectively (Liu & Buckingham, 2018). These markers help in managing textual interactions and ensuring that the arguments presented are persuasive and credible (Kostenko et al., 2023).

This research will explore whether there are discernible differences in the deployment of these markers between the two groups in different academic writing types. Specifically, it will examine the variety and frequency of IMDMs used by NAWEs and TAWEs to engage the reader, clarify the argument, and assert or hedge the claims made in the discussion of their findings. Additionally, this research aims to identify if the differences in the use of IMDMs are statistically significant and how these variations might reflect broader cultural and educational influences on academic writing practices.

The lack of knowledge regarding their role at distinct academic levels, from master's students to doctoral candidates and expert scholars, inhibits the development of targeted writing pedagogies and effective strategies for enhancing the quality of academic discourse.

1.3. OBJECTIVES AND SIGNIFICANCE OF THE STUDY

In today's academic landscape, where English predominates as the primary medium of scholarly discourse, it is paramount to comprehend how metadiscourse functions and exhibits variations in usage among writers with diverse linguistic and cultural backgrounds. This study zeroes in on the specific realm of foreign language teaching, where master's theses, doctoral dissertations, and research articles serve as the linchpin for disseminating knowledge. By delving into the utilization of interactional metadiscourse markers in writings by Turkish academic writers and native English-speaking academic writers within the field of foreign language teaching, this research strives to unveil patterns, commonalities, and distinctions in metadiscourse usage. Such insights prove invaluable for educators, researchers, and writers in the field, shedding light on the pragmatic and cultural dimensions of metadiscourse within the context of academic writing.

This research holds significance for several reasons. Firstly, it fills a gap in the literature by concentrating specifically on the use of interactional metadiscourse markers in the specialized context of foreign language teaching discussion sections. Secondly, it enhances our understanding of how academic writers, encompassing both native and non-native English speakers, navigate the intricacies of academic discourse in a field where linguistic and cultural diversity is integral. The findings have the potential to provide insights into the challenges and strategies employed by writers to establish their presence and effectively engage with readers.

Moreover, this study carries practical implications for educators, researchers, and students in the field of foreign language teaching. By uncovering patterns and distinctions in the use of interactional metadiscourse markers, it can inform pedagogical approaches that foster effective academic writing skills. As Yoon and Römer (2020) found, advanced students use interactional metadiscourse to align with disciplinary expectations, improving clarity and reader engagement. Additionally, the research contributes to the ongoing scholarly conversation about the role of metadiscourse markers in academic communication. Understanding these markers empowers writers to adeptly convey ideas, engage readers, and establish authority within the discipline. Ebtisam Saleh Aluthman (2018) demonstrated that different academic divisions use varying amounts of metadiscourse markers, which can inform tailored teaching approaches.

Educators and writing instructors stand to benefit from the outcomes of this study by gaining a deeper comprehension of specific interactional metadiscourse markers prevalent and effective in various types of academic writing. This awareness informs the development of targeted pedagogical strategies aimed at improving the writing skills of students across different academic levels. With a focus on comparing the usage of interactional metadiscourse markers among Turkish academic writers and native English-speaking academic writers, this research holds the potential to nurture cross-cultural academic dialogue. Kirişçi and Duruk (2022) found significant differences in metadiscourse marker usage between Turkish and English writers, which can foster greater intercultural understanding and collaboration. It may contribute to recognizing the impact of cultural and linguistic diversity on academic writing practices, fostering greater intercultural understanding and collaboration.

This study has the potential to propel academic research by illuminating the intricacies of interactional metadiscourse markers in the realm of foreign language teaching. Researchers can leverage these findings as a foundation for further investigations into the influence of these markers on knowledge dissemination, the evolution of academic discourse, and the emergence of distinctive writing conventions in this discipline. Khadije Ghahremani Mina and Reza Biria (2017) highlighted the importance of these markers in making academic texts more persuasive and interactive.

The effective utilization of interactional metadiscourse markers in academic writing elevates the overall quality of scholarly publications. By augmenting the clarity and engagement of academic discourse, this study supports the broader academic community in its mission to disseminate knowledge and insights to a diverse and global readership. Enhanced communication through well-crafted academic texts ensures that research findings are more accessible and impactful, facilitating the exchange of ideas and advancing the collective understanding of complex subjects within the academic community.

In conclusion, the significance of this research lies in its potential to directly influence academic writing practices, writing pedagogy, cross-cultural academic discourse, and the overall advancement of knowledge in the field of foreign language teaching. Through an exploration of interactional metadiscourse markers in academic writing, this study makes valuable contributions to the academic community and the broader educational landscape.

Based on all these, this present research aims to achieve a nuanced understanding of how the interactional metadiscourse markers are employed in academic writing across varying academic levels, particularly by Turkish academic writers and their native English-speaking peers. In pursuing this objective, the study is organized in order to:

1. Identify the prevalent use of interactional metadiscourse markers in English master's theses, doctoral dissertations, and research articles addressing foreign language teaching discussion sections, as authored by TAWE and NAWE.
2. Examine how frequently interactional metadiscourse markers appear between the two groups in different academic writing types discussion sections penned by TAWE and NAWE.
3. Investigate whether there is a significant difference in the deployment of interactional metadiscourse markers between the foreign language teaching publications discussion sections,
   a. by TAWE and NAWE.
   b. by TAWE and NAWE within different academic genres (doctoral dissertations, master's theses, research articles)

By accomplishing these aims, this research aspires to offer significant perspectives on the significance of interactional metadiscourse markers in academic writing and their potential modifications influenced by the writer's linguistic and cultural context. The study endeavors to illuminate the influence of these markers on written communication, advance the construction of writing pedagogies, and enrich cross-cultural academic discourse. Ultimately, this contributes to the effective dissemination of knowledge in the realm of foreign language teaching.

1.4. RESEARCH QUESTIONS

On the basis of the aforementioned purposes, the following research questions are determined to lead the analysis:

- What interactional metadiscourse markers are predominantly used, and how frequently are they employed in English master's theses, doctoral dissertations, and research articles on foreign language teaching written by Turkish academic writers compared to those written by native English-speaking academic writers?

- Is there a significant difference in the use of interactional metadiscourse markers among English master's theses, doctoral dissertations, and research articles on foreign language teaching written by Turkish academic writers compared to those written by native English-speaking academic writers?

1.5. SCOPE AND DELIMITATIONS

The focus of this study involves a thorough examination of the utilization of interactional metadiscourse markers in English master's theses, doctoral dissertations, and research articles within the domain of foreign language teaching using Hyland's taxonomy(2005). This taxonomy comprises two main sections: interactive resources and interactional resources, with further subdivisions in each category. For the purpose of this study's data analysis, the focus is solely on coding interactional metadiscourse indicators. Specifically, this research analyzes the discussion sections of these academic texts authored by both native English-speaking academic writers (NAWEs) and non-native English-speaking academic writers (TAWEs). The research was specifically focused on the analysis of doctoral dissertations, master's theses, and research articles within the field of English Language Teaching. A key criterion for selecting these texts was the presence of distinct discussion sections in experimental studies, which inherently limited the scope of the corpus. Consequently, this purposeful scope limited the number of words for the corpora.

Given that only experimental studies with separate discussion sections were intentionally chosen, the findings are shaped by this methodological decision and may not fully capture the range of discourse practices across all types of academic writings in English Language Teaching. This selection criterion may also exclude a broader range of academic texts that could present different uses of interactional metadiscourse markers but do not fit the experimental study design or lack a designated discussion section.

Moreover, because the analysis is confined to experimental studies within a single academic discipline, the results might not be generalizable to other fields or non-experimental studies within English Language Teaching. The study's focus on specific academic documents also means that the influence of individual authors' backgrounds, which can significantly impact metadiscourse usage, was not comprehensively assessed.

These limitations suggest that while the study provides valuable insights into the construction of academic stance in English Language Teaching experimental studies,

further research involving a more diverse array of document types and disciplines would be beneficial. Such research could broaden our understanding of the nuanced ways in which academic writers employ metadiscourse across various contexts.

Despite these limitations, this study seeks to contribute valuable insights into the usage of interactional metadiscourse markers in the context of academic writing within the field of foreign language teaching. It provides a foundation for further research and a deeper understanding of the role of metadiscourse in effective written communication.

1.6. DEFINITIONS OF TERMS

Academic Writing (AW): Academic writing encompasses the activities of publishing, communicating, and contributing to a knowledge base within an academic context. It represents a fundamental component of scholarly engagement, through which academics disseminate and exchange knowledge (Burke, 2010).

Author Stance: Author stance refers to the way writers express their personal attitudes or evaluate the status of knowledge within their texts, indicating their position or perspective in relation to the content discussed (Hyland, 2012b).

Contrastive Analysis (CA): Contrastive Analysis involves the systematic identification of similarities and differences between languages. This analytical approach informs the development of language teaching syllabi by highlighting distinctive linguistic features that may require targeted instructional focus (adapted from Granger, 2003).

Corpus: A corpus is a collection of spoken or written texts compiled and structured digitally to facilitate linguistic analysis. These collections are designed to be representative of and balanced across linguistic varieties or genres, providing a resource for detailed linguistic inquiry (adapted from Gries, 2009).

Corpus-based Approach: This approach pertains to the linguistic analysis focused on the frequency and distribution of specific words or phrases within a structured corpus, providing insights into language usage patterns (adapted from Andersen, 2016).

Corpus Linguistics: Corpus Linguistics is the study of language as expressed in corpora (samples of real-world text or speech). This field involves the systematic assembly of text samples to support linguistic research, emphasizing the authentic use of language (adapted from Adolphs & Lin, 2011).

Interactional Metadiscourse Markers (IMDMs): According to Hyland's taxonomy, interactional metadiscourse encompasses linguistic tools that help engage readers and clarify the writer's attitude towards both the content and the audience, facilitating reader involvement in the text (Hyland, 2005b).

Log-Likelihood Statistics: Log-likelihood is a statistical method used to determine the significance of differences observed in the frequency of linguistic features between different text samples, commonly applied in corpus-based studies to assess the significance of results (adapted from Baker, Hardie, & McEnery, 2006).

Metadiscourse (MD): Metadiscourse refers to the aspects of a text that organize the discourse, engage the reader, and convey the writer's attitude towards both the content and the reader, playing a crucial role in structuring and clarifying academic argumentation (Hyland, 1998b).

Native Academic Writers of English (NAWEs): This term refers to American academic authors whose native language is English and who contribute to the corpus of native academic writings, namely doctoral dissertations, master's theses, and research articles analyzed in this study.

Pragmatics of Metadiscourse: The pragmatic aspect of metadiscourse involves how academic writers communicate intentions to their readers and seek acceptance of their claims, balancing the illocutionary and perlocutionary effects within their disciplinary culture (Hyland, 1998b).

Syntactic Frames of IMDMs: In this study, interactional metadiscourse markers are categorized based on their syntactic roles, such as stance adverbs, adjectives, verbs, nouns, modals, and pronouns. These categories are adapted from the comprehensive syntactic taxonomy developed by Biber et al. (1999), which details the grammatical devices employed to express stance.

The Corpus of Native Academic Writers of English (CNWE): This corpus includes doctoral dissertations, master's theses, and research articles authored by native English-speaking academics, spanning various disciplines related to the English language.

The Corpus of Turkish-speaking Academic Writers of English (CTWE): Comprising doctoral dissertations, master's theses, and research articles by Turkish-speaking academics, this corpus includes works across three key disciplines within

English studies: English Language Teaching, English Language and Literature, and Linguistics.

Turkish-speaking Academic Writers of English (TAWEs): Refers to the Turkish academics whose English-language doctoral dissertations, master's theses, and research articles were analyzed in this study.

CHAPTER 2
REVIEW OF LITERATURE

2.1. INTRODUCTION

This section delves deeper into the foundational concepts relevant to this study: corpus linguistics, academic writing, author stance, and metadiscourse. It aims to elucidate the interconnections between these elements, fostering a comprehensive understanding of metadiscourse within the realm of academic writing. Writing serves not only as a medium of communication but also as a bridge connecting writers and readers, allowing them to exchange ideas and experiences. As a communicative tool, writing facilitates interaction beyond a mere presentation of ideas; it actively engages the reader through directed queries, guidance through the text, and interactive discourse. Particularly in academia, where authors are keen to disseminate their findings to peers and interested parties, writing transcends simple narratives to become a platform for scholarly dialogue. Here, metadiscourse plays a pivotal role by enhancing the interactive quality of academic writing, thus enriching the communicative experience.

2.2. METADISCOURSE

Writing is a crucial facet of human interaction, providing a medium through which individuals can express and share their thoughts. This interactive process is especially pronounced in academic writing, which has been extensively studied for its capacity to forge relationships between writers and their readers (Hyland, 2001). Writers must present their arguments persuasively, as readers are active participants who may challenge or reject the writers' assertions, highlighting the dynamic interplay between reader and writer (Hyland, 2001).

Metadiscourse is instrumental in shaping this interactive narrative, facilitating engagement by reflecting the writer's attitudes and organizing the discourse (Zarei, 2011). It is pivotal in persuasive writing, where the relationship with the reader is central to the effectiveness of the text (Fuertes-Olivera et al., 2001). The concept has been variously defined; Mauranen (1993) uses the term 'metatext' to describe elements that address the text itself and go beyond mere propositional content, while Dahl (2004) views metadiscourse as a way for writers to overtly recognize the reader's presence, thereby enhancing communication.

Furthering these definitions, Hyland (2004) describes metadiscourse as "linguistic resources used to organize discourse or to express the writer’s attitude towards the text or reader" (p.109), emphasizing its role in involving the reader in the narrative

and ensuring textual coherence. These elements not only convey the writer's personality and credibility but also foster sensitivity and connectivity with the audience (Hyland, 2001, p.156).

Vande Kopple (1985) distinguishes two distinct layers of writing: the propositional content, which provides factual information about the topic, and the metadiscourse level, which does not impart new information but helps readers organize and interpret the material presented. Thus, metadiscourse is essentially discourse about discourse, aimed at guiding reader interpretation and response to the text (Vande Kopple, 1985).

Overall, the literature positions metadiscourse as a strategic tool that not only structures information but also cultivates an evaluative and interpretative framework for the reader, underscoring its significance in academic writing (Halliday, 1973; Mauranen, 1993; Hyland, 1998, 1999; Hyland & Tse, 2004).

2.2.1. Metadiscourse Taxonomy

The application of metadiscourse is not arbitrary; it adheres to the norms and expectations specific to various cultural and professional communities. Writing, inherently a culturally situated social activity, demands an understanding of rhetorical contexts, where effective metadiscourse use hinges on the writer's ability to manage interpersonal and intertextual relationships (Hyland, 1998). Although Hyland highlights these two factors, the field recognizes a broader spectrum of metadiscourse taxonomies (Beauvais, 1989; Crismore, 1989; Mauranen, 1993; Nash, 1992; Vande Kopple, 1985), with a particular emphasis on the detailed taxonomy by Hyland and Tse (2005b), which serves as the foundation for this study.

Metadiscourse is acknowledged as a key rhetorical strategy in discourse production (Chambliss and Garner, 1996; Hyland, 1996, 1998). Vande Kopple (1985) initially categorized metadiscourse into textual and interpersonal types, the former sometimes called metatext (Bunton, 1999; Mauranen, 1993), aligning with Halliday's textual function to structure the discourse and guide the reader.

Metadiscourse operates within Halliday's three macro-functions of language: ideational, interpersonal, and textual, as delineated by various scholars (Vande Kopple, 1985; Crismore, Markkanen & Steffensen, 1993; Mauranen, 1993; Bunton, 1999; Hyland

and Tse, 2004). However, Adel (2006) diverges from this convention, proposing a taxonomy not based on these functions, illustrating a unique perspective on the integration of text and reader-writer interactions.

In metadiscourse, textual elements structure the content, ensuring clarity and coherence, while interpersonal elements facilitate the construction of social relationships, allowing writers to express personal attitudes and engage with the reader on a more intimate level (Halliday, 1973; Vande Kopple, 1985). These categories have been refined over time, with Mauranen (1993) narrowing the scope of metatext and Bunton (1999) further developing these ideas into a more comprehensive taxonomy.

Adel's (2006) taxonomy, distinct in its approach, divides metadiscourse into metatext, addressing the text itself and writer-reader interactions, emphasizing engagement strategies. This nuanced understanding underlines the importance of considering both the text and its interactive components in academic discourse.

The study's reliance on Hyland's (2005b) taxonomy, chosen for its comprehensiveness and modernity, reflects a trend towards more reader-oriented and clearly differentiated metadiscourse categories. Their work particularly emphasizes the dual dimensions of interactive and interactional resources, guiding readers through the text and engaging them in the argument, respectively. This taxonomy serves as a cornerstone for examining metadiscourse elements across various academic disciplines, highlighting its pivotal role in shaping scholarly communication.

Metadiscourse (MD) encompasses a range of linguistic devices that writers use to engage with readers, organize text, and express their viewpoints. The development of various taxonomies over the years illustrates the complexity and evolving understanding of metadiscourse within academic writing. One seminal framework is Vande Kopple's taxonomy, first introduced in 1985 and later refined in 2012 due to criticisms about its initial vagueness. This updated taxonomy identifies six main categories of metadiscourse: Text Connectives, which elucidate connections within the text; Code Glosses, which clarify terms; Illocution Markers, which define the actions being performed by the writer; Epistemology Markers, which reveal the writer's stance on the knowledge presented; Attitude Markers, which express feelings towards the content; and Commentary, which involves direct addresses to the reader.

The analysis of metadiscourse is often approached broadly or narrowly, as noted by Adel (2006). The broad approach emphasizes the writer's explicit presence and interaction with the reader, focusing on elements that allow the reader to organize, interpret, and evaluate the information. Conversely, the narrow approach concentrates on the text's organizational aspects and reflexivity. This distinction is crucial as it influences the inclusion of "stance" in the analysis of MD markers within specific genres.

Adel's own taxonomy, inspired by Jacobson's reflexive model, categorizes metadiscourse into two main types: Meta-text, which relates to the writer's commentary on their text, and Writer-Reader Interaction, which includes features used to engage readers. Similarly, influenced by Mauranen's work, Bunton (1999) develops a taxonomy that spans several categories, including text references and act markers. Ifantidou (2005) critiques these existing frameworks and suggests a model based on inter-textual and intra-textual elements, highlighting metadiscourse's role at the semantic level of academic discourse.

Hyland (2005b) introduces a comprehensive model that defines metadiscourse as self-reflective expressions used to negotiate meanings in the text, aiding writers to articulate viewpoints and engage with readers as part of a specific community. His model rests on three principles: distinguishing metadiscourse from propositional content, shaping interactions for effective communication, and distinguishing internal from external relations. This framework categorizes metadiscourse into Interactive Resources, which organize text and assess reader relationships, and Interactional Resources, which help readers engage with the text and understand the writer's attitudes towards content and audience.

Hyland's broad model underscores the intricate role of metadiscourse in academic writing, serving not just as stylistic tools but as essential elements that foster coherent and engaging scholarly communication. This approach highlights the dynamic interplay between writers and readers, facilitating not only textual organization but also the interpersonal dynamics within academic discourse.

Table 2.1: Hyland's Taxonomy of Metadiscourse

Category	Function	Examples
Interactive resources	Help to guide the reader through the text	
Transitions	Express semantic relation between main clauses	In addition/but/thus/and
Frame markers	Refer to discourse acts, sequences, text stages	Finally/to conclude/my purpose is to
Endophoric markers	Refer to information in other parts of the text	Noted above/ see Fig./ in Section 2
Evidentials	Refer to source of information from other texts	According to X/(Y, 1990)/Z states
Code glosses	Help readers grasp the meanings of ideational material	Namely/e.g.,/such as/in other words
Interactional resources	Involve the reader in the argument	
Hedges	Withhold the writer's full commitment to the proposition	Might/perhaps/possible/about
Boosters	Emphasise force or the writer's certainty in the proposition	In fact definitely/ it is clear that
Attitude markers	Express 'writer's attitude/ proposition	Unfortunately/ I too agree/surprisingly
Engagement markers	Explicitly refer to or build a relationship with the reader with devices such as directives, reader pronouns, personal asides, questions	Consider/ note that/ you can see that
Self-mentions	Explicit reference to the author	I/we/my/our

Source: (Hyland, 2005b, p.49)

Interactive Resources

The interactive dimension of metadiscourse focuses on the writer's recognition of an engaged reader. It involves tailoring the text to address the reader's knowledge, interests, rhetorical expectations, and processing capabilities (Hyland, 2005a). The writer crafts the discourse deliberately, aiming to guide readers toward specific interpretations and objectives.

This dimension encompasses several key categories: transition markers, frame markers, endophoric markers, and code glosses, as identified by Hyland (2005b). Transition markers, which include conjunctions and adverbial phrases, facilitate readers' understanding of the logical progression within arguments. Frame markers delineate text sections and help organize discourse by sequencing, labeling, and indicating shifts in arguments, thereby enhancing clarity for the reader.

Endophoric markers refer to different segments of the discourse, assisting readers in navigating the argumentation. Evidentials, described by Thomas and Hawes (1994, p. 129) as "metalinguistic representations of ideas from other sources," also play a significant role in this context. Lastly, code glosses provide additional explanations or reformulations of statements, ensuring that the writer's intended meaning is clear to the reader.

Interactional Resources

The interactional dimension of metadiscourse pertains to how a writer connects with readers, allowing them to engage actively with the text. This dimension, which both intrudes into and comments on the message, is crucial for the writer to articulate ideas clearly and involve readers, creating a space for response and interaction. This approach enables writers to express their personal 'voice' or a persona recognized by their community, shaping how they present judgments and connect with their readers. Interactional resources, according to Hyland (2005), build on what Vande Kopple (1985) identifies as the interpersonal category by adding layers of evaluative and engaging elements, fostering solidarity, and anticipating and addressing potential objections.

Hyland (2005) expands this dimension into two subcategories: Stance and Engagement. 'Stance' relates to the textual voice or the personality recognized by the community (p.176). It involves the expression of the writer's identity using various devices—paralinguistic, non-linguistic, and linguistic. Linguistic tools for developing stances include hedges, boosters, attitude markers, and self-mentions, as detailed by Hyland and Tse (2004). Conversely, 'Engagement' connects the writer with readers by acknowledging their presence and guiding them through the argument, which is achieved by focusing their attention, recognizing their uncertainties, and including them as active discourse participants (Hyland, 2005).

Engagement tools, as categorized by Hyland (2005), include directives, reader pronouns, personal asides, and questions, all designed to draw readers into the discourse. Hedges, for instance, allow writers to present their research claims with a calibrated level of certainty, acknowledging alternative viewpoints while safeguarding against potential criticism (Swales et al., 1998). Boosters are used to assert certainty, close off counterarguments, and reinforce the writer's points with expressions like 'clearly' and 'obviously' (Hyland, 2005).

Attitude markers convey the writer's emotional stance towards the content, showing surprise, agreement, or frustration through various grammatical constructions. Self-mentions place the author within the discourse, establishing their personal perspective and authorial identity (Hyland, 2001). Engagement markers directly address readers, enhancing their involvement by focusing attention and including them as part of the conversation (Hyland, 2005).

Hyland (2005; p.54) identifies two primary functions of engagement markers:

- Addressing readers directly to fulfill their expectations for inclusion and solidarity, using pronouns and interjections to make them feel part of the dialogue.
- Rhetorically positioning the audience by using questions and directives to guide them through the text, anticipate objections, and lead them to specific interpretations.

The categories of interactional resources thus emphasize the writer's engagement with the reader, creating a persona that aligns with community norms and expectations. Metadiscourse has been extensively explored across various fields and text types, including academic articles, which are the focus of this study, highlighting its significance in scholarly communication. This exploration extends to metadiscourse applications in different languages and disciplines, reflecting its widespread relevance and adaptability.

2.2.2. Teaching Metadiscourse Features

Ken Hyland's insights into metadiscourse (MD) underscore its critical role as a linguistic feature that enhances the communicative effectiveness of academic writing. Hyland (2005b) advocates incorporating an understanding of metadiscourse into teaching and learning models, emphasizing that academic writing extends beyond mere grammatical proficiency. Instead, it involves a deep awareness of rhetorical strategies that can make texts more compelling and relevant to specific academic audiences. He notes that while native English writers typically utilize metadiscourse effectively, English as a Second Language (ESL) writers often struggle, using these features awkwardly or inappropriately due to a lack of understanding of deeper discourse conventions.

Hyland points out the deficiencies in how textbooks present metadiscourse, often failing to equip novice writers with the necessary tools to engage deeply with academic rhetorical practices. He argues that metadiscourse is more than just text organization—it is about connecting with the audience, enhancing text persuasiveness, and improving coherence and comprehension. Hyland suggests that metadiscourse can bridge the gap between the real world and academic environments by personalizing and humanizing texts, making them more accessible and engaging for readers. Furthermore, metadiscourse markers help to clarify the writer's stance on the information presented, indicate their attitude towards the reader, and manage the reader's cognitive load by guiding them through the text.

To address these challenges, Hyland advocates for "Rhetorical Consciousness Raising," a pedagogical approach designed to enhance students' understanding of the rhetorical features specific to various genres. This method involves analyzing texts, manipulating texts, understanding audiences, and creating texts, aiming to develop skilled writers rather than merely producing polished texts. By focusing on rhetorical features during instruction, students can better understand how to engage their audience effectively and make their writing more coherent and persuasive.

Supporting Hyland's views, other studies in the field explore practical applications of teaching metadiscourse. Tavakoli, Bahrami, and Amirian (2012) investigate whether intermediate EFL learners can apply interactive MD markers appropriately in a process-based writing course. Their findings suggest that such instruction significantly aids learners in improving their use of metadiscourse, leading to greater confidence in writing. Similarly, Cheng and Steffensen (1996) conducted a quasi-experimental study to determine if metadiscourse usage can enhance writers' sensitivity to their readers' needs and whether it correlates with improved text quality. Their results indicate that students exposed to metadiscourse-focused instruction tend to use these features more effectively in their writing.

Overall, Hyland and other researchers highlight the importance of metadiscourse in academic writing and advocate for targeted instructional strategies that help students understand and effectively use these critical linguistic tools. By fostering a deeper awareness of how language functions to engage readers and structure discourse, educators can enhance both the effectiveness and impact of students' academic writing.

2.2.3. Studies on Metadiscourse

The exploration of metadiscourse (MD) in academic texts has burgeoned over recent years, focusing particularly on how different variables—such as cross-cultural and cross-disciplinary perspectives—affect its usage. Ken Hyland has been a seminal figure in this research, contributing extensively to our understanding of how metadiscourse facilitates writer-reader interaction and enhances the persuasiveness of academic writing. His studies highlight how disciplinary contexts influence the choice of metadiscourse devices, revealing the adaptability of these tools across various academic fields.

Significant among the evolving MD frameworks is the taxonomy developed by Vande Kopple, which underwent revision from its initial seven sub-categories to a more refined six-category system in 2012. This taxonomy serves to clarify the connections within texts, assist readers in grasping content, and explain the writers' actions or intentions through specific linguistic markers.

Hyland's own work, alongside other studies, often utilizes this taxonomy to analyze metadiscourse across different contexts. For instance, Rezaei Zadeh et al. (2015) applied Hyland's taxonomy to study the metadiscourse markers in English master's theses across various disciplines, noting significant usage variations that suggest disciplinary preferences. Similar cross-disciplinary investigations, like those by Cao and Hu (2014), further confirm these nuanced uses of interactive MD features, reflecting both disciplinary and paradigm-specific influences.

Cross-cultural studies also provide insights into how metadiscourse varies between different linguistic and cultural backgrounds. Özdemir and Longo (2014) and Çapar (2014) examined differences in metadiscourse usage between Turkish and American students and academics, uncovering distinct patterns that suggest cultural influences on academic writing styles.

Other researchers have extended the analysis of metadiscourse to include variables such as gender, with studies like those by Zareifard & Alinezhad (2014) and Yavari & Kashani (2013), which explore how gender might influence the use of interpersonal resources in academic writing. Although findings in this area show no significant gender-linked differences, they reinforce the discipline-specific nature of metadiscourse usage.

In recent years, the study of metadiscourse has increasingly focused on the role it plays in maintaining a sense of interpersonality within academic texts. Scholars like Mur-Duenas (2011) and Gillaerts & Van de Velde (2010) have examined how different contexts and historical periods influence metadiscourse strategies, particularly in terms of negotiating power and constructing authorial identity in academic writing.

Overall, the extensive body of research on metadiscourse underscores its critical role in shaping academic discourse. It not only aids writers in structuring their arguments and engaging with their readers but also in adapting their rhetorical approach to suit specific disciplinary and cultural contexts. Mastery of metadiscourse is thus seen as essential for academics aiming to establish a significant presence within the global academic community, where English often serves as the lingua franca.

Given the diverse influences on metadiscourse usage identified in cross-cultural research, it becomes particularly relevant to focus on Turkish academic writing. The unique linguistic and cultural background of Turkish scholars, as well as the evolving academic standards in Turkey, provide a rich context for exploring how metadiscourse is adapted and employed differently from other linguistic groups (Kan, 2016). Therefore, this thesis will include a comprehensive table of Turkish studies on metadiscourse. This table aims to illustrate not only the breadth and depth of research conducted in this area within Turkey but also to shed light on the specific metadiscourse strategies utilized by Turkish academics (Duruk, 2017). By providing this focused overview, the study seeks to enhance our understanding of the interplay between cultural identity and rhetorical choices in academic writing, thereby enriching the global discourse on metadiscourse practices (Çapar &Turan, 2020; Yüksel & Kavanoz, 2018; Kirişçi & Duruk, 2022).

Table 2.2: Turkish Studies on Metadiscourse

Author	Genre	Corpus	Objectives	Findings
Çapar (2014)	Ph.D. dissertation	150 research articles: 50 English research articles written by American academic writers (AAWs), Turkish academic writers (TAWs) and 50 Turkish research articles written by TAWs	To examine the use of interactional metadiscourse markers (IMM) in research articles	AAWs used significantly more IMMs in English research articles compared to IMMs in English and Turkish research articles written by TAWs.
Yuvayapan (2018a)	Ph.D. thesis	120 doctoral dissertations written between 2010 and 2015	To compare the use of interactional metadiscourse markers (IMDMs) by native academic authors of English (NAAEs) and Turkish-speaking academic authors of English (TAAEs)	Turkish-speaking academic authors of English underused IMDMs regarding the overall use of 5 subcategories of IMDMs.
Algı (2012)	MA thesis	104 (52 Turkish and 52 English) argumentative paragraphs	To investigate the types, frequencies and functions of hedges and boosters in L1 and L2 argumentative paragraphs	that the number of hedges and boosters in L2 paragraphs were not much higher than that of L1
Akbaş (2012)	Research Art.	90 abstracts of dissertations in the Social Sciences	To explore metadiscourse in the dissertation abstracts written by Native Speakers of Turkish (NST), Turkish Speakers of English (TSE) and Native Speakers of English (NSE) in the Social Sciences	English-speaking writers wrote their abstracts with more interaction and guidance unlike Turkish writers.

Table 2.2: (Cont) Turkish Studies on Metadiscourse

Author	Genre	Corpus	Objectives	Findings
Akbaş (2014)	RA	20 discussion sections from MA dissertations written by Turkish writers in L1 and L2	To figure out how interactional metadiscourse is used by Turkish writers in Turkish and English in this section	there were some similarities and statistically significant differences between the two corpora regarding interactional metadiscourse
Ekoç (2010)	RA	40 MA theses abstracts	To reveal Turkish MA students' use of lexical hedging strategies in MA theses abstracts from different fields	MA students use different hedging strategies
Yuvayapan (2019)	RA	60 doctoral dissertations	To examine the use of metadiscursive nouns written by American academic writers of English and Turkish-speaking academics of English	both groups of academic writers in the study showed similarities on the total preference of metadiscoursive nouns
Özdemir & Longo (2014)	RA	52 thesis abstracts	To investigate cultural variations in the use of metadiscourse between Turkish and USA postgraduate students' abstracts in English MA thesis	there were some cultural differences in metadiscourse amounts and types

Source: (Yuvayapan, 2019).

2.3. PERSPECTIVES IN THE ANALYSIS OF ACADEMIC LANGUAGE

The extensive literature on academic discourse has focused particularly on the specific linguistic features of different registers (spoken or written), employing primarily three analytical approaches: register analysis, genre analysis, and multi-dimensional analysis. Understanding these methods is crucial for a thorough examination of linguistic features within specific registers.

In every culture, language fulfills various communicative purposes through systems of registers, which are maintained by culture-specific interaction patterns. Biber and Conrad (2009) describe register variation as revolving around pervasive linguistic features aimed at functional objectives, while genre variation pertains to the conventional structuring of different text types. Both register and genre variations are fundamental, universal aspects of human language, embodying the conventions understood and shared by community members.

Ferguson (1994) defines register as a variant of language determined by situation, whereas genre is identified as conventionalized forms of messages recurring within a community, each developing a unique internal structure over time. Swales (1990) adds that a genre encompasses a class of communicative events united by shared purposes.

Biber (2006a) clarifies that the distinction between register and genre occurs at various analytical levels, including the study's focus and the linguistic and cultural characteristics under investigation. Register pertains to general language types associated with specific domains, such as legal or scientific language, while genre refers to culturally recognized message types like research articles or business memos.

Biber and Conrad (2009) differentiate between register analysis, which examines typical linguistic features of a register within its situational context, and genre analysis, which focuses on unique language characteristics in texts to uncover their structural conventions. Often, studies tend to focus exclusively on one approach and neglect the other, though both are instrumental in linguistic research.

Moreover, multi-dimensional analysis offers a broader perspective by examining a range of linguistic features across texts, identifying common co-occurrence patterns, and analyzing registers in relation to these patterns. This approach allows for comparisons

across multiple registers, providing insights into the underlying dimensions of linguistic variation.

In summary, academic language studies leverage these analytical methods to explore the rich interplay between linguistic features and their functional applications within specific communicative contexts, enhancing our understanding of language use in academic settings.

2.3.1. Author Stance

Recent discussions within academic discourse have challenged the traditional notion of scientific writing as objective and impersonal, emphasizing instead the persuasive and subjective elements inherent in academic texts. Hyland (1995, 2011a) points out that academic writing revolves around constructing a narrative based on observable facts aimed at persuading readers of the veracity of the claims made. Academics employ discipline-specific persuasive techniques to mitigate potential reader objections and enhance the acceptance of their arguments.

Hyland (1994) also highlights the dynamic interaction between the writer and the reader, stressing that academic writing is not just about relaying information but about presenting the writer's attitude, thereby involving the writer's presence in the text. This concept is supported by Ivanic and Camps (2001), who argue against the term "impersonal writing," advocating instead for recognition of how writers project their identities through their writing, shaped by cultural norms.

In the academic sphere, the terms "writer identity," "writer presence," and "author stance" are pivotal in understanding how authors convey their personal imprint through their texts. Hyland (2010a) regards writing as a tool for constructing the author identity within the confines of academic conventions, which, while restrictive, also provide a scaffold for authors to actively shape their identity through language choices.

Matsuda (2015) and Hyland (2012a) describe identity as a complex interplay of the choices writers make from a socially available repertoire, which are influenced by the ongoing discursive practices within their community. This identity is not only reflected in how they align with their peers but also in how they differentiate themselves, contributing to their recognition and success within the academic community.

Academic prose, therefore, is a medium where writers not only present data but also negotiate reader interpretation through rhetorical features, revealing their identities. Jiang and Hyland (2015) emphasize that academic writing is deeply embedded in the cultural norms of specific communities or disciplines, affecting the use of language and the construction of academic identity.

Moreover, Ivanic (1998) explores how identity is shaped through social interactions and the choices writers make in their language use, which are nevertheless bounded by socially determined restrictions. The relationship between identity and text is crucial, necessitating detailed studies to understand how different types of identity—autobiographical, discoursal, and authorial—are manifested in academic discourse.

Through various studies, including those by Hyland and others, it is evident that academic identity is not merely a backdrop but a critical element in the effective communication of scientific ideas. Writers must navigate the delicate balance between adhering to disciplinary conventions and expressing their unique perspectives and scholarly authority. This ongoing negotiation shapes not only their textual presence but also their professional identities within their fields.

2.4. GENRE APPROACH AND ACADEMIC WRITING

The genre approach stands out as a fundamental method in writing instruction. The term "genre approach" denotes the common features of a particular genre. According to Hyland (2005), "genre" is employed to characterize texts and "depicts how writers commonly employ language to address recurring situations" (p. 87). Although some textual overlap might occur in certain types, the emphasis on variation is as crucial as recognizing similarities, as asserted by Swales (1990). That is to say, while genre can be flexible and show variety, comprehension requires the common concept of a genre. The utilization of metadiscourse is a distinguishing factor that sets genres apart from each other and distinguishes them from other types of genres (Hyland, 2005).

Although sharing several similar aspects, academic prose differs from other genre types in how it uses metadiscourse. Academic prose is typically recognized as a distinct form of argumentation as it relies on the presentation of facts, empirical data, or flawless logic (Hyland, 2005). Readers expect to acquire information pertaining to the topic or discussion they are engaging with. According to Hyland (2005), academic writing's ability to persuade readers comes from presenting data based on methodology,

objective observation, and well-informed thought. Academic prose provides an unbiased representation of how the natural and human worlds actually appear. Knowledge is seen as a guarantee in academic prose since readers demand the truth.

According to Hyland (2005), academic prose no longer has the conventional perception of being an impartial, anonymous, and impersonal style of speech. Currently, academic prose is considered a convincing piece that engages the reader and writer in conversation. Perceiving texts as precise depictions of "the actual state of the world" is challenging (Hyland, 2005, p. 66) since texts distinguish these representations through the processes of selecting and foregrounding. In place of facts, scientific works base their arguments on extra-factual and extra-logical evidence, such as probability. Such facts should be given as specific techniques of persuasion rather than as absolute proof (Hyland, 2005b). A writer's output for an academic audience goes beyond text.

The genre approach to teaching writing has established itself as a fundamental strategy in the realm of writing pedagogy. Within the context of this approach, the term "genre" takes on a multifaceted role, referring to the shared characteristics and conventions inherent to specific types of discourse. As Hyland (2005) contends, genres are not merely descriptors of texts; they serve as a lens through which to understand how language is wielded by writers in response to recurring communicative situations (p. 87). In essence, genres encapsulate the expected ways in which writers use language to navigate the complexities of their discourse communities.

While it is natural for some overlap to exist among text types, the variances, nuances, and deliberate distinctions shape the essence of genres. As Swales (1990) aptly notes, genres are defined not only by their commonalities but also by their divergences. In other words, while genres may exhibit flexibility and diversity, they are underpinned by a core concept—a shared understanding of what a genre encompasses. It is within the realm of metadiscourse that genres emerge as distinct entities, each bearing its unique features and rhetorical strategies (Hyland, 2005).

Academic prose serves as a genre type that, while sharing commonalities with other forms of discourse, is unmistakably set apart by the manner in which it deploys metadiscourse. In the realm of academic writing, the primary objective is often the presentation of facts, empirical evidence, or irrefutable logic. As posited by Hyland (2005), readers approach academic prose with the anticipation of encountering the factual

foundations underpinning a given argument or debate. Herein lies the essential distinction—academic writing hinges on the exposition of information rooted in rigorous methodology, objective observation, and well-informed reasoning.

The persuasive power of academic prose arises from its capacity to present data as a result of systematic and methodical inquiry. This approach upholds the tenet of impartiality, seeking to provide an objective representation of the natural and human worlds. In the realm of academic prose, knowledge is not a mere offering; it is an imperative. Readers, versed in the traditions of academic writing, demand verifiable truths and authoritative information (Hyland, 2005).

In the realm of academic writing, there has been a departure from the traditional notion of academic prose as an impersonal and detached form of expression. According to Hyland (2005), modern academic writing is marked by its ability to involve both readers and writers in a dynamic and interactive discourse. The concept of texts serving as precise reflections of "the actual state of the world" (Hyland, 2005, p. 66) has evolved into a more nuanced perspective. Texts are now acknowledged not as objective mirrors but as constructions that shape reality through the processes of selection and foregrounding.

Writing serves as a vital mode of communication, manifesting in various forms, with academic writing standing out as a particularly prominent example. Academic writing, often referred to as academic discourse, embodies specific ways of thinking and utilizing language within academic settings (Hyland, 2009). This form of writing is defined by Irvin (2010) as an evaluative method that demands the demonstration of knowledge and proficiency in specific disciplinary skills such as thinking, interpreting, and presenting (p. 8). Burke (2010) describes academic writing as a fundamental activity for academics, involving publishing, communication, and contributing to their fields of knowledge (p. 40).

Wright, Macarthur, and Taylor (2000) further elaborate on academic writing by introducing the concept of academic language proficiency, which enables communication in abstract, decontextualized settings (p. 66). This involves defining and manipulating abstract forms and reflecting on one's thoughts within restricted contexts. Murray and Moore (2006) describe academic writing as a dynamic process that requires shifting orientations from inception to conclusion, engaging with the voices of others, and

embedding one's work within a broader theoretical framework through connections and comparisons.

Academic writing transcends the mere use of conventional linguistic forms; it involves active communication with readers and the palpable presence of the writer. The process is not only about conveying ideas but also about engaging in a socially constructed activity that adheres to the expected conventions within the academic community (Burke, 2010). Hyland (2009) argues that academic discourse plays crucial social roles, such as shaping academics, creating knowledge, and supporting the academic infrastructure.

Recently, there has been a shift toward understanding that academic texts must foster interaction between the writer and the reader, treating academic genres as both socially situated and structured to achieve rhetorical goals. Effective academic writing, therefore, incorporates interactional elements that reflect both the propositional content and the writer's perspective (Hyland, 1994). Academic writers not only need to organize their arguments persuasively and distinguish between facts and opinions but also enable the audience to evaluate these opinions (Pazhakh et al., 2014).

Oshima and Hague (1994) highlight that academic writing is distinct from other writing types due to its unique audience, tone, and purpose. The understanding of the audience, primarily academic professors, facilitates clear and effective communication. The formal tone of academic writing is manifested through linguistic choices, and the purpose of the writing dictates the rhetorical forms used. Irvin (2010) emphasizes that successful academic writing depends on the writer's awareness of these elements and their approach to the writing task.

Furthermore, the iterative nature of academic writing is underscored by Murray and Moore (2006), who describe it as a continuous and reflective process, offering opportunities for development and learning through both progression and regression phases. This iterative process allows writers to explore challenges and develop strategies for overcoming them.

In summary, academic writing is a complex, multifaceted activity that is central to academic success and performance. It requires a deep engagement with the text and the audience, mastery of disciplinary conventions, and continuous reflection and development.

2.4.1. Doctoral Dissertations

Doctoral dissertations epitomize the zenith of scholarly achievement, marking the culmination of extensive dedication to deep research and critical inquiry. These pivotal works not only showcase an advanced mastery in particular academic domains but also significantly mold the direction of scholarly endeavors and practical implementations in those fields. The multifaceted significance of doctoral dissertations spans their direct contributions to academic knowledge and their integral role in cultivating the professional personas of emerging scholars. As highlighted by Frick et al. (2015), the doctoral journey is critical for the acquisition of refined research competencies and the formation of a solid academic identity.

The thorough examination of doctoral dissertations, as Carter (2008) discusses, ensures that these comprehensive works adhere to the highest standards of scholarly rigor, thus safeguarding the quality of academic contributions. These theses also play a crucial role in the professional development of academics, assisting in their full integration into the academic community, a process underscored by Schulze (2014). Furthermore, the impact of doctoral studies extends into accommodating the evolving needs of higher education and professional fields, promoting a broad spectrum of academic and practical applications, as noted by Boud and Tennant (2006).

The reach of doctoral dissertations continues as they serve as a bridge to further research inquiries and scholarly dialogue. They often become catalysts for new studies and are frequently converted into published articles, enhancing ongoing academic discussions and innovations, as observed by Wolhuter (2015). The increased visibility and accessibility of these theses through Open Access repositories, as Ferreras-Fernández et al. (2016) found, significantly amplify their use and citation across the academic landscape.

In essence, doctoral dissertations are foundational to the dissemination of new knowledge and play a pivotal role in advancing various academic disciplines. They not only contribute to the academic and professional growth of scholars but also foster the ongoing evolution of scholarly practices and knowledge exchange globally.

2.4.2. Master's Theses

Master's theses serve as critical junctures in the educational trajectories of postgraduate students, embodying key mechanisms for deep scholarly engagement within specific academic fields. These dissertations are essential not only for demonstrating students' capability to systematically address complex topics but also as catalysts for advancing personal and academic development. Their significance extends to fostering analytical thinking, encouraging methodical research practices, and enhancing essential research capabilities that are fundamental across various professional domains (Feng Chun-liang, 2011).

The dissertation process challenges students to undertake a series of rigorous tasks, from initial topic selection and comprehensive literature review to conducting empirical research and articulating innovative conclusions. This endeavor instills a disciplined research methodology, requiring meticulous attention to detail and a commitment to extensive scholarly exploration (Yang, Zhang, & Zhang, 2021). Moreover, through engaging in original research, students develop critical problem-solving skills and prepare themselves to contribute significantly to their academic disciplines.

Additionally, master's theses significantly enrich the academic community by providing fresh insights, introducing innovative research methodologies, and delivering robust empirical data. These contributions are crucial as they not only augment the existing body of knowledge but also foster the development of new scholarly inquiries and practical applications. The completion of a dissertation marks the transition of students from learners to emerging scholars, enabling them to participate actively in the scholarly dialogue and potentially influence future research trajectories (Kowalczuk-Walędziak et al., 2021).

In essence, the master's thesis is more than an academic requirement; it is a profound exercise in intellectual maturity and scholarly contribution. It equips students with the skills necessary to navigate complex research landscapes and positions them to make enduring impacts in their respective fields. Thus, master's theses are indispensable in shaping the next generation of scholars and professionals as they prepare to address and solve the challenges of their disciplines and beyond.

2.4.3. Research Articles

Research articles remain the quintessential medium through which academics engage with their peers, sharing and scrutinizing the novelty and significance of their work, as Hyland (2005) underscores. These articles serve not only as a platform for disseminating knowledge but also as a forum for the robust exchange of ideas, where authors negotiate interpretations and assertions to shape collective understanding. Hyland (2005) asserts that the main goal of research articles is to foster knowledge through discourse, necessitating that authors consider what the audience knows and needs to understand. This careful consideration facilitates effective communication, pivotal for the academic dialogue that research articles intend to provoke.

Furthermore, the strategic use of metadiscourse plays a critical role in this communication process. Hyland's investigation into the discourse patterns across various disciplines, including microbiology and applied linguistics, reveals a predominant use of interactive metadiscourse devices such as hedges, code glosses, and evidentiary elements (Hyland, 1998). These elements are instrumental in moderating claims and engaging readers, demonstrating that metadiscourse significantly enhances the interaction between the writer and the reader. In a subsequent study, Hyland (1999) identified even more metadiscourse components, reinforcing the idea that these tools are essential for articulating research within the academic community effectively.

In essence, research articles are the lifeblood of academic discourse, providing a critical conduit for the dissemination of complex research findings. These peer-reviewed works not only contribute to the advancement of knowledge but also have a profound impact on the broader realms of academia, research, and societal development. By effectively leveraging metadiscourse, authors ensure that their contributions resonate within and beyond their immediate scholarly circles, enriching both the discourse and the discipline at large.

CHAPTER 3
METHODOLOGY

3.1. INTRODUCTION

This research aims to explore the interactional metadiscourse elements present in 'master's theses, doctoral dissertations, and research articles authored by both Turkish and native academic writers. The aim is to identify the types of interactional metadiscourse elements employed in these academic writings and to analyze their usage. The current thesis seeks to conduct a comprehensive analysis of all interactional metadiscourse elements and their application in 'master's theses, doctoral dissertations, and research articles, drawing comparisons between them.

This chapter outlines the methodology of the current study, including its design, data collection, and data preparation and analysis procedures. The chapter begins by providing an overview of the research design, offering insights into the conceptual framework that guides the research.

Following this, the process of data collection for the corpora is detailed. This section describes how both native and non-native text corpora were chosen, the criteria used for their selection, and the rationale behind these choices. This part of the chapter aims to ensure transparency in the methodology and to justify the selection process based on the study's objectives.

Lastly, the chapter discusses the statistical tools and data analysis procedures employed in the study, which includes a description of the software and analytical techniques used to process and analyze the data, as well as the steps taken to ensure the accuracy and reliability of the results. The explanation of the analytical methods is intended to provide readers with a clear understanding of how the study's findings were derived and the statistical rigor underpinning the conclusions.

3.2. OVERVIEW OF THE RESEARCH DESIGN

The research design for this thesis employs a corpus analysis approach to examine English-language research articles authored by Turkish and American writers. Corpus analysis involves the systematic examination of a collection of texts (corpus) to identify patterns and structures within the data. In this study, the corpus consists of research articles focusing on the teaching of English as a foreign language.

To categorize metadiscourse, the study utilizes Hyland's framework. Hyland (2005) provides a comprehensive model for analyzing metadiscourse, which refers to the

linguistic devices used by writers to organize their text, engage readers, and convey their stance. This framework divides metadiscourse into two main categories: interactive and interactional. Interactive metadiscourse helps guide the reader through the text (e.g., transitions, frame markers, endophoric markers), while interactional metadiscourse involves the writer's presence and engagement with the reader (e.g., hedges, boosters, attitude markers, engagement markers, self-mentions).

The software NVivo 10 will be employed to identify and code metadiscourse markers within the corpus. NVivo 10 is a qualitative data analysis tool that facilitates the efficient organization and examination of large datasets. Additionally, a log-likelihood analysis will be conducted to determine the statistical significance of the differences in metadiscourse usage between Turkish and American authors. This statistical method will help to highlight patterns and variances that are not due to random chance.

This study is grounded in the conceptual framework of contrastive rhetoric, which examines how writers from different linguistic and cultural backgrounds structure their arguments and use metadiscourse. Contrastive rhetoric explores the ways in which language and cultural differences influence writing styles, particularly in academic and professional texts.

Johns (2002), in her seminal work "Text, Role and Context: Developing Academic Literacies," emphasizes the importance of understanding the context in which writing occurs. According to Johns, writers from different linguistic backgrounds bring unique rhetorical traditions and conventions to their writing. This framework is essential for analyzing how Turkish and American writers construct their arguments and utilize metadiscourse.

By applying the principles of contrastive rhetoric, this study seeks to identify and compare the rhetorical strategies and metadiscourse features employed by Turkish and American authors. This analysis aims to provide insights into the influence of cultural and linguistic factors on academic writing practices.

The integration of corpus analysis with Hyland's framework for categorizing metadiscourse, along with the conceptual framework of contrastive rhetoric, facilitates a thorough exploration of the differences in rhetorical structures and metadiscourse usage between Turkish and American writers. By utilizing NVivo 10 for metadiscourse identification and log-likelihood analysis for statistical validation, this study aims to

provide a comprehensive understanding of how cultural and linguistic backgrounds shape academic writing.

3.3. DATA COLLECTION

The primary goal of this study was to analyze the usage of interactional metadiscourse markers (IMDMs) in doctoral dissertations, master's theses, and research articles written by Turkish-speaking academic writers of English (TAWEs) and native academic writers of English (NAWEs). The focus was on how IMDMs contribute to the construction of the author's stance within the academic discourse, a critical aspect given English's role as a global medium of communication in academia. Academic writing was selected for analysis due to its specific organizational and linguistic conventions, which provide a rich context for examining how authors establish credibility and engage in academic persuasion.

Hyland (2005b) underscores that academic writing is deeply embedded in community-specific contexts, requiring authors to navigate interpersonal and intertextual relationships effectively to publish significant research and achieve acceptance in their fields. This study specifically targeted the genre of doctoral dissertations, as doctoral students are typically advanced users of academic English. However, as emerging scholars, they often encounter challenges in adhering to the linguistic norms of their disciplines, particularly in signaling their stance and persuading readers. Insights gained from examining these challenges could significantly benefit second language teaching, especially in academic writing instruction for non-native English speakers.

For this research, an electronic corpus of doctoral dissertations, master's theses, and research articles from 2020 to 2023 was compiled from online open-access sources. The corpus was divided into two primary collections: CTWE (Corpus of Turkish-speaking Academic Writers of English) and CNWE (Corpus of Native Academic Writers of English). The analysis focused specifically on the discussion sections, which are most reflective of the author's stance (Soyşekerci et al., 2022). To maintain a clear focus on original academic discourse, titles, tables, figures, quotations, and paraphrases were excluded.

The choice to focus on discussion sections was driven by a recognized gap in the literature regarding the use of interactional metadiscourse markers in these sections during the specified period. While previous studies have explored metadiscourse in

various parts of academic texts, such as introductions and conclusions, the discussion sections have not been examined as thoroughly, particularly within the 2020-2023 timeframe (Gezegin & Baş, 2020). This oversight in existing research underscores the importance of the current study, which aims to fill this gap by providing a detailed analysis of how interactional metadiscourse markers are utilized in discussion sections by both native and non-native English-speaking authors (Saidi & Karami, 2021).

By focusing on this underexplored area, the study not only addresses a significant gap but also contributes valuable insights into academic writing practices across different linguistic and cultural backgrounds. This focus is particularly timely and relevant given the evolving nature of academic discourse and the increasing importance of understanding how authors from diverse backgrounds engage with their readers in scholarly writing (Kuhi & Rezaei, 2020).

Each document within the corpora was coded and cataloged with details, including the author's name, publication year, and dissertation title. After assembling the corpus, the dissertations were converted into Word format, and relevant sections were isolated into separate documents before being converted into text files for analysis. This meticulous organization and categorization facilitated a detailed and structured analysis of how IMDMs are employed by both TAWEs and NAWEs to signal their stance, thereby contributing to our understanding of academic discourse across different cultural and linguistic backgrounds.

In this research, we focused exclusively on interactional metadiscourse markers (IMDMs) as defined by Hyland's taxonomy (2005b), which differentiates between interactive and interactional resources within academic texts. Interactional resources were chosen for analysis because they are instrumental in reflecting the author's stance, making them crucial for understanding how academic writers engage with their audience and convey subjectivity and emphasis in their discourse.

Hyland's framework identifies five sub-categories of IMDMs, which include hedges, boosters, attitude markers, self-mentions, and engagement markers. These categories provide a nuanced lens through which to examine how authors position themselves and their arguments in relation to their academic community and readership.

This study drew on literature (Creswell, 2012; Hyland, 2005b). The analytical framework employed in this research paradigm aims to depict a contemporary or

historical event or situation as it unfolds. In document analysis, the researcher examines previously stored or generated records and sources. Documents serve as a valuable source of textual data for qualitative studies, offering access to information without the need to transcribe observational or interview data. By utilizing documents, the researcher can amass data that includes the language and words to which participants give careful attention. Moreover, the document analysis technique allows the researcher to gather data spanning from the past to the present. This study adhered to specific criteria, employing the document analysis model, as it evaluates research articles authored by Turkish and American academic writers in terms of interactional metadiscourse features.

This study employed a purposeful sampling strategy, specifically utilizing homogeneous sampling. Purposeful sampling involves the deliberate selection of participants or sites that possess shared characteristics relevant to the research aims. It is widely used in qualitative research to identify and select information-rich cases related to the phenomenon under study (Palinkas et al., 2015). In our study, we focused on English-language research articles authored by writers from Turkey and the United States. The authors were chosen based on their nationality—either Turkish or American—to ensure a consistent basis for comparative analysis.

All selected research articles needed to be experimental studies, ensuring a uniform methodological approach. Additionally, the articles had to address the specific field of teaching English as a foreign language. This criterion ensured that the data collected was highly relevant and directly aligned with the study's objectives (Tafur-Arciniegas & Contreras, 2018). This method facilitated a detailed exploration of the approaches used by Turkish and American authors in teaching English.

In educational research, purposeful sampling is particularly valuable as it allows researchers to select samples that are most pertinent to their research questions. This method is effective for exploring specific educational phenomena and obtaining in-depth insights (Sun, 2002). The application of purposeful sampling, specifically homogeneous sampling, ensured that the selected samples were relevant and comparable, supporting a thorough examination of the research question.

The present study focused on the utilization of interactional metadiscourse markers in academic writing, specifically in research publications that encompassed experimental studies. While academic writers typically present their studies objectively

in their papers, writing also possesses a pragmatic dimension, allowing authors to incorporate subjective elements into their texts (Bazerman, 1998; Swales, 1990). Moreover, research on academic discourse is considered foundational for proficient writers who need to communicate with their peers in their respective professional disciplines (Yoon & Römer, 2020). Lastly, since most academic writers aim for international recognition in their professions by writing in English, the inclusion of interactional features in their papers becomes imperative (Blagojevic, 2004). Interactional metadiscourse markers help writers create more engaging and persuasive texts by managing reader-writer interactions and reflecting the writers' stance (Aluthman, 2018). The significance of these markers in academic writing has been highlighted in various studies, which show their role in facilitating effective communication and enhancing the readability of texts (Hadi Kashiha, 2018). The studies chosen for this thesis were specifically selected due to their experimental or quasi-experimental nature. This choice is based on the understanding that such studies, especially in their discussion sections, tend to use a higher frequency of interactional metadiscourse markers. These markers are vital for effectively conveying research findings, managing reader-writer interactions, and establishing the author’s credibility and stance.

Research indicates that the discussion sections of experimental and quasi-experimental studies are often rich in interactional metadiscourse as authors interpret their findings, engage with results, and address implications and limitations. Studies have shown that these types of studies tend to employ a higher frequency of interactional metadiscourse markers in their discussion sections (Salahshoor & Afsari, 2017). Interactional metadiscourse markers are crucial for managing reader-writer interactions and establishing the author's stance (Mina & Biria, 2017). The abundant use of these markers in discussion sections aids authors in effectively engaging with their findings and addressing implications (Sarani et al., 2017). Additionally, these markers help in presenting claims cautiously, thereby enhancing the text's credibility and persuasiveness (Kostenko et al., 2023).

This makes experimental and quasi-experimental studies particularly valuable for analyzing how interactional metadiscourse enhances the clarity, persuasiveness, and engagement of academic writing. The deliberate selection of these studies ensures that the analysis focuses on the significant role of interactional metadiscourse markers in

academic writing, particularly within the context of experimental and quasi-experimental research.

To ensure the quality and relevance of the research, the publications and journals were selected based on specific characteristics. Each criterion was chosen with careful consideration to maintain the integrity and applicability of the research findings.

Firstly, the studies selected were published between 2020 and 2023. The field of education, particularly English language teaching, is continually evolving. By choosing studies published within the last few years, the research reflects current methodologies, technologies, and pedagogical trends. Recent publications are more likely to address contemporary challenges and opportunities in the field, thus providing up-to-date insights crucial for maintaining the relevance and applicability of the research findings (Hyland, 2005; Creswell & Plano Clark, 2011).

The focus of the selected studies is on English language teaching. This specific focus aligns with the research objective of understanding and improving pedagogical practices in this area. By concentrating on English language teaching, the research can provide a more detailed and relevant analysis of instructional strategies and outcomes. Specialization ensures that the research is deeply focused and relevant to the specific needs and contexts of the field (Johns, 2002; Silverman, 2013).

Only experimental or quasi-experimental studies were included. These types of studies provide robust evidence of cause-and-effect relationships, which are essential for evaluating the effectiveness of educational interventions and methodologies. Experimental designs are considered the gold standard in educational research for establishing causality and testing the efficacy of interventions (Palinkas et al., 2015).

Another criterion was that the selected articles must have a separate discussion section. This section is crucial as it allows authors to interpret their findings, discuss implications, and provide recommendations. The discussion section often provides insights into the significance of the results and their practical applications in the field of English language teaching (Hyland, 2005; Merriam & Tisdell, 2015).

The studies were chosen from peer-reviewed international journals, all of which are published in English. Peer-reviewed journals ensure that the research has undergone rigorous evaluation by experts in the field, maintaining high standards of quality and

credibility. International journals were chosen to include diverse perspectives and methodologies, enhancing the overall quality of the research (Sun, 2002).

To ensure accessibility, all selected journals are available online. Online availability ensures easy access to the full texts of the articles for comprehensive analysis and facilitates the dissemination and replication of research findings. Accessibility to full texts is important for conducting thorough literature reviews and ensuring that the research can be easily referenced and validated (Tafur-Arciniegas & Contreras, 2018; Glesne, 2011).

The research also included theses and dissertations from ProQuest for native English-speaking authors and from YÖKTEZ for Turkish authors. ProQuest provides access to a large number of theses and dissertations from reputable institutions worldwide, ensuring the inclusion of high-quality academic work. YÖKTEZ is a Turkish database that offers access to theses and dissertations from Turkish universities, ensuring that the research considers regional studies and contributions to the field of English language teaching in Turkey (Palinkas et al., 2015; Johns, 2002).

The research publications are all from the same field: teaching a foreign language. Each article element was analyzed for interactional metadiscourse signals. The research articles were compiled from peer-reviewed journals available in both online and print formats. This approach was adopted to ensure the inclusion of articles with comparable writing conventions and language usage. The selected journals exclusively focused on the topics of teaching and language learning. In order to emphasize the importance of including articles written in English and accepted on an international scale, English research articles authored by Turkish academics were specifically chosen from internationally published refereed journals. This selection aimed to illustrate that the language employed in these articles was not only suitable but also conformed to a consistent writing style.

Finally, the selected journals are derived from those cited in the associate professorship field index in education. This criterion ensures that the journals are recognized and respected within the academic community, particularly in the field of education. Selecting journals from established indexes ensures that the research is credible and recognized by the academic community (Hyland, 2005).

To summarize, the publications and journals were picked with the following characteristics in mind. All of the criteria are presented as follows:

Table 3.1: Corpus Inclusion Exculision Criteria

Criteria	Inclusion	Exclusion
Publication Date	Studies published between 2020 and 2023	Studies published before 2020
Field of Study	Focus on English language teaching	Focus on subjects outside English language teaching
Type of Study	Experimental or quasi-experimental studies	Non-experimental studies (e.g., descriptive studies, case studies)
Discussion Section	Studies with a separate discussion section	Studies without a distinct discussion section
Journal Type	Published in peer-reviewed international journals, all in English	Published in non-peer-reviewed or non-international journals
Accessibility	Journals available online	Journals not available online
Databases	ProQuest (for Native English speakers' theses and dissertations) YÖKTEZ (for Turkish theses and dissertations)	Studies not indexed in ProQuest or YÖKTEZ databases
Journal Focus	Articles focused on teaching and language learning	Articles focused on other topics
Language	Articles written in English and published in internationally recognized journals	Articles not written in English or published in non-international journals
Journal Index	Journals cited in the associate professorship field index in education	Journals not cited in the associate professorship field index in education
Author Background	American writers who pursued their studies and are employed in the U.S. Native English speakers professionally active beyond their home country	Authors without a U.S. educational or professional background
Data Collection	Full texts downloaded manually, and discussion sections separated for analysis	Studies with incomplete data or inaccessible full texts

The biographical details and associated websites of American writers were scrutinized to ascertain whether their educational and professional journeys unfolded within the United States. For this study, preference was given to writers who pursued their studies and are currently employed at a university in the United States. Native English speakers who are professionally active beyond their home country were also included in the selection. The evaluation of their status relied on the biographical information available on their personal or institutional websites. According to the criteria mentioned above, all the data found online was downloaded manually, and the discussion sections were taken to a separate file for each one of them. Interactional metadiscourse features were identified in various sections of the collected research publications.

1. **Interactional Metadiscourse Markers in Master's theses:**

- For a comprehensive analysis, 28 master's theses on foreign language teaching authored by Turkish academic writers were collected and analyzed.
- Similarly, 27 English master's theses on foreign language teaching authored by native English-speaking academic writers were collected and analyzed.

2. **Interactional Metadiscourse Markers in Doctoral dissertations:**

- A sample of 28 doctoral dissertations on foreign language teaching written by Turkish academic writers were collected and analyzed.
- A sample of 25 doctoral dissertations on foreign language teaching authored by native English-speaking academic writers were collected and analyzed.

3. **Interactional Metadiscourse Markers in Research Articles:**

- 29 research articles on foreign language teaching authored by Turkish academic writers were collected and analyzed.
- Similarly, 25 research articles on foreign language teaching authored by native English-speaking academic writers were collected and analyzed.

3.4. DATA PREPARATION AND ANALYSIS

A qualitative computer program and statistics were used to examine the data. These programs have capabilities that aid in data analysis. When dealing with extensive data exceeding 500 pages and necessitating a meticulous review of each word or sentence related to the research topic, computer analysis becomes instrumental. This approach facilitates data preservation, allowing the researcher to systematically organize the data by adding labels or codes. Such organization permits efficient data retrieval, enabling the researcher to locate specific sentences or words (Creswell, 2012). Consequently, the data was electronically processed on a computer using NVivo 10, a qualitative data analysis tool. NVivo 10 is software designed for the evaluation of data acquired through qualitative and mixed methods research. It offers researchers the capability to analyze data from diverse sources, including documents, films, audio recordings, and more. The software provides a comprehensive toolkit for swift coding, exploration, rigorous management, and analysis (Castleberry, 2014). NVivo 10 assists in recognizing and quantifying the occurrence of interactional metadiscourse elements. Furthermore, by not requiring color coding or manual analysis, this tool avoids common issues in qualitative

data analysis. It also eliminates data loss and makes data analysis and contacting data sources easier. The data can be evaluated more thoroughly (Mortelmans, 2019). Ultimately, NVivo 10 enables the creation of visual diagrams representing the categories identified during data analysis through concept mapping (Godau, 2004).

The descriptive analysis was applied, emphasizing frequent usage, to assess the data, using specified categories for labeling interactional metadiscourse markers. The coding process employed Hyland's (2005b) metadiscourse taxonomy. This taxonomy was selected for its recent, straightforward, clear, and comprehensive approach, making it more reader-friendly compared to Vande Kopple's (1989) and Bunton's (1999). The interactional metadiscourse markers are presented in Table 1. This taxonomy was used to evaluate the data (Hyland, 2005b). Subsequent analyses of the six datasets were then conducted using the NVivo 10 tool to search PDF and Word files for specific markers. Each identified marker was assigned to a taxonomic category. Finally, the entire dataset was scrutinized using the most recent version of the interactional metadiscourse marker list (Appendix 1). Following the completion of analyses, figures and tables were generated for each dataset.

In total 162 academic writings' discussion sections, 54 research articles, 55 master's theses, and 53 doctoral dissertations were gathered according to the criteria mentioned above determined in terms of interactional metadiscourse markers based on Hyland and Tse's (2005b) taxonomy.

To enhance the dependability of the coding process, a supplementary English instructor was engaged to code 30% of the data in addition to the researcher. Initially, the researcher and the English instructor worked together on the taxonomy, coding sample articles from each category: English research papers, 'master's theses, and doctoral these authored by Turkish academic writers and native academic writers.

The reliability assessment was conducted using NVivo 10. The interrater applied the coding list provided by the researcher, based on the taxonomy of Hyland (2005) and the additional codes from the pilot study, after transferring the project established on the researcher's software to the interrater's program. The computer calculated the Kappa Coefficient for each code, evaluating the agreement rate between the coders. The results showed a reliability of 94% for Turkish research articles authored by Turkish academics, 90% for English research articles by Turkish writers, and 95% for English research

articles by American authors. On average, the agreement percentage was 93%. This high level of agreement, reflected by the Kappa Coefficient, suggests "almost perfect agreement" according to widely accepted guidelines (Landis & Koch, 1977). The Kappa Coefficient is particularly valuable because it adjusts for the possibility of agreement occurring by chance, providing a more accurate measure of inter-rater reliability compared to simple percentage agreement (Cohen, 1960).

Recent studies in corpus research continue to support the use of the Kappa Coefficient as a robust measure for assessing inter-rater reliability. For instance, recent corpus studies emphasize the importance of Kappa in ensuring consistent and reliable annotation, especially in complex linguistic tasks where subjectivity could influence coding (Artstein, 2017; McKay & Plonsky, 2020). These studies reaffirm the significance of high Kappa values in maintaining the integrity of research data, particularly in areas involving qualitative analysis and linguistic annotation (Kolesnyk & Khairova, 2022). Thus, the strong reliability percentages observed in your data underscore the robustness and consistency of the coding process, ensuring the validity of your findings.

A quantitative analysis of word counts was conducted on the articles within each group to facilitate a comparison. Subsequently, the occurrences per 10,000 words were calculated for each dataset (refer to Table 3). This normalization method was selected to facilitate consistent and meaningful comparisons across different datasets, especially when the corpora vary significantly in size. By standardizing frequencies to 10,000 words, the results become more interpretable and allow for direct comparisons across various texts or corpora.

Normalization to 10,000 words offers a balanced approach between detail and readability. If frequencies were normalized to smaller units like 1,000 words, the results might be overly granular, leading to fractional values that are less intuitive. Conversely, normalizing to a larger unit, such as 100,000 words, could obscure subtle but important trends, making it difficult to identify meaningful patterns in the data. Therefore, using 10,000 words as a baseline ensures that the frequencies are both informative and easy to comprehend. This approach is not only practical but also well-established in corpus linguistics. It has been effectively employed in seminal works like those of Biber et al. (1999), where it proved useful in the analysis of various linguistic phenomena. Recent studies also support this practice, emphasizing its utility in linguistic analysis and corpus-based research. For instance, in contemporary corpus studies, scholars such as McEnery

and Hardie (2012) have advocated for normalization techniques that standardize word frequencies, including normalization per 10,000 words, to ensure comparability across different datasets. Additionally, Larsson (2018) has utilized similar methods in the study of syntactic structures in academic writing, demonstrating the continued relevance and effectiveness of this approach in modern linguistic research.

By applying this method, the data is normalized in a way that reduces the impact of varying corpus sizes, thereby ensuring that the findings are robust and reliable. The frequencies of interactional metadiscourse markers per 10,000 words were then subjected to comparison across each dataset, drawing on the frameworks of Hyland and Tse (2004), Hyland (2004; 2005), and Algı (2012).

Table 3.2: Description and Composition of the Corpora

	Native PhD	Native Master	Native Article	Turkish PhD	Turkish Master	Turkish Article	Total
Total no. of words	79,680	42,466	25,070	190,475	114,854	30,098	482,643
Average text length	3,187	1,572	1,002	6,802	4,101	1,037	3,026

Models were developed utilizing the nodes and codes identified in the course of data analysis. The NVivo models illustrate the connections among the coded interactional metadiscourse indicators.

After determining the frequencies of each interactional metadiscourse marker in each corpus, a statistical test was employed to assess whether there were significant differences in the usage of interactional metadiscourse markers in native and Turkish corpora. In summary, the uses of interactional metadiscourse markers in different academic writing types among Turkish writers and Native writers of English were evaluated using Hyland and Tse's (2005b) taxonomy of interactional metadiscourse indicators. An NVivo 10 data analysis was employed, providing a more systematic investigation of the markers. The outcomes of the data analysis are presented in the subsequent section.

3.4.1. Contrastive Analysis

The methodological framework of this study is rooted in a well-established approach in corpus linguistics known as contrastive analysis (CA). As Granger (2003a) articulates, CA involves *"charting areas of similarity and difference between languages*

and basing the teaching syllabus on the contrastive findings" (p. 17). This method has proven beneficial not only in linguistic studies but also in enhancing language teaching by pinpointing potential difficulties encountered by second-language learners.

Andersen (2016) introduces an important distinction in corpus studies between the corpus-based and corpus-driven approaches. In a corpus-based approach, the research focuses on the usage and distribution of specific words or phrases within a corpus, often guided by predefined linguistic queries. Conversely, the corpus-driven approach adopts a more inductive methodology, exploring data without preconceived notions to uncover previously unidentified linguistic features.

Johansson (2003) further supports the utility of CA, noting its significance in identifying the specific challenges second language learners face, which can provide valuable insights for language instruction. The primary goal of this study is to explore how Turkish-speaking academic authors of English (TAWEs) and native academic authors of English (NAWEs) utilize interactive metadiscourse markers (IMDMs) to express their stance in their doctoral dissertations. Employing CA will allow for a detailed comparison between these two groups, focusing on how they construct their stance and the linguistic strategies they employ.

For the purposes of this study, a corpus-based approach is deemed most suitable. The objective here is not to unearth new linguistic elements but to analyze the use of IMDMs, a well-defined linguistic category. Following Hyland's (2005b) taxonomy of IMDMs provides a structured analytical framework, enabling an effective examination of how these discourse markers are employed by TAWEs and NAWEs to signal their academic stance. This approach not only aligns with the specific aims of the study but also ensures that the analysis is grounded in recognized linguistic principles.

Stages of corpus analysis:

- The analysis of NAWE: The corpus consisting of doctoral dissertations, master's dissertations, and research articles of NAWEs were analyzed separately by using NVivo 10 regarding the use of 5 categories of Hyland's IMDMs taxonomy (2005b) to find out which markers were used and which ones were not used.
- The analysis of TAWE: The corpus consisting of doctoral dissertations, master's dissertations, and research articles of TAWEs were analyzed by using NVivo 10

regarding the use of 5 categories of Hyland's IMDMs taxonomy (2005b) to find out which markers were used and which ones were not used.

- The analysis of Turkish and Native corpus: To find out whether NAWE and TAWE significantly differ with respect to the use of IMDMs, log-likelihood analysis was conducted.
- The analysis of Turkish and Native counterpart discourses: To find out whether NAWE and TAWE counterparts significantly differ with respect to the use of IMDMs, log-likelihood analysis was conducted.
- The analysis of Categorical use of IMDMs in corpora: To find out whether corpora differ in categorical use, the analysis of the categorical use of IMDMs in total to have a broader understanding and frequency distribution of IMDMs in native and Turkish corpora was conducted.
- PhD level, master's level, and article-level log-likelihood analysis was conducted to further see the differences in each IMDM categories in native and Turkish academic groups.

CHAPTER 4
RESULTS

4.1. INTRODUCTION

This study examined the use of interactional metadiscourse markers (IMDMs) within English master's theses, doctoral dissertations, and research articles focused on foreign language teaching, comparing texts written by Turkish academic writers (TAWE) with those authored by native English-speaking academic writers (NAWE). The quantitative findings are organized according to the research questions presented in two main sections:

Research Question 1: What interactional metadiscourse markers are predominantly used, and how frequently are they employed, in English master's theses, doctoral dissertations, and research articles on foreign language teaching written by Turkish academic writers compared to those written by native English-speaking academic writers?

Research Question 2: Is there a significant difference in the use of interactional metadiscourse markers among English master's theses, doctoral dissertations, and research articles on foreign language teaching written by Turkish academic writers compared to those written by native English-speaking academic writers?

For the first research question, descriptive statistics were generated to offer an overview of the most frequently used IMDMs within each academic level (master's theses, doctoral dissertations, and research articles) across both NAWE and TAWE groups. This step was crucial in identifying the IMDMs most commonly employed by each group, as well as understanding their frequency within the respective corpora.

Subsequently, log-likelihood analyses were conducted to determine whether there were significant differences in the usage of IMDMs between Turkish and native English-speaking writers. These analyses were performed separately for each academic level to ensure a thorough comparison across the different types of texts. Where differences were significant, additional analyses were conducted to pinpoint the specific IMDM subcategories responsible for these variations.

Regarding the second research question, which explored whether significant differences in the use of IMDMs existed across the different academic levels within each group (NAWE vs. TAWE), further log-likelihood analyses were employed. These analyses aimed to uncover any variations in IMDM usage between master's theses, doctoral dissertations, and research articles within each group. Pairwise comparisons

were then used to identify the specific academic levels where significant differences occurred.

The following sections detail the results of these statistical analyses, providing insights aligned with each research question.

4.1.1. Interactional Metadiscourse Markers in Turkish and Native Corpora

To address our research questions, an in-depth analysis of interactional metadiscourse markers (IMDMs) across six distinct academic corpora, segmented into groups authored by Native English Academic Writers (NAWEs) and Turkish Academic Writers of English (TAWEs), was carried out. These groups include the **Native Ph.D. Discussion**, **Native Article Discussion**, **Native Master Discussion**, **Turkish Ph.D. Discussion**, **Turkish Article Discussion**, and **Turkish Master Discussion**. The investigation was guided by Hyland's taxonomy of IMDMs, which organizes the markers into five pivotal categories, namely hedges, boosters, attitude markers, engagement markers, and self-mentions.

Table 4.1: Distribution and Frequency of IMDMs in Academic Corpora

	Native Academic Writers of English			*Turkish Academic Writers of English*		
	Ph.D. Discussion	**Master Discussion**	**Article Discussion**	**Ph.D. Discussion**	**Master Discussion**	**Article Discussion**
Corpus size in words	76.680	42.466	25.070	190.475	114.854	30.098
Number of IMDMs used (n)	4153	2697	1542	9699	5968	1568
n/ 10.000	541.60	635.10	615.08	509.20	519.62	520.96
Number of IMDMs used	185	194	185	214	229	178
Number of IMDMs not used	133	124	133	104	89	140

n: raw frequency of IMDMs

n/ 10.000: frequency of IMDMs per 10.000 words

In the present comprehensive study, interactional metadiscourse markers (IMDMs) were analyzed across six diverse academic corpora to investigate how authors from different linguistic backgrounds—specifically Native English Academic Writers (NAWEs) and Turkish Academic Writers of English (TAWEs)—utilize linguistic strategies to establish their stance within academic writing. The corpora are segmented

into three groups each for NAWEs and TAWEs: Native Ph.D. Discussion, Native Master Discussion, Native Article Discussion, Turkish Ph.D. Discussion, Turkish Master Discussion, and Turkish Article Discussion. Collectively, these represent a substantial lexical volume and a variety of academic disciplines.

The aggregate analysis across these corpora has highlighted several intriguing patterns concerning the employment of IMDMs, guided by Hyland's 2005b taxonomy. Specifically, the IMDMs analyzed varied not only in frequency but also in the diversity of their application. a total of 318 IMDMs were underlined, with their occurrences parsed and quantified using advanced linguistic software tools.

As presented in the data, the corpus sizes range from 25,070 words in Native Academic Article discussions to 190,475 words in Turkish Academic Ph.D. discussions. A total of 31,827 IMDMs were analyzed across five categories, including attitude markers, boosters, self-mentions, engagement markers, and hedges. The analysis revealed differing levels of IMDM utilization across these academic texts.

As illustrated in Table 4, in the Native Academic context, the Ph.D. discussions utilized 4,153 IMDMs, Master discussions used 2,697 IMDMs, and Article discussions utilized 1,542 IMDMs. In contrast, Turkish Academic discussions used more IMDMs across all levels: 9,699 in Ph.D., 5,968 in Master's, and 1,568 in Article discussions, which indicates a higher frequency of IMDM use in Turkish academic writings compared to their Native counterparts.

Normalized frequencies per 10,000 words were calculated to compare IMDM density more effectively across these varied discussions. The recalculated frequencies show that Native Ph.D. discussions had a frequency of 541.60 IMDMs, Master discussions had 635.10 IMDMs, and Article discussions had 615.08 IMDMs. Comparatively, Turkish discussions featured slightly lower frequencies, with Ph.D. discussions at 509.20 IMDMs, Master discussions at 519.62 IMDMs, and Article discussions at 520.96 IMDMs. These statistics reveal that, per 10,000 words, Native discussions generally employ IMDMs more densely than Turkish discussions, indicating a more intensive use of these markers to explicitly structure discourse.

Additionally, the number of IMDMs not utilized also highlighted differences, suggesting a larger pool of potential IMDMs considered but not employed in the Turkish

texts, which might indicate a more conservative or selective utilization of these linguistic elements.

Moving forward, further statistical tests, such as log-likelihood comparisons, were employed to substantiate the aforementioned observations and enhance our understanding of metadiscourse roles in academic writing across different linguistic backgrounds.

Log Likelihood analysis was carried out to assess whether Native Academic Writers of English (NAWEs) and Turkish Academic Writers of English (TAWEs) significantly differed in the use of Interactive Metadiscourse Markers (IMDMs) in terms of frequency. Regarding the findings of the Log Likelihood (LL) statistics about the overall use of IMDMs in the two sets of corpora, we observed an overuse of IMDMs by NAWEs, as shown in Table 4.2.

Table 4.2: Total Log-Likelihood Analysis of IMDM Use in Native & Turkish Academic Writers

Academic Level	Corpus Type	Observed Frequency	Relative Frequency per 100 words	LL Ratio	Significance	ELL
Total	Native	8,392	5.82	+90.91	p <0.05	0.0203
Total	Turkish	17,235	5.14			

+ indicates overuse, - indicates underuse in Native corpus relative to Turkish corpus

Rayson and Garside (2000) argue that a higher Log Likelihood (LL) value signifies a greater difference in relative frequency between two corpora. The relative frequencies represent the concentration of IMDM usage per 100 words within the corpus of each group. The analysis revealed that NAWEs used 5.82 IMDMs per 100 words, whereas TAWEs used 5.14 IMDMs per 100 words.

The LL Ratio was calculated as 90.91 ($p < 0.0001$), signifying a statistically significant difference in the overall frequency of IMDM occurrences between the two corpora. This result is further substantiated by the Expected Log Likelihood (ELL) ratio of 0.0203, which reflects the effect size and emphasizes that Native academic writers tend to use IMDMs more frequently per 100 words compared to Turkish academic writers.

- *Native vs. Turkish Comparison:* The IMDM frequencies observed were 8,392 in the Native corpus and 17,235 in the Turkish corpus. The relative frequencies per 100 words were 5.82 and 5.14, respectively. This suggests that, on average,

Native writers incorporate IMDMs more frequently in their writing than their Turkish counterparts.

Statistical Significance:

- Log Likelihood Ratio (LL Ratio): The LL ratio of 90.91 with an extremely small p-value of $p<0.0001p<0.0001$ strongly indicates a statistically significant difference between the two corpora in terms of IMDM usage. This high LL value suggests that the observed frequencies deviate substantially from what would be expected if there were no differences between the groups.

Effect Size and Interpretation:

- *Expected Log Likelihood (ELL):* The ELL of 0.0203 per 100 words underscores that IMDMs are used more frequently per word by Native writers compared to Turkish writers, reflecting a subtle yet statistically significant disparity.
- *Over/Underuse:* The positive sign (+) in the LL Ratio column indicates that IMDMs are overused by the Native group compared to the Turkish group, aligning with the higher observed frequency and the positive ELL value.

Thus, a statistically significant difference between NAWEs and TAWEs in terms of frequency counts of IMDMs was found, reflecting potential variations in rhetorical strategies and academic writing practices between these groups.

Table 4.3: Log-Likelihood Analysis of IMDM Use in Native & Turkish Academic Discourses

Description	Native (O1)	%1	Turkish (O2)	%2	LL Ratio ($p<0.05$)	ELL
Ph.D.	4,153	5.42	9,699	5.09	+11.58	0.0000433
Master	2,697	6.35	5,968	5.20	+77.24	0.000491
Article	1,542	6.15	1,568	5.21	+22.69	0.000411

O1 is observed frequency in Native Corpus, O2 is observed frequency in Turkish Corpus

%1 and %2 values show relative frequencies in the texts.

+ indicates overuse, - indicates underuse in Native corpus relative to Turkish corpus

As revealed in Table 6, with the analysis, the use of interactive metadiscourse markers (IMDMs) in the academic writings of Native Academic Writers of English (NAWEs) and Turkish Academic Writers of English (TAWEs) was investigated. The Log-Likelihood Ratio (LL Ratio) was calculated to determine the statistical significance

of differences in IMDM usage between these groups across three academic levels: Ph.D., Master's, and Article.

Relative Frequency values: These values represent the relative frequency of IMDMs per 100 words, illustrating the density of IMDM employment within each corpus. For the Ph.D. level, IMDMs are used at a rate of 5.42 per 100 words by Native writers and 5.09 by Turkish writers.

Over/Underuse: The "+" sign indicates the overuse of IMDMs by the Native group relative to the Turkish group. For all levels—Ph.D., Master's, and Article—the Native group shows a higher frequency of IMDM usage per 100 words, indicating overuse compared to the Turkish group.

LL Ratio and Significance: The LL Ratios are 11.58 for Ph.D., 77.24 for Master's, and 22.69 for the Article level, respectively. These values suggest statistically significant differences in the usage patterns of IMDMs, with the Master's level showing the most pronounced difference. The p-values are all below 0.05, confirming that these differences are statistically significant across all levels.

The analysis demonstrates significant variations in the frequency of IMDM usage between Native and Turkish academic writings. These variations might reflect differing academic traditions or rhetorical preferences, influencing how scholarly arguments are structured and presented. The consistent overuse of IMDMs in Native texts across all academic levels suggests a frequent reliance on these markers to structure discourse and engage with the academic audience.

Log-likelihood analysis was conducted to determine whether there are significant differences in the use of IMDMs between Native and Turkish academic discussion corpora, categorized by academic levels (Ph.D., Article, and Master). Our focus was on assessing whether the frequency of IMDM usage differed significantly across these groups.

As shown in the revised table, the analysis provided separate comparisons for each level of academic discourse:

- *Native Ph.D. vs. Turkish Ph.D.:* The observed frequencies of IMDMs were 4,153 for the Native Ph.D. corpus and 9,699 for the Turkish Ph.D. corpus. The relative frequencies per 100 words were 5.42 and 5.09, respectively. The LL Ratio was 11.58, indicating a statistically significant difference between the two corpora,

which suggests an overuse of IMDMs in the Native Ph.D. corpus compared to the Turkish Ph.D. corpus. The effect size, represented by an ELL of 0.0000433, further supports the significance of this finding.

- *Native Article vs. Turkish Article:* Here, IMDM counts were 1,542 for the Native Article corpus and 1,568 for the Turkish Article corpus, with relative frequencies per 100 words of 6.15 and 5.21, respectively. The LL Ratio for this comparison was 22.69, illustrating a highly significant difference in the usage of IMDMs, with the Native Article corpus showing a higher frequency of usage. The ELL of 0.000411 strongly emphasizes the magnitude of this disparity.
- *Native Master vs. Turkish Master:* In this pairing, the IMDM counts were 2,697 for the Native Master and 5,968 for the Turkish Master, with frequencies per 100 words of 6.35 and 5.20, respectively. The LL Ratio was 77.24, confirming a statistically significant difference favoring the Native Master corpus in terms of IMDM use. The ELL value of 0.000491 underlines the considerable effect size of this difference.

Overall, the log-likelihood analysis across the different academic levels indicates significant disparities in the usage of IMDMs between the Native and Turkish corpora. The higher the LL Ratio, the more significant the difference in frequency of IMDM usage between the corpora, with the positive ELL values providing a measure of the effect size of these differences. Each comparison confirms that the observed variations are not merely by chance but reflect genuine differences in discourse practices between these groups.

4.1.2. Categorical Use of Interactional Metadiscourse Markers in Turkish and Native Corpora

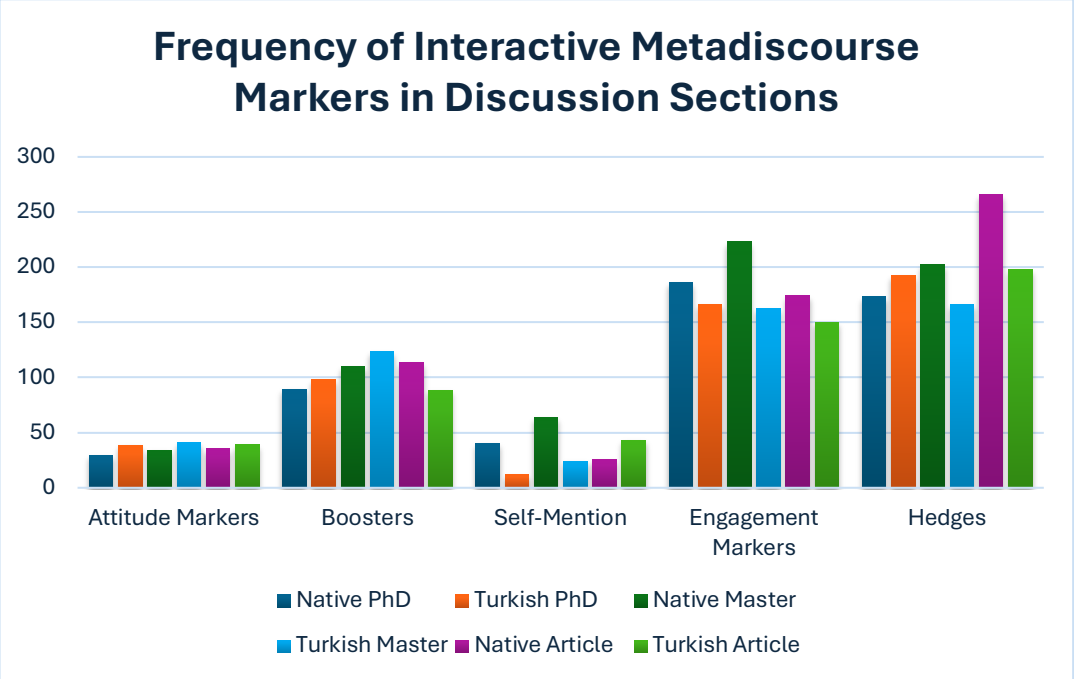
Table 4.4: Categorical use of IMDMs in Corpora

Category	Native Ph.D.	Turkish Ph.D.	Native Master	Turkish Master	Native Article	Turkish Article
Attitude Markers	30.37	39.17	34.62	41.53	35.50	39.21
Boosters	90.11	98.39	110.21	123.90	113.68	89.04
Self-Mention	40.79	12.86	64.52	24.90	25.93	43.86
Engagement Markers	186.24	166.11	223.00	162.90	174.31	150.51
Hedges	173.69	192.68	202.75	166.39	265.66	198.35

Turning to the categorical use of interactive metadiscourse markers (IMDMs) across Native Academic Writers of English (NAWE) and Turkish Academic Writers of English (TAWE), the data reveals distinct patterns in how each group employs these linguistic tools in academic writing. As the comparative charts illustrate, there are notable differences in the frequency and variety of IMDM usage, which contribute significantly to the construction of their academic stances.

Figure 1 illustrates a comparative analysis of the use of five categories of IMDMs — Attitude Markers, Boosters, Self-Mention, Engagement Markers, and Hedges — across 6 academic groups.

Figure 4.1: Distribution of IMDMs Across Academic Groups



In the comparative analysis of interactive metadiscourse markers (IMDMs) across various academic groups, distinct patterns emerge, which reflect varied rhetorical strategies and cultural influences in academic writing. By examining these markers—Attitude Markers, Boosters, Self-Mention, Engagement Markers, and Hedges—we gain insights into the linguistic nuances of each group.

Hedges are notably prominent across all groups, peaking with the Native Article discussions at a frequency of 265.66, which suggests a universal academic tendency towards cautious language. This strategy, used to soften claims and introduce flexibility, reduces the potential for conflict or criticism in scholarly discourse. Such a pattern

highlights a general preference for mitigating assertions, characteristic of careful and considered academic communication.

Boosters are utilized with varying intensities, showing the highest frequency in the Native Master discussions at 110.21 and Turkish Ph.D. discussions at 98.39. This significant employment of boosters indicates a confident stance in their assertions and a rhetorical approach emphasizing certainty and conviction. It could reflect a disciplinary or cultural inclination towards presenting robust arguments and a strong authorial presence, potentially to persuade or assert authority within the academic community.

Engagement Markers feature prominently in the Native Master group with a frequency of 223.00, illustrating a strategy focused on involving the reader and fostering an interactive text.

The analysis of Self-Mention shows a higher frequency in Native groups compared to Turkish ones, with the most significant usage in the Native Master discussions at 64.52. This pattern suggests a cultural or stylistic preference for a more personal or subjective approach in the Native texts, where authors may choose to position themselves explicitly within the discourse. This can make the text appear more personalized and grounded in personal research experience or opinion, contrasting with a possibly more detached style in Turkish texts.

Lastly, Attitude Markers are used sparingly across all groups, with the lowest frequencies observed in the Native Ph.D. discussions at 30.37. The minimal use of these markers across the board points to a common academic practice of maintaining an objective and neutral tone, avoiding overt expressions of emotion or personal bias, which aligns with the conventions of formal academic writing.

Overall, this detailed examination of IMDMs across different academic and cultural contexts reveals how academic writers adapt linguistic tools to construct their scholarly identities and engage with their audiences.

Table 4.5: Frequency Distribution of IMDM Categories in Native Academic Groups

IMDM Category	Data Type	Native Ph.D.	Native Master	Native Article
Hedges	n	1384	861	666
	n/10,000	173.69	202.75	265.66
	%	33.33	31.93	43.19
Boosters	n	718	468	285
	n/10,000	90.11	110.21	113.68
	%	17.29	17.35	18.48
Self-Mentions	n	325	274	65
	n/10,000	40.79	64.52	25.93
	%	7.83	10.16	4.22
Engagement Markers	n	1484	947	437
	n/10,000	186.24	223.00	174.31
	%	35.73	35.11	28.34
Attitude Markers	n	242	147	89
	n/10,000	30.37	34.62	35.50
	%	5.83	5.45	5.77

n: raw frequency of each category of IMDMs

n /10.000: frequency of each category of IMDMs per 10.000 words

Table 4.5 presents a detailed frequency analysis of interactive metadiscourse markers (IMDMs) within the Native academic contexts, offering insights into the categorical use across three academic levels: Ph.D., Master, and Article. In terms of the frequencies per 10,000 words, hedges were the most frequently employed IMDMs across all levels, with 173.69 in Ph.D., 202.75 in Master, and 265.66 in Article Remarkably, hedges accounted for 33.33% of all IMDMs in Native Ph.D., 31.93% in Native Master, and surged to 43.19% in Native Article, underscoring their predominant role in mitigating claims to foster scholarly caution.

Boosters, serving to emphasize certainty and writer's confidence, were the next most common category. They constituted 17.29% of all IMDMs in Native Ph.D. and showed slightly higher percentages in Master and Article with 17.35% and 18.48%, respectively. Boosters appeared 90.11 times per 10,000 words in Ph.D., increased to 110.21 in Master, and slightly more in Article at 113.68, indicating a growing reliance on assertive language in less formal academic writings.

Engagement markers, which directly address the reader to involve them in the text, also showed significant usage. They appeared 186.24 times per 10,000 words in Ph.D. discussions, peaked at 223.00 in Master, and moderated to 174.31 in Article. This marker represented around one-third of all IMDMs across Native academic levels, highlighting a robust engagement with the subject matter across different discourse contexts.

Self-mentions, which explicitly refer to the author's presence in the discourse, varied more distinctly across the levels. They were most prevalent in Master discussions with 64.52 per 10,000 words and constituted 10.16% of IMDMs, compared to only 40.79 in Ph.D. and a minimal 25.93 in Article. This variation reflects different practices in expressing authorial presence, with a more pronounced usage in Master's theses, possibly due to the personalized nature of such academic works.

Attitude markers, though the least frequent across all categories, were used to express judgments or appraisals within the academic texts. Their usage was fairly consistent, ranging from 30.37 in Ph.D. to 35.50 in Article, representing less than 6% of IMDMs across all levels. This consistency suggests a subtle but significant role in shaping the evaluative stance of academic writers. Overall, the analysis highlights how Native Academic Writers of English utilize various IMDMs to construct their scholarly voice across different academic levels. While hedges and boosters remain foundational in building academic stances, the notable variances in the usage of self-mentions and engagement markers across different contexts underscore the adaptive strategies employed by academic writers to align with disciplinary expectations and rhetorical purposes. This detailed examination not only reveals the preferred linguistic strategies but also reflects broader disciplinary practices that govern academic writing in Native contexts.

Table 4.6: Frequency Distribution of IMDMs in Turkish Academic Groups

IMDM Category	Data Type	Turkish Ph.D.	Turkish Master	Turkish Article
Hedges	n	3670	1911	597
	n/10,000	192.68	166.39	198.35
	%	37.84	32.02	38.07
Boosters	n	1874	1423	268
	n/10,000	98.39	123.90	89.04
	%	19.33	23.85	17.10
Self-Mentions	n	245	286	132
	n/10,000	12.86	24.90	43.86
	%	2.53	4.79	8.42
Engagement Markers	n	3164	1871	453
	n/10,000	166.11	162.90	150.52
	%	32.62	31.35	28.90
Attitude Markers	n	746	477	118
	n/10,000	39.17	41.53	39.21
	%	7.69	7.99	7.53

n: raw frequency of each category of IMDMs

n /10.000: frequency of each category of IMDMs per 10.000 words

Table 4.6 provides an intricate analysis of interactive metadiscourse markers (IMDMs) across Turkish academic contexts, elucidating the differences in IMDM usage across three distinct academic levels: Ph.D., Master, and Article. Hedges emerge as the predominant IMDM in all three levels, with frequencies per 10,000 words at 192.68 in Ph.D., 166.39 in Master, and peaking at 198.35 in Article. They represent 37.84% of IMDMs in Turkish Ph.D., 32.02% in Turkish Master, and 38.07% in Turkish Article, illustrating their crucial role in moderating claims to enhance precision and cautiousness in scholarly communication.

Boosters, which underscore certainty and intensify the author's stance, follow hedges in prevalence. They make up 19.33% of all IMDMs in Turkish Ph.D., a more pronounced 23.85% in Turkish Master, and 17.10% in Turkish Article. The frequency of boosters per 10,000 words appears slightly reduced in Ph.D. contexts at 98.39, increases to 123.90 in Master, and decreases again to 89.04 in Article, suggesting variable emphasis on direct and assertive language across different academic formats.

Engagement markers, used to actively involve the reader, show substantial usage with 166.11 per 10,000 words in Ph.D., slightly reduced to 162.90 in Master, and further to 150.52 in Article. Accounting for approximately one-third of the IMDMs across Turkish academic writings, these markers indicate a strong orientation towards reader engagement, though slightly less emphasized in less formal academic writings like Article.

Self-mentions are notably less frequent compared to Native groups, reflecting cultural differences in academic discourse. Appearing only 12.86 times per 10,000 words in Ph.D., they constitute a mere 2.53% of IMDMs, rising slightly in Master to 24.90 per 10,000 words (4.79%) and further to 43.86 in Article (8.42%). This trend highlights a more reserved usage of authorial presence, possibly due to differing academic conventions or a preference for a more detached scholarly voice.

Attitude markers, while used least frequently, are consistently employed across all levels to express evaluations or attitudes, ranging from 39.17 in Ph.D. to 41.53 in Master and 39.21 in Article. They represent about 7% to 8% of IMDMs, underscoring their subtle yet impactful role in framing the scholarly narrative.

In summary, the analysis of Turkish academic IMDM usage reveals a strong reliance on hedges and boosters, akin to Native contexts, yet with distinctive patterns in

the usage of self-mentions and engagement markers. This variance not only reflects the adaptive rhetorical strategies of Turkish academic writers but also points to broader cultural and disciplinary influences that shape how scholarly arguments are constructed and articulated in Turkish academic discourse. This detailed scrutiny not only sheds light on preferred linguistic strategies but also mirrors the broader disciplinary practices that govern academic writing in Turkish contexts.

Comparative Analysis of IMDM Usage in Native and Turkish Academic Groups

The analysis done in Table 8 highlights the distribution and usage patterns of interactive metadiscourse markers across Native and Turkish academic contexts, providing insights into the linguistic and rhetorical preferences of each group.

Hedges

- *Native Groups:* Predominantly used, with frequencies per 10,000 words peaking at 265.66 in Native Article. They comprise up to 43.19% of all IMDMs in Native Article, indicating a strong preference for mitigating claims and fostering cautious academic dialogue.
- *Turkish Groups:* Similarly prevalent, with the highest frequency in Turkish Articles at 198.35 per 10,000 words. They constitute up to 38.07% of Turkish Articles, slightly less than in Native groups, yet still significant, highlighting a common scholarly practice of moderating assertions.

Boosters

- *Native Groups:* Employed robustly, especially in Native Master (110.21 per 10,000 words) and reflecting confidence and assertion, accounting for up to 18.48% in Native Article.
- *Turkish Groups:* Also significant, particularly in Turkish Master at 123.90 per 10,000 words, but generally less frequent than in Native contexts, which suggests a slightly less direct approach in emphasizing certainty and strength of claims.

Self-Mentions

- *Native Groups:* More frequently used, particularly in Native Master where they appear 64.52 times per 10,000 words and make up 10.16% of IMDMs, indicating a more pronounced authorial presence.

- *Turkish Groups:* Markedly lower usage, with just 12.86 occurrences per 10,000 words in Turkish Ph.D. and only 2.53% of IMDMs. This reflects a cultural or academic preference for a more detached or impersonal authorial stance.

Engagement Markers

- *Native Groups:* Extensively used, especially in Native Master at 223.00 per 10,000 words, making up about 35.11% of IMDMs, showing a strong inclination to engage and involve the reader.
- *Turkish Groups:* Less prevalent, with 166.11 per 10,000 words in Turkish Ph.D. and constituting about 32.62% of IMDMs, indicating a slightly lesser focus on reader engagement compared to Native groups.

Attitude Markers

- *Native Groups:* Least frequently used, with about 5.83% in Native Ph.D. They remain a minor component, used to convey personal judgments or appraisals subtly.
- *Turkish Groups:* Used slightly more than in Native groups, especially in Turkish Master (41.53 per 10,000 words), suggesting a somewhat greater propensity to explicitly state attitudes and evaluations.

Both Native and Turkish academic writers employ IMDMs extensively to structure their scholarly discourse, yet distinct patterns emerge. Native academic writers tend to use more self-mentions and engagement markers, highlighting a more personal and interactive discourse style. In contrast, Turkish writers exhibit a slightly higher use of attitude markers but generally favor a more formal and less personal approach, as seen in the lower usage of self-mentions.

This comparative analysis underscores how cultural and educational contexts influence the rhetorical strategies of academic writers. The variance in IMDM usage reflects not only linguistic preferences but also deeper academic and cultural norms that shape how arguments are constructed and presented in scholarly communication.

Table 4.7: Comparative Log Likelihood Analysis of IMDMs with Overuse/Underuse Indicators

IMDM Category	Native n	Turkish n	LL Ratio ($p<0.05$)	ELL
Hedges	1384	3670	-10.98	0.00001668
Boosters	718	1874	-4.06	0.00000499
Self-Mentions	325	245	+185.96	0.0007320
Engagement Markers	1484	3164	+13.04	0.00008419
Attitude Markers	242	746	-12.32	0.00003307

n: raw frequency of each category of IMDMs

+ indicates overuse, - indicates underuse in Native corpus relative to Turkish corpus

Table 4.7 delineates the categories of interactive metadiscourse markers (IMDMs) and their associated Log Likelihood (LL) values. The crucial insight gleaned from this analysis is the statistically significant differences in the frequency of IMDM usage across the two corpora. Among the categories, **Self-Mentions** exhibited the most pronounced difference, with the highest LL value of +185.96, suggesting a substantial disparity in its usage between the groups. The LL values for **Engagement Markers** and **Hedges** were also significant, recorded at +13.04 and -10.98, respectively, underscoring notable variations in their application.

Further analysis revealed significant differences for **Attitude Markers** and **Boosters**, with LL values of -12.32 and -4.06, respectively. These findings are corroborated by the Expected Log Likelihood (ELL) values ranging between 0 and 1, reinforcing the statistical significance of these disparities.

Through this investigation, the types and frequencies of IMDMs utilized by Turkish Academic Writers (TAWEs) and Native Academic Writers (NAWEs) in their Ph.D. dissertations have been discerned, and the statistical significance of these variances has been established. It was observed that the frequency and types of IMDMs differed significantly across the corpus, highlighting distinct rhetorical strategies employed by CNWE and CTWE.

Notably, **Hedges** and **Boosters** were the most frequently occurring IMDM categories, illustrating how both TAWEs and NAWEs strategically moderated their academic stance. Hedges allowed authors to soften their claims, providing space for reader interpretation, while Boosters enabled them to assert their statements more emphatically. Despite the prevalent use of **Engagement Markers** in CNWE being twice

as common as in CTWE, the proportions in both corpora were relatively similar, suggesting a concerted effort by both groups to engage with their readership effectively.

Interestingly, the lower frequency of **Attitude Markers** in both corpora might suggest a deliberate avoidance by both TAWEs and NAWEs of personal comments on propositional content, maintaining a more objective academic tone. However, the stark contrast in the use of **Self-Mentions**, which were significantly more frequent in NAWEs compared to TAWEs, indicates a distinct approach to projecting an academic persona, with NAWEs more frequently foregrounding their discoursal self.

In summary, the main distinction in the construction of academic stance between NAWEs and TAWEs lies in their differential employment of **Self-Mentions**, reflecting divergent cultural or disciplinary norms in expressing authorial presence in academic discourse.

Table 4.8: Ph.D. Level IMDMs Analysis

IMDM Category	Native n	Turkish n	LL Ratio ($p<0.05$)	ELL
Hedges	3670	1384	-10.98	0.00001668
Boosters	1874	718	-4.06	0.00000499
Self-Mentions	245	325	+185.96	0.000732
Engagement Markers	3164	1484	+13.04	0.00008419
Attitude Markers	746	242	-12.32	0.00003307

n: raw frequency of each category of IMDMs

+ indicates overuse, - indicates underuse in Native corpus relative to Turkish corpus

Table 4.8, The Ph.D. level comparison reveals significant differences in the usage of interactive metadiscourse markers between Native and Turkish academic groups. The most striking finding is the very high LL value for **Self-Mentions**, where Native writers exhibit a marked preference for incorporating personal voice into their dissertations, significantly more so than their Turkish counterparts. This could reflect cultural or disciplinary norms that encourage a more explicit authorial presence in scholarly work.

Engagement markers also show a higher usage among Native Ph.D. candidates, suggesting a rhetorical strategy aimed at more actively involving the reader. This indicates a possible difference in academic training or expectations in reader engagement across cultures.

Conversely, **Hedges**, **Boosters**, and **Attitude markers** show underuse in the Native corpus compared to the Turkish one, although they still present significant differences. This underuse may reflect a rhetorical style that is less assertive and more tentative among Native Ph.D. writers, which aligns with academic conventions that prioritize caution over assertion.

Table 4.9: Master Level IMDMs Analysis

IMDM Category	Native n	Turkish n	LL Ratio (p<0.05)	ELL
Hedges	1911	861	-21.05	0.00005022
Boosters	1423	468	-5.53	0.00001322
Self-Mentions	286	274	+119.84	0.000286
Engagement Markers	1871	947	+57.15	0.0001368
Attitude Markers	477	147	-4.15	0.00000991

n: raw frequency of each category of IMDMs

+ indicates overuse, - indicates underuse in Native corpus relative to Turkish corpus

At the Master level, the data reveals substantial differences in the use of IMDMs, with **Engagement markers** and **Self-Mentions** again showing significant divergences. Native Masters students use these markers extensively compared to their Turkish counterparts, suggesting a consistent pattern observed at the Ph.D. level that continues into Masters level studies.

Hedges and **Boosters** also show significant differences, with underuse in the Native corpus indicating a continued preference for a more reserved and cautious rhetorical style. This might reflect deeper educational or cultural influences on academic writing styles at the Master's level.

The significant difference in **Self-Mentions** reflects a similar trend to the Ph.D. level, where Native writers more frequently foreground their personal academic perspective, underscoring a cultural inclination towards a pronounced scholarly identity.

Table 4.10: Article-Level IMDMs Analysis

IMDM Category	Native n	Turkish n	LL Ratio ($p<0.05$)	ELL
Hedges	597	666	+27.53	0.000551
Boosters	268	285	+8.47	0.000169
Self-Mentions	132	65	-12.48	0.000250
Engagement Markers	453	437	-5.01	0.000100
Attitude Markers	118	89	-0.47 (not significant)	0.00000941

n: raw frequency of each category of IMDMs

+ indicates overuse, - indicates underuse in Native corpus relative to Turkish corpus

For published articles, the analysis indicates differences, though they are less pronounced compared to graduate-level academic work. The use of **Hedges** shows overuse in the Native corpus, suggesting that even in published work, Native authors maintain a cautious approach, possibly to align with international academic publishing standards that value objectivity and careful claim framing.

Boosters and **Engagement markers** also show significant differences but to a lesser extent, pointing to variations in assertiveness and reader engagement strategies. This could reflect different editorial policies or audience expectations in scholarly publishing.

The LL value for **Attitude Markers** at -0.47, marked as "not significant," indicates that the difference in usage of Attitude Markers between the Native and Turkish corpora in the Article level analysis does not reach the statistical threshold to be considered meaningful in terms of frequency variation. This result can be interpreted in several ways:

Across all levels—Ph.D., Master, and Article—the analysis highlights culturally and educationally influenced differences in how IMDMs are used by Native and Turkish academic writers. These differences are particularly marked in the use of **Self-Mentions** and **Engagement markers**, which vary significantly between the Native and Turkish corpora, reflecting divergent rhetorical practices and possibly different academic values or training emphases. The observed patterns provide insights into how academic writers from different backgrounds construct their scholarly narratives and engage with their academic communities.

Now that the general usage and significant differences of interactive metadiscourse markers (IMDMs) between Native Academic Writers (NAWEs) and

Turkish Academic Writers (TAWEs) across various academic levels have been thoroughly analyzed, this detailed examination will further illuminate how these groups distinctively employ IMDMs in their Ph.D. dissertations, Master's theses, and scholarly articles, enhancing our understanding of the nuanced rhetorical strategies that characterize their academic writing. By exploring these differences in depth, we can appreciate the subtle yet impactful ways in which cultural and educational backgrounds influence academic discourse.

Hedges

In this study, **hedges** emerged as the most frequently occurring category among the five types of interactive metadiscourse markers (IMDMs) analyzed. Hyland (2005b) describes hedges as markers that "indicate the writer's decision to recognize alternative voices and viewpoints and so withhold complete commitment to a proposition" (p. 52). By allowing information to be presented as an opinion rather than a fact, hedges thus emphasize the subjectivity of a position, opening it to negotiation and interpretation. This nuanced function of hedges is crucial in academic writing, where asserting certainty or tentativeness impacts the reception of claims and arguments.

Table 4.11 provides a detailed overview of these findings, underscoring the strategic employment of hedges as a rhetorical tool to navigate academic arguments effectively. The table also notes that certain hedges identified in the corpora were not utilized, indicating selective preference or avoidance in specific contexts by both groups of academic writers.

Table 4.11: Distribution of Hedges in Turkish and Native Academic Corpora

Data Type	Turkish Total	Native Total
Frequency of Hedges (n)	6178	2911
n / 10,000	157.42	179.69
Percentage of Hedges	36.31%	36.15%

Table 4.11 reveals significant differences in the use of hedges between Native Academic Writers (NAWEs) and Turkish Academic Writers (TAWEs). According to the data, NAWEs exhibited a higher raw frequency of hedges, totaling 2,911, compared to 6,178 in TAWEs. However, when normalized per 10,000 words, hedges were more frequent in Native texts (179.69) than in Turkish texts (157.42), highlighting a denser usage in smaller corpora sizes by Native authors. Despite this, the percentage of hedges

relative to total discourse markers stands at 36.31% for TAWEs and 36.15% for NAWEs, suggesting a nearly equal proportional reliance on hedges in their academic discourse.

Table 4.12 provides an insightful breakdown of how hedges—linguistic tools that allow for flexibility in statements and claims—are utilized across different academic levels (Ph.D., Master, Article) in Turkish and Native academic contexts. The use of hedges is notably varied, reflecting differences in academic communication styles and potentially the level of conservatism or assertiveness preferred in academic discourse.

Table 4.12: Distribution of Hedges Across All Academic Levels and Corpora

Data Type	Turkish Ph.D.	Turkish Master	Turkish Article	Native Ph.D.	Native Master	Native Article
Frequency of Hedges (n)	3670	1911	597	1384	861	666
n / 10,000	192.68	166.39	198.35	173.69	202.75	265.66
Percentage of Hedges	37.84%	32.02%	38.07%	33.33%	31.93%	43.19%
Number of Hedges Used	71	72	63	56	56	67
Number of Hedges Not Used	30	29	38	45	45	34
Total Number of Hedges	101	101	101	101	101	101

In terms of raw frequency, Turkish Ph.D. students exhibit the highest use of hedges (3670 instances), suggesting a preference for a cautious approach when discussing their research findings. This is perhaps reflective of the complex nature of Ph.D. research, where arguments must be carefully positioned. Conversely, in the Native group, the highest density of hedges occurs in article writing (265.66 per 10,000 words), indicating a strategic use of hedges to negotiate the speculative claims typical of published research. This high frequency of articles could be influenced by the rigorous standards of peer review and the need to address a diverse academic readership.

When normalized per 10,000 words, the data reveals that Native articles not only have a high raw frequency but also the highest normalized usage among all categories. This highlights an intensive use of hedging to either temper claims or engage readers in a dialogue, a style likely encouraged by editorial standards in scholarly publishing. Turkish articles also show significant hedging (198.35 per 10,000 words), underscoring a cautious approach that possibly aims to incorporate and acknowledge diverse viewpoints.

The comparison of hedges used versus not used is particularly revealing. Both Turkish Ph.D. and Master levels demonstrate a robust engagement with almost all

available hedges, using 71 and 72 out of 101, respectively. This could indicate a cultural or academic preference for modesty and precision in stating claims. Native Ph.D. and Master levels, however, show more restraint, with 56 hedges used from a similar pool, suggesting a different academic convention or confidence level in stating claims outright.

This analysis underscores how hedging serves as a crucial rhetorical strategy across different academic cultures and levels of study. Turkish academic writers, especially at the Ph.D. and Article levels, tend to employ hedges more frequently, perhaps reflecting a broader academic culture that values caution and inclusivity in scholarly discussions. Native writers, while employing fewer hedges overall, concentrate their hedging efforts significantly in article writing, likely to mitigate potential criticism and foster a collegial dialogue within the scholarly community. This variation not only highlights the cultural differences in academic discourse but also illustrates the strategic use of language in academic writing to navigate the complex landscapes of global scholarly communication.

Table 4.13: Items of Hedges Not Found in Two Corpora

Native Article	Native Master	Native Ph.D.	Turkish Article	Turkish Master	Turkish Ph.D.
apparently	apparently	apparent	apparent	apparently	apparently
certain amount	certain amount	certain amount	certain amount	certain amount	certain amount
certain extent	certain extent	certain extent	certain extent	certain extent	certain extent
from my perspective	from my perspective	argue	from my perspective	from my perspective	from my perspective
from our perspective	from our perspective	from my perspective	from our perspective	from our perspective	from our perspective
from this perspective	from this perspective	from our perspective	from this perspective	from this perspective	from this perspective
in general	in general	from this perspective	in general	in general	in general
in most cases	in most cases	in most cases	in most cases	in most cases	in most cases
in most instances	in most instances	in most instances	in most instances	in most instances	in most instances
in my opinion	in my opinion	in my opinion	in my opinion	in my opinion	in my opinion
in my view	in my view	in my view	in my view	in my view	in my view
in this view	in this view	in this view	in this view	in this view	in this view
in our opinion	in our opinion	in our opinion	in our opinion	in our opinion	in our opinion
in our view	in our view	in our view	in our view	in our view	in our view
on the whole	on the whole	on the whole	on the whole	on the whole	on the whole
plausibly	plausibly	plausibly	plausibly	plausibly	plausibly
presumably	presumably	presumably	presumably	presumably	presumably
to my knowledge	to my knowledge	to my knowledge	to my knowledge	to my knowledge	to my knowledge
uncertainly	uncertainly	uncertainly	uncertainly	uncertainly	uncertainly

Table 4.13: (Cont) Items of Hedges Not Found in Two Corpora

Native Article	Native Master	Native Ph.D.	Turkish Article	Turkish Master	Turkish Ph.D.
unclearly	unclearly	unclearly	unclearly	unclearly	unclearly
doubtful	doubtful	doubtful	doubtful	doubtful	doubtful
estimate	estimate	estimate	estimate	estimate	estimate
postulate	postulate	postulate	postulate	postulate	postulate
postulates	postulates	postulates	postulates	postulates	postulates
supposes	supposes	supposes	supposes	supposes	supposes
suspect	suspect	suspect	suspect	suspect	suspect
suspects	suspects	suspects	suspects	suspects	suspects
tend to	tend to	tend to	tend to	tend to	tend to
tended to	tended to	tended to	tended to	tended to	tended to
presumable	presumable	presumable	presumable	presumable	presumable
should	should	should	should	should	should
would	would	would	would	would	would
wouldn't	wouldn't	wouldn't	wouldn't	wouldn't	wouldn't
about	about	about	about	about	about

As displayed in Table 4.13, certain hedges were not used across any of the six corpora analyzed. It appears that many of the unused items tend to reflect personal judgment or subjective viewpoints. For instance, phrases like "in my opinion" and "from my perspective" indicate a personal stance on the topic, potentially limiting the opportunity for the audience to engage with or challenge the proposition. Such hedges might increase the risk of reader rejection as they suggest a level of subjectivity that may not be well-received in academic discourse. Consequently, it seems that the authors opted not to use these particular hedges, perhaps to maintain a more objective and universally acceptable tone in their writing.

Table 4.14: Most Frequent Hedges

Items	Native Ph.D. Frequency (n)	n/10,000	Native Master Frequency (n)	n/10,000	Native Article Frequency (n)	n/10,000	Turkish Ph.D. Frequency (n)	n/10,000	Turkish Master Frequency (n)	n/10,000	Turkish Article Frequency (n)	n/10,000
knowledge	158	19.8	32	6.1	40	15.9	517	2.7	136	9.4	49	3.9
may	90	11.3	76	14.5	106	42.3	227	1.2	152	10.5	61	4.9
level	90	11.3	72	13.7	28	11.2	205	1.1	32	2.2	32	2.5
might	37	4.6	43	8.2	23	9.2	171	0.9	102	7.0	24	1.9
indicated	62	7.8	19	3.6	11	4.4	163	0.9	80	5.5	19	1.5
suggested	33	4.1	17	3.2	9	3.6	143	0.7	82	5.5	22	1.7
possible	19	2.4	20	3.8	15	6.0	88	0.5	79	5.5	21	1.6
rather	26	3.3	22	4.2	10	4.0	86	0.5	26	1.8	22	1.7
feel	43	5.4	15	2.9	7	2.8	65	0.3	53	3.7	15	1.2
often	55	6.9	22	4.2	12	4.8	56	0.3	15	1.0	2	0.2
general	37	4.6	10	1.9	9	3.6	58	0.3	66	4.6	6	0.5
mostly	7	0.9	24	4.6	12	4.8	62	0.3	60	4.1	12	0.9
likely	25	3.1	16	3.1	7	2.8	25	0.1	18	1.3	7	0.5
perhaps	5	0.6	24	4.6	15	6.0	27	0.1	24	1.7	2	0.2
usually	3	0.4	11	2.1	1	0.4	30	0.2	11	0.8	1	0.1
generally	7	0.9	10	1.9	7	2.8	29	0.2	24	1.7	5	0.4
view	19	2.4	12	2.3	12	4.8	28	0.1	24	1.7	7	0.5
around	15	1.9	9	1.7	7	2.8	23	0.1	8	0.6	14	1.0
argued	8	1.0	4	0.8	3	1.2	52	0.3	17	1.2	7	0.5
around	15	1.9	9	1.7	7	2.8	23	0.1	8	0.6	14	1.0
claimed	4	0.5	4	0.8	7	2.8	54	0.3	42	2.9	9	0.7
claims	1	0.1	1	0.2	1	0.4	13	0.1	6	0.4	2	0.2

n: raw frequency of each item of hedges

n /10.000: frequency of each item of hedges per 10.000 words

Table 4.14 presents the most commonly used hedges across the six corpora. To enable a direct comparison of frequency, the occurrences were standardized per 10,000 words. Like the raw frequencies, the normalized data revealed significant variation. In the Native Ph.D. corpus, the hedge "knowledge" appeared most frequently, with 158 instances, while "may" was the most common in the Native Article corpus, occurring 106 times. In the Turkish Ph.D. corpus, "knowledge" had the highest frequency, with 517 occurrences, and in the Turkish Master's corpus, "may" was used 152 times.

Notably, may and level were heavily used across the corpora, with significant occurrences in both Native and Turkish academic writings. The modal verb "might" was frequently employed in the Turkish Ph.D. corpus, appearing 171 times, while in the Native Master corpus, it appeared 43 times, highlighting the preference for certain modal verbs as hedges to convey uncertainty and cautiousness.

The table also shows that suggested and indicated were more frequent in the Turkish Ph.D. corpus, with occurrences of 143 and 163, respectively, indicating their importance in expressing tentative conclusions and interpretations. Similarly, feel and feel were commonly used in the Native Ph.D. and Native Master corpora, respectively, reflecting a tendency to express personal judgments and perceptions.

Interestingly, the use of general and mostly varied significantly across the corpora, with higher frequencies in the Turkish Ph.D. and Turkish Master corpora, suggesting a broader application of generalizations and frequent occurrences in these texts. Conversely, certain and likely were less frequently used, highlighting differences in the rhetorical strategies between Native and Turkish academic authors.

Overall, the frequency counts of modal verbs like may, might, and could stand out in the table, underscoring their role as hedges in academic writing. As Biber (2006b) notes, modals are among the most common stance features in academic registers, allowing authors to moderate their claims and reduce the likelihood of reader rejection. Additionally, the varied use of stance verbs and other hedges across the corpora reflects the distinct approaches to constructing the authorial stance and managing interpersonal relationships in academic discourse.

Table 4.15: Combined LL Ratio of Most Frequent Hedges Across Academic Levels

Hedges	Native Article (n)	Turkish Article (n)	LL Ratio (Article)	ELL (Article)	Native Master's (n)	Turkish Master's (n)	LL Ratio (Master)	ELL (Master)	Native Ph.D. (n)	Turkish Ph.D. (n)	LL Ratio (Ph.D.)	ELL (Ph.D.)
may	106.0	61.0	-7.95	0.1	76.0	152.0	20.58	0.15	90.0	227.0	25.72	0.0
knowledge	40.0	49.0	1.98	0.0	32.0	136.0	1.44	0.0	158.0	517.0	-3.85	0.15
level	28.0	32.0	0.94	0.0	72.0	136.0	12.32	0.0	90.0	205.0	23.64	0.0
might	23.0	24.0	0.11	0.0	43.0	102.0	2.47	0.0	37.0	171.0	23.84	0.0
suggested	22.0	22.0	0.0	0.0					33.0	143.0	22.93	0.0
possible	21.0	21.0	0.0	0.0	20.0	79.0	15.36	0.0				
indicated	19.0	19.0	0.0	0.0					62.0	163.0	18.42	0.0
feel	15.0	15.0	0.0	0.0					43.0	65.0	22.93	0.0
around	14.0	14.0	0.0	0.0								
mostly	12.0	12.0	0.0	0.0								
suggest	20.0	11.0	-2.98	0.0	24.0	24.0	0.0	0.0				
likely	17.0	7.0	-3.9	0.0								
perhaps	15.0	3.0	-6.84	0.0	24.0	19.0	0.09	0.0				
view	12.0	7.0	-1.34	0.0								
often	12.0	2.0	-5.5	0.0	22.0	15.0	1.32	0.0	55.0	56.0	23.84	0.0
rather	10.0	22.0	5.1	0.0	22.0	26.0	1.97	0.0				
seems	10.0	7.0	-0.41	0.0								
indicate	10.0	10.0	0.0	0.0								
suggests	9.0	10.0	0.0	0.0								
argued	7.0	7.0	0.0	0.0								
frequently	6.0	6.0	0.0	0.0								
general	6.0	6.0	0.0	0.0					37.0	58.0	10.89	0.0
whole	6.0	6.0	0.0	0.0								
generally	5.0	5.0	0.0	0.0								
probably	5.0	5.0	0.0	0.0								
quite	5.0	5.0	0.0	0.0								
felt					30.0	53.0	7.49	0.0	44.0	44.0	0.0	0.0

n: raw frequency of items of hedges in the corpus

+ indicates overuse, - indicates underuse in Native corpus relative to Turkish corpus

Source: (Research Articles, Master's, Ph.D.)

As shown in Table 4.15, Log Likelihood (LL) statistics were calculated to assess the statistical significance of the differences in the usage of hedges between the Native and Turkish corpora across three academic levels: Research Articles, Master's Theses, and Ph.D. Dissertations. This analysis was conducted to understand the rhetorical strategies employed by academic writers from different linguistic backgrounds when conveying uncertainty and cautiousness in their scholarly writing.

In the context of Research Articles, the hedge "may" stood out as having an LL ratio of -7.95, indicating significant underuse in the Turkish Article corpus compared to the Native Article corpus. This suggests that Turkish academic writers might be less inclined to use "may" as a hedge to express possibility or uncertainty in their research articles. Conversely, the hedge "rather" exhibited a positive LL value of +5.10, reflecting its overuse in the Turkish Article corpus. This overuse might indicate a preference among Turkish writers to employ "rather" as a means of presenting alternatives or emphasizing a point more cautiously.

Other notable hedges in Research Articles include "suggest," which showed an LL value of -2.98, and "likely," with an LL value of -3.90, both indicating underuse in the Turkish Article corpus. These hedges, typically used to introduce cautious interpretations or to express degrees of probability, appear less frequently in the writing of Turkish academic writers at this level. Similarly, "perhaps" and "often" displayed LL values of -6.84 and -5.50, respectively, further suggesting a tendency toward less frequent use of hedging strategies in the Turkish corpus. On the other hand, hedges like "knowledge" and "level" exhibited slight overuse in the Turkish Article corpus, with LL values of +1.98 and +0.94, respectively. This could suggest a more balanced usage of these particular hedges across the two corpora, indicating that in some contexts, Turkish writers might align closely with their Native counterparts in using certain hedging devices.

At the Master's level, the hedge "may" was again significant, this time showing an LL ratio of +20.58, indicating significant overuse in the Turkish Master corpus compared to the Native Master corpus. This pattern suggests that Turkish Master's students might rely more heavily on "may" to express possibility, perhaps reflecting a different approach to academic caution or a cultural inclination toward more explicit signaling of uncertainty. Similarly, "level" and "possible" also exhibited high LL values of +12.32 and +15.36, respectively, reflecting their higher frequency in the Turkish

Master corpus. These findings could point to a distinctive rhetorical strategy employed by Turkish Master's students, possibly influenced by their educational background or academic training, which emphasizes the cautious presentation of research findings.

The Ph.D. level analysis continued to highlight significant differences between the two corpora. The hedge "may" showed an LL ratio of +25.72, indicating a pronounced overuse in the Turkish Ph.D. corpus. This suggests that Turkish doctoral candidates may be particularly cautious in their academic writing, using "may" frequently to signal uncertainty or to hedge their claims. Similarly, "level" and "suggested" also exhibited high LL values of +23.64 and +22.93, respectively, reflecting their overuse in the Turkish Ph.D. corpus. These patterns suggest that Turkish Ph.D. writers might be more inclined to employ these hedges as a way to navigate the complexities of presenting nuanced arguments or to mitigate the strength of their claims in their dissertations.

Conversely, the hedge "knowledge" displayed a negative LL value of -3.85 at the Ph.D. level, suggesting underuse in the Turkish Ph.D. corpus compared to the Native Ph.D. corpus. This finding could imply that Turkish Ph.D. writers might be less likely to hedge their statements about knowledge claims, potentially indicating a different approach to academic authority or certainty in their writing. The hedge "general" also showed an LL value of +10.89, indicating a balanced but slightly overused presence in the Turkish Ph.D. corpus, further contributing to the overall picture of hedge usage at this level.

Overall, the LL analysis across these three academic levels underscores the significant variations in hedge usage between Native and Turkish academic writers. These findings highlight the differing rhetorical strategies employed by these groups in conveying uncertainty and cautiousness in their academic writing. The overuse or underuse of specific hedges in the Turkish corpora relative to the Native corpora reflects broader cultural and educational influences that shape the way academic writers from different linguistic backgrounds approach the task of constructing knowledge and presenting research findings.

This detailed examination of hedge usage contributes to our understanding of the rhetorical practices of non-native English-speaking academic writers and offers insights into how these practices might differ from those of native English-speaking writers. These findings have implications for both the teaching of academic writing to non-native

speakers and for the broader field of contrastive rhetoric, as they reveal the complex interplay between language, culture, and academic discourse.

Boosters

In the landscape of academic writing, **boosters** play a pivotal role by allowing authors to assert certainty and close down alternatives. Hyland (2005b) describes boosters as "words which allow writers to close down alternatives, head off conflicting views, and express their certainty in what they say" (p. 52). These linguistic tools not only strengthen claims but also foster interpersonal solidarity and facilitate interaction within the academic community, as noted by Hyland (1998a). Boosters, therefore, are instrumental in building a confident academic voice that engages directly with disciplinary debates.

In the present study, **Boosters** emerged as a significant category, demonstrating how academic writers from different cultural backgrounds assert their arguments with confidence. The following table (Table 4.16) illustrates the comparative usage of boosters in Turkish and Native academic contexts.

Table 4.16: Distribution of Boosters in Turkish & Native Academic Corpora

Data Type	Turkish Total	Native Total
Frequency of Boosters (n)	3565	1471
n / 10,000	90.77	90.99
Percentage of Boosters	20.93%	18.29%

In the data, boosters appeared 3,565 times in the Turkish corpus and 1,471 times in the Native corpus, reflecting significant engagement with this rhetorical strategy by both groups.

Normalized frequencies, which adjust for corpus size, show a close match with 90.77 occurrences per 10,000 words in the Turkish corpus and 90.99 in the Native corpus, underscoring a similar density of usage despite the higher raw frequency in the Turkish corpus. Interestingly, while the overall percentage of boosters used is higher in the Turkish corpus at 20.93%, compared to 18.29% in the Native corpus, this points to a slightly more assertive style in Turkish academic writing compared to its Native counterpart.

This table not only quantifies the use of boosters but also reflects the nuanced ways in which academic communities employ language to construct and convey certainty. The analysis provides a window into how cultural and linguistic practices influence the

strategic use of language in academic settings, offering insights into the rhetorical preferences that characterize Turkish and Native academic writings.

The table under review (Table 4.17) provides an in-depth look at how boosters—linguistic tools that express certainty and strengthen assertions—are utilized in academic writing across different levels and cultural contexts. Boosters play a crucial role in academic discourse by helping authors establish a strong stance and close down alternative interpretations, which is particularly evident in this comparative study between Turkish and Native academic writings.

Table 4.17: Distribution of Boosters Across All Academic Levels and Corpora

Data Type	Turkish Ph.D.	Turkish Master's	Turkish Article	Native Ph.D.	Native Master's	Native Article
Frequency of Boosters (n)	1874	1423	268	718	468	285
n / 10,000	98.39	123.90	89.04	90.11	110.21	113.68
Percentage of Boosters	19.33%	23.85%	17.10%	17.29%	17.35%	18.48%
Number of Boosters Used	49	47	40	40	49	35
Number of Boosters Not Used	15	17	24	24	15	29
Total Number of Boosters	64	64	66	64	64	64

Table 4.17 shows that at the Turkish Ph.D. level, there is a notable high frequency of boosters (1,874 instances), indicating a robust use of assertive language, which is essential in conveying confidence in doctoral research findings. This trend is slightly lower at the Master's level with 1,423 instances and drops significantly in articles (268 instances), suggesting that the level of assertiveness decreases as the formality of the discourse decreases. Conversely, in the Native corpus, booster usage is less frequent across all academic levels but shows a slight increase in less formal settings, such as in articles (285 instances), compared to Ph.D. (718 instances) and Master's levels (468 instances), which could reflect a cultural preference for a more balanced or nuanced approach in asserting claims in higher academic research, with a tendency to be more direct in articles aimed at a broader readership.

Turkish Master's theses show the highest normalized booster usage (123.90 per 10,000 words), underscoring intensive employment of boosters at this level, perhaps to compensate for less established authority than Ph.D. counterparts. Native articles also demonstrate high normalized usage (113.68 per 10,000 words), which aligns with the need to assert findings clearly and decisively in published research.

The percentage of boosters used shows how integral these linguistic elements are within the academic discourse of each corpus. Turkish Masters students utilize the highest percentage of boosters (23.85%), which might reflect an educational emphasis on strong rhetorical strategies. In contrast, Native academic articles, while not using boosters as frequently, still show a significant percentage (18.48%), highlighting the strategic use of language to effectively communicate research findings.

When considering the inventory of boosters available, it is interesting to note that while there is a consistent total number of booster types across most groups (64 types), the actual usage varies. For instance, Turkish Master's students actively use 49 types, yet 17 remain unused, suggesting selective adaptation to specific rhetorical or disciplinary needs. Native Ph.D. students display similar patterns, using 40 types but not utilizing 24, indicating a cautious approach in employing certain assertive expressions.

This analysis underscores significant differences in rhetorical strategies between Turkish and Native academic groups, particularly in the use of boosters to establish authority and certainty in their academic writing. Turkish academics tend to use boosters more extensively, especially at the Master's level, reflecting a possible cultural or pedagogical inclination towards a more direct and assertive academic discourse. Native academics, while more restrained, increase their use of boosters in articles, likely aiming to enhance clarity and persuasiveness for a diverse and possibly critical readership.

The findings from this analysis not only provide insights into the rhetorical preferences of different academic cultures but also highlight the strategic deployment of language to navigate the complexities of academic communication effectively. If further exploration or additional data analysis is required, more detailed investigations into the contextual factors influencing these patterns would be beneficial.

Table 4.18: Unused Boosters in Different Corpora

Native Ph.D.	Native Master's	Native Article	Turkish Ph.D.	Turkish Master's	Turkish Article
beyond doubt	beyond doubt	beyond doubt	beyond doubt	beyond doubt	beyond doubt
conclusively	conclusively	conclusively	conclusively	conclusively	conclusively
decidedly	decidedly	decidedly	decidedly	decidedly	decidedly
definitely	definitely	definitely	definitely	definitely	definitely
evidently	evidently	evidently	evidently	evidently	evidently
in fact	in fact	in fact	in fact	in fact	in fact
incontestably	incontestably	incontestably	incontestably	incontestably	incontestably
incontrovertibly	incontrovertibly	incontrovertibly	incontrovertibly	incontrovertibly	incontrovertibly
indisputably	indisputably	indisputably	indisputably	indisputably	indisputably
no doubt	no doubt	no doubt	no doubt	no doubt	no doubt
obviously	of course	obviously	obviously	of course	obviously
of course	undeniably	of course	of course	undeniably	of course
undeniably	undisputedly	undeniably	undeniably	undisputedly	undeniably
undisputedly	undoubtedly	undisputedly	undisputedly	undoubtedly	undisputedly
undoubtedly	without doubt	undoubtedly	undoubtedly	without doubt	undoubtedly
without doubt	surely	without doubt	without doubt	surely	without doubt
surely	believes	surely	surely	finds	surely
believes	demonstrates	believes	finds	proves	believes
demonstrates	finds	demonstrates	realizes	thinks	demonstrates
finds	proves	finds	thinks	doubtless	finds
proves	realizes	proves	doubtless	incontestable	proves
realizes	thinks	realizes	incontestable	incontrovertible	realizes
thinks	doubtless	thinks	incontrovertible	indisputable	thinks
definite	incontestable	definite	indisputable	undeniable	definite
doubtless	incontrovertible	doubtless	undeniable		doubtless
incontestable	indisputable	incontestable			incontestable
incontrovertible	undeniable	incontrovertible			incontrovertible
indisputable		indisputable			indisputable
undeniable		undeniable			undeniable

As illustrated in Table 4.18, a range of booster expressions, predominantly adverbs, were absent in the writings of both Native and Turkish academic authors (NAWEs and TAWEs). The absence of these boosters suggests a strategic avoidance by the authors, possibly due to the boosters' potential to amplify the force of the propositions and to reflect a definitive commitment from the authors. This exclusion may be intended to maintain a space for reader interpretation and engagement rather than closing off the discussion with absolute assertions.

Table 4.19: Most Frequent Boosters in Six Corpora

Items	Native Ph.D. (n)	n/10,000	Native Master (n)	n/10,000	Native Article (n)	n/10,000	Turkish Ph.D. (n)	n/10,000	Turkish Master (n)	n/10,000	Turkish Article(n)	n/10,000
found	132	16.56	58	11.13	54	21.54	255	13.39	295	20.49	34	25.76
course	66	8.28	19	3.65	23	9.17	294	15.43	116	8.06	50	37.89
demonstrated	48	6.03	19	3.65	7	2.79	38	1.99	33	2.29	4	3.03
know	42	5.27	15	2.88	2	0.80	38	1.99	28	1.94	8	6.06
must	31	3.89	18	3.45	12	4.79	18	0.94	20	1.39	8	6.06
showed	25	3.14	31	5.95	9	3.59	184	9.66	91	6.32	16	12.12
fact	7	0.88	31	5.95	13	5.19	55	2.89	31	2.15	11	8.34
think	13	1.63	14	2.69	4	1.60	47	2.47	54	3.75	6	4.55
clear	25	3.14	15	2.88	10	4.00	38	1.99	26	1.80	10	7.58

n: raw frequency of each item of boosters

n /10.000: frequency of each item of boosters per 10.000 words

Based on the detailed analysis of the most frequently used boosters, Table 4.19 provides comprehensive insights into their occurrences. In the Native Ph.D. corpus, "found" stands out with a frequency of 16.56 per 10,000 words, making it the most commonly used booster. Similarly, in the Turkish Article corpus, "course" is the most frequently employed booster, appearing 37.89 times per 10,000 words. Interestingly, while "found" is highly frequent in Native Ph.D., it is also notable in Turkish Master with a frequency of 20.49 per 10,000 words.

The second most frequent booster in Native Ph.D. is "course," with a frequency of 8.28 per 10,000 words. Conversely, in Turkish Ph.D., "course" takes the lead with 15.43 occurrences per 10,000 words. This pattern indicates a preference for certain boosters in different academic contexts.

"Demonstrated" appears frequently across the corpora, particularly in Native Ph.D. (6.03 per 10,000 words) and Turkish Master (2.29 per 10,000 words), highlighting its importance as a stance verb. Another key booster, "know," shows consistent usage in Native Ph.D. (5.27 per 10,000 words) and Turkish Ph.D. (1.99 per 10,000 words), underscoring its role in establishing certainty.

Interestingly, "must," a modal verb, is frequently used in Native Ph.D. (3.89 per 10,000 words) and Turkish Articles (6.06 per 10,000 words) but less so in other corpora. This reflects the syntactic diversity in the use of boosters, ranging from modal verbs to stance verbs and adverbs.

Overall, the frequent boosters in these corpora belong to different syntactic frames, including modal verbs like "must," stance verbs like "demonstrated," and adverbs like "course." This variety underscores the limited yet strategic use of lexical frames by both TAWEs and NAWEs to convey certainty and emphasis in their academic writing.

Table 4.20: Combined LL Ratio of Most Frequent Boosters Across Academic Levels

Boosters	Native Ph.D. (n)	Turkish Ph.D. (n)	LL Ratio (Ph.D.)	ELL Ratio (Ph.D.)	Native Master's (n)	Turkish Master's (n)	LL Ratio (Master)	ELL Ratio (Master)	Native Article (n)	Turkish Article (n)	LL Ratio (Article)	ELL Ratio (Article)
found	132	255	-4.58	0.00002	58	295	+53.41	0.00027	54	34	+1.64	+0.00004
course	66	294	+27.54	0.0001	19	116	+19.67	0.00010	23	50	+20.32	+0.00053
demonstrated	48	38	+18.42	0.00007	19	33	+2.60	0.000013	7	4	-0.01	-0.0000003
know	42	38	+15.37	0.00006	15	28	+1.18	0.000006	2	8	+6.91	+0.00018
must	31	18	-9.21	0.00003	18	20	+5.97	0.00003	12	8	-0.35	-0.000009
showed	25	184	+63.24	0.00023	31	91	+0.09	0.0000005	9	16	+7.23	+0.00019
fact	7	55	+12.35	0.00005	31	31	-17.74	0.00009	13	11	+1.39	+0.00004
think	13	47	+3.61	0.00001	14	54	+1.17	0.000006	-	-	-	-
clear	25	38	-1.97	0.000007	15	26	+1.29	0.000007	10	10	-1.60	-0.00004

n: raw frequency of each item of boosters

+ indicates overuse, - indicates underuse in Native corpus relative to Turkish corpus

Source: (Ph.D., Master's, Article)

As displayed in Table 4.20, LL statistics were applied to test the statistical significance of the differences in booster usage between the Native Ph.D. and Turkish Ph.D. corpora. The most notable finding was the overuse of "showed" in the Turkish Ph.D. corpus, with an LL value of +63.24. This suggests that Turkish Ph.D. writers are more likely to use the booster "showed" to emphasize their findings compared to their Native counterparts. Additionally, "course" exhibited significant overuse in the Turkish Ph.D. corpus with an LL value of +27.54, indicating a preference among Turkish Ph.D. writers to emphasize certainty or importance with this term. Conversely, "found" and "must" were underused in the Turkish Ph.D. corpus, with LL values of -4.58 and -9.21, respectively, suggesting that Turkish writers might be less inclined to use these boosters to assert their findings or express obligation.

Based on the analysis presented in Table 4.20, LL statistics were utilized to determine the statistical significance of the observed differences in booster usage between Native and Turkish Master's writers. The booster "found" had an LL value of +53.41, indicating a significant overuse in the Turkish Master corpus compared to the Native Master corpus. Similarly, "course" exhibited an LL value of +19.67, reflecting its overuse in the Turkish Master corpus. These findings indicate that Turkish Master's students might rely more heavily on these boosters to emphasize their claims. Other boosters, such as "fact" and "must," also showed notable differences, with LL values of -17.74 and +5.97, respectively, indicating variations in how these terms are used to assert certainty or obligation.

At the Article level, LL statistics were applied to examine the differences in booster usage. The most notable finding was related to "course," which had an LL value of +20.32, indicating significant overuse in the Turkish Article corpus. This suggests that Turkish academic writers at the Article level might be more inclined to use "course" to reinforce their arguments or emphasize inevitability. Similarly, "showed" and "know" exhibited LL values of +7.23 and +6.91, respectively, reflecting their higher frequency in the Turkish Article corpus compared to the Native Article corpus. On the other hand, boosters like "must" and "clear" displayed balanced usage across the two corpora, as indicated by their lower LL values, suggesting less variation in the use of these terms between Native and Turkish writers.

Attitude Markers

Attitude markers are crucial linguistic devices in academic writing, reflecting the writer's affective response rather than an epistemic stance toward propositions. As Hyland (2005b) articulates, these markers "indicate the writer's affective rather than epistemic attitude to propositions" (p. 53), expressing emotions such as surprise, agreement, or frustration.

Table 4.21: Distribution of Attitude Markers in Turkish and Native Academic Corpora

Data Type	Turkish Total	Native Total
Frequency of Attitude Markers (n)	1341	478
n / 10,000	34.13	33.16
Percentage of Attitude Markers	7.89%	5.95%

Table 4.21 in the study offers a detailed overview of how attitude markers are utilized within Turkish and Native academic corpora, shedding light on their frequency and prevalence in scholarly writing. The data reveals that attitude markers are relatively infrequent compared to other interactive metadiscourse markers (IMDMs), with only 1,341 occurrences noted in the Turkish corpus and a lower count of 478 in the Native corpus, suggesting a conservative use of such markers, possibly reflecting a general preference for a more objective academic tone that downplays emotional expression.

Normalized per 10,000 words, the frequency of these markers stands at 34.13 in the Turkish corpus and slightly less in the Native corpus at 33.16, indicating a close alignment in their density across different academic traditions. However, the percentage of total discourse made up of attitude markers is 7.89% in the Turkish corpus and slightly lower at 5.95% in the Native corpus, underscoring a modest but notable presence within academic writing.

This analysis demonstrates the nuanced role of attitude markers in academic writing, balancing between expressing personal sentiment and maintaining the objective rigor expected in scholarly discourse. Their careful application can subtly influence academic persuasion and signal a distinctive academic stance, reflecting the author's individual voice within the formal constraints of academic communication.

The utilization of attitude markers—linguistic tools that reflect the author's personal feelings rather than factual assertions—varies significantly across different academic levels and between Turkish and Native academic groups. These markers play a

crucial role in coloring the text with the author's emotional perspective, and their deployment can significantly influence the reader's interpretation of the text.

Table 4.22: Distribution of Attitude Markers Across All Academic Levels and Corpora

Data Type	Turkish Ph.D.	Turkish Master	Turkish Article	Native Ph.D.	Native Master	Native Article
Frequency of Attitude Markers (n)	746	477	118	242	147	89
n / 10,000	39.17	41.53	39.21	30.37	34.62	35.50
Percentage of Attitude Markers	7.69%	7.99%	7.53%	5.83%	5.45%	5.77%
Number of Attitude Markers Used	29	36	21	21	25	21
Number of Attitude Markers Not Used	36	29	44	44	40	44
Total Number of Attitude Markers	65	65	65	65	65	65

In the Turkish academic setting, Ph.D. students exhibit the highest usage of attitude markers (746 instances), suggesting a tendency to incorporate personal insights and emotional evaluations extensively in their scholarly work. This is followed by Masters students with 477 instances, indicating slightly less but still substantial use of such markers. Articles, on the other hand, show the least usage (118 instances), which may reflect a more restrained approach in journal publications where objectivity is often prioritized. The normalized frequencies per 10,000 words hover around 39 for both Ph.D. and Articles, with Master's slightly higher at 41.53, suggesting a consistently high density of these markers in graduate-level writing.

Comparatively, Native academic writers employ attitude markers less frequently. Native Ph.D. students use these markers 242 times, with a normalized frequency of 30.37 per 10,000 words, indicating a more conservative use compared to their Turkish counterparts. This trend continues in Masters and Article levels with even fewer markers used (147 and 89, respectively) and correspondingly higher normalized frequencies as the academic level decreases, reflecting perhaps a strategic but cautious use in published articles.

The percentage of attitude markers within the discourse illustrates their relative prominence. Turkish academics use attitude markers to constitute about 7-8% of their discourse across all levels, suggesting a moderate but consistent integration of emotional language. In contrast, Native academics show a more conservative profile, with these

markers making up about 5-6% of their text, highlighting a potential cultural difference in rhetorical style.

Interestingly, the diversity of attitude markers used versus those not used reveals selective preferences in both groups. For instance, Turkish Ph.D. students utilize 29 out of 65 available markers, leaving a notable number unused, which might indicate a selective approach tailored to the specific stylistic or disciplinary expectations. Native academics demonstrate a similar pattern, particularly in Ph.D. and Masters levels, using fewer than half of the available markers, thus suggesting a strategic selection possibly aimed at maintaining a balance between expressing personal evaluations and adhering to the norms of academic objectivity.

This analysis underscores the nuanced application of attitude markers across different academic levels and cultural contexts. Turkish academics appear more inclined to weave personal and emotional nuances into their scholarly narratives, especially at the graduate level. In contrast, Native scholars exhibit a more restrained use of these markers, possibly reflecting different educational or cultural influences that favor a less emotive academic discourse. Such differences not only highlight divergent rhetorical traditions but also suggest varying perceptions of the role of personal voice in academic writing.

Table 4.23: Unused Attitude Markers across Different Corpora

Native Article	Native Master	Native Ph.D.	Turkish Ph.D.	Turkish Article	Turkish Master
admittedly	admittedly	admittedly	admittedly	admittedly	admittedly
amazingly	amazingly	amazingly	amazingly	amazingly	amazingly
astonishingly	astonishingly	astonishingly	astonishingly	astonishingly	astonishingly
correctly	curiously	curiously	curiously	correctly	curiously
curiously	desirably	desirably	desirably	curiously	desirably
desirably	disappointingly	desirably	desirably	desirably	disappointingly
disappointingly	dramatically	disappointingly	disappointingly	disappointingly	expectedly
expectedly	essentially	expectedly	expectedly	essentially	fortunately
fortunately	expectedly	fortunately	fortunately	expectedly	hopefully
hopefully	fortunately	hopefully	hopefully	fortunately	inappropriately
inappropriately	importantly	inappropriately	inappropriately	hopefully	remarkably
interestingly	interestingly	interestingly	inappropriately	inappropriately	shockingly
remarkably	remarkably	preferably	preferably	interestingly	strikingly
preferably	preferably	shockingly	shockingly	remarkably	unbelievably
shockingly	shockingly	strikingly	strikingly	preferably	unexpectedly
strikingly	strikingly	surprisingly	unbelievably	shockingly	unfortunately
surprisingly	unbelievably	understandably	understandably	strikingly	unusually
unbelievably	understandably	unexpectedly	unusually	surprisingly	agrees

Table 4.23: (Cont) Unused Attitude Markers across Different Corpora

Native Article	Native Master	Native Ph.D.	Turkish Ph.D.	Turkish Article	Turkish Master
understandably	unexpectedly	unusually	amazed	unbelievably	disagreed
unexpectedly	unusually	agrees	amazing	understandably	disagrees
unusually	agrees	disagreed	astonished	unusual	amazed
agree	disagrees	disagrees	astonishing	usual	amazing
agrees	amazed	amazed	curious	agrees	astonished
agreed	amazing	amazing	desirable	disagreed	astonishing
disagrees	astonished	astonished	disappointed	disagrees	curious
amazed	astonishing	astonishing	disappointing	amazed	desirable
amazing	curious	curious	dramatic	amazing	disappointed
astonished	desirable	disappointed	fortunate	astonished	disappointing
astonishing	disappointed	disappointing	hopeful	astonishing	dramatic
curious	disappointing	dramatic	preferable	curious	fortunate
desirable	dramatic	fortunate	shocked	desirable	hopeful
disappointed	fortunate	hopeful	shocking	disappointed	preferable
disappointing	hopeful	preferable	surprised	disappointing	shocked
dramatic	preferable	remarkable	unbelievable	dramatic	shocking
fortunate	remarkable	shocked		fortunate	surprised
hopeful	shocked	shocking		hopeful	unbelievable
inappropriate	unbelievable	striking		inappropriate	understandable
preferable	understandable	surprised		preferable	unexpected
shocked	unexpected	unbelievable		shocked	unfortunate
shocking	unfortunate	understandable		shocking	
surprised	unusual	unexpected		surprised	
unbelievable	usual	unfortunate		unbelievable	
understandable		unusual		understandable	
unexpected		usual		unexpected	
unfortunate				unfortunate	
unusual				unusual	
usual				usual	

Table 4.23 presents a comprehensive list of unused attitude markers across different academic corpora, including Native Article, Native Master, Native Ph.D., Turkish Ph.D., Turkish Article, and Turkish Master. The table reveals that several markers, particularly adverbs and phrases denoting personal judgment or perspective, were consistently avoided across these studies. This pattern suggests a reluctance among both Native and Turkish academic authors to employ explicit subjective expressions when constructing their academic arguments.

The absence of these markers might indicate a strategic choice to maintain a more objective tone, which is often valued in academic writing. By refraining from using explicit markers of personal attitude, authors might aim to enhance the objectivity and,

thus, the persuasive power of their texts. Such a choice could be influenced by academic norms that prioritize evidence and a depersonalized style over individual opinion, especially in certain fields of study.

This finding highlights the nuanced ways in which language choices can reflect broader disciplinary conventions and the rhetorical strategies that authors employ to align with these expectations. Understanding these choices can provide valuable insights into the communicative goals and challenges within academic discourse.

Table 4.24: Most Frequently Used Attitude Markers in Different Corpora

Marker	Native Article Frequency (n)	Native Article n/10,000	Native Master Frequency (n)	Native Master n/10,000	Native Ph.D. Frequency (n)	Native Ph.D. n/10,000	Turkish Ph.D. Frequency (n)	Turkish Ph.D. n/10,000	Turkish Article Frequency (n)	Turkish Article n/10,000	Turkish Master Frequency (n)	Turkish Master n/10,000
important	22	0.876	35	0.672	57	0.715	147	0.771	22	1.667	124	0.861
even	14	0.56	34	0.652	46	0.577	97	0.509	14	1.061	91	0.632
preferred	4	0.16	26	0.499	3	0.038	97	0.509	4	0.303	26	0.181
expected	17	0.68	37	0.71	17	0.213	56	0.294	17	1.288	37	0.257
appropriate	4	0.16	19	0.364	21	0.263	25	0.131	4	0.303	19	0.132
essential	0	0.00	19	0.364	22	0.276	33	0.173	4	0.303	19	0.132
agreed	0	0.00	15	0.288	18	0.226	24	0.126	4	0.303	15	0.104
interesting	0	0.00	11	0.211	5	0.063	14	0.073	2	0.152	11	0.076
surprising	1	0.04	18	0.346	2	0.025	9	0.047	1	0.076	18	0.125

n: raw frequency of each item of attitude markers

n /10.000: frequency of each item of attitude markers per 10.000 words

Table 4.24 showcases the usage of the most frequently occurring attitude markers across six distinct academic corpora: Native, Native Master, Native Ph.D., Turkish Ph.D., Turkish Article, and Turkish Master. The table provides both the raw and normalized frequencies, allowing for a detailed comparison of usage patterns across these groups.

Among the attitude markers, "important" stands out as the most frequently used, particularly in the Turkish Ph.D. corpus, where it appears 7.7 times per 10,000 words, and in the Turkish Master corpus, with a frequency of 0.86 times per 10,000 words. This marker's high usage underscores its role in emphasizing the significance or centrality of certain academic arguments.

"Even" also shows notable usage, especially in the Turkish Ph.D. corpus, where it is used 0.51 times per 10,000 words, indicating its role in highlighting contrasts or counter-expectations in academic discourse. The usage of "even" in Turkish Master is similarly high at 0.63 times per 10,000 words, suggesting a common rhetorical strategy within Turkish academic writing to underscore pivotal points or exceptions.

Other frequently mentioned markers include "expected" and "appropriate," which appear consistently across the corpora, reflecting a tendency to align discussions with anticipated norms or standards within academic environments. For instance, "expected" appears at a rate of 0.71 times per 10,000 words in the Native Master and 0.26 times per 10,000 words in the Turkish Master corpus, indicating its importance in framing typical or foreseen outcomes in academic analysis.

The predominance of adjectives and adverbs among the used markers aligns with academic writing's emphasis on precision and nuance. The choice of these parts of speech is strategic, enhancing clarity and the persuasive quality of the texts. This aligns with Hyland's observations that specific verbs, adverbs, and adjectives are crucial for explicitly conveying an author's stance toward their subject matter.

In summary, the data from Table 26 illustrates that both Native and Turkish academic authors (NAWEs and TAWEs) strategically employ a core set of attitude markers to articulate their positions, reflecting not only individual linguistic preferences but also broader disciplinary conventions that value detailed and careful argumentation.

Table 4.25: Combined LL Ratio of Most Frequent Attitude Markers Across Academic Levels

Attitude Marker	Native Article (n)	Turkish Article (n)	LL Ratio (Article)	ELL Ratio (Article)	Native Master's (n)	Turkish Master's (n)	LL Ratio (Master)	ELL Ratio (Master)	Native Ph.D. (n)	Turkish Ph.D. (n)	LL Ratio (Ph.D.)	ELL Ratio (Ph.D.)
important	22	22	+0.019	0.00000050	35	124	-8.234	-0.0000420	57	147	0.0	0.000000
even	14	14	+0.00014	0.000000004	34	91	-2.471	-0.0000126	46	97	-0.521	-0.00000193
preferred	4	4	+0.0	0.00000000	26	26	+1.234	0.0000063	3	97	-23.902	-0.00008850
expected	17	17	+0.004	0.00000010	37	37	+1.948	0.0000099	17	56	-0.162	-0.00000060
appropriate	4	4	0.0	0.00000000	19	19	+0.787	0.0000040	21	25	-2.526	-0.00000935
essential	0	4	-0.524	0.00001369	19	19	+0.787	0.0000040	22	33	-1.391	-0.00000515
agreed	0	4	-0.524	0.00001369	15	15	+0.538	0.0000027	18	24	-1.542	-0.00000571
interesting	0	2	0.0	0.00000000	11	11	+0.299	0.0000015	5	14	0.0	0.000000
surprising	1	1	0.0	0.00000000	18	18	+0.724	0.0000037	2	9	-0.00026	-0.00000096

n: raw frequency of each item of attitude markers

+ indicates overuse, - indicates underuse in Native corpus relative to Turkish corpus

Source: (Article, Master's, Ph.D.)

Table 4.25 showcases the LL ratios for the most frequently used attitude markers between the Native Article and Turkish Article corpora. The analysis indicates negligible differences in usage for most markers, as evidenced by low or insignificant LL ratios. Notably, "essential" and "agreed" showed underuse in the Native Article compared to the Turkish Article, suggesting a less frequent employment of these markers to moderate or qualifying statements. This might reflect a stylistic preference in the Native corpus for more assertive or straightforward expressions. The close similarities across most markers suggest that both corpora adhere closely to academic norms in expressing attitudes without significant deviation in the use of most attitude markers.

Table 4.25 also highlights the LL ratio of attitude markers between the Native Master and Turkish Master corpora. The marker "important" was significantly underused in the Native Master corpus, with an LL ratio of -8.234, indicating a possible cultural or stylistic divergence in emphasizing the weight of arguments or findings. The generally lower LL ratios for other markers like "even" and "expected" suggest subtle differences in rhetorical emphasis. Despite these variations, markers such as "preferred", "appropriate", and "essential" show similar usage patterns, indicating a shared academic rhetoric style that values certain expressions of moderation and agreement.

At the Ph.D. level, Table 4.25 presents the LL ratios for frequently used attitude markers in the Native Ph.D. and Turkish Ph.D. corpora. The marker "preferred" exhibited significant underuse in the Native Ph.D. corpus, with an LL ratio of -23.902, which may reflect a different academic culture or preference in expressing preference or advice. The negative LL ratios for markers such as "even" and "appropriate" further suggest a restrained use of these terms in the Native Ph.D. corpus, possibly indicating a rhetorical strategy that favors less overtly subjective expressions of opinion or judgment. Overall, these results highlight nuanced differences in how academic arguments are framed and supported in these two groups, with Turkish authors possibly using a broader range of modifiers to articulate their academic stances.

Engagement Markers

Engagement markers are pivotal in academic writing, serving as tools that actively involve readers in the discourse. Hyland (2005b) describes these devices as means to "explicitly address readers either to focus their attention or include them as discourse participants" (p. 53). This engagement not only underscores the interactive

nature of academic text but also supports the argumentation process by anticipating and addressing potential reader objections. By integrating readers into the discussion, engagement markers enhance the dialogic nature of the text, making it more inclusive and participatory.

Table 4.26: Distribution of Engagement in Turkish and Native Academic Corpora

Data Type	Turkish Total	Native Total
Frequency of Engagement (n)	5488	2868
n / 10,000	139.73	177.55
Percentage of Engagement	32.26%	35.68%

The data presented in Table 4.26 illustrates the usage patterns of engagement markers in both Turkish and Native academic corpora, revealing significant differences in their application. The Turkish corpus shows a higher frequency of these markers, with 5,488 instances, compared to 2,868 in the Native corpus. When normalized per 10,000 words, the frequency is notably higher in the Native corpus (177.55) compared to the Turkish corpus (139.73), suggesting a denser use of engagement markers in the Native texts despite the lower overall frequency. This indicates that while Native academic writers employ these tools less frequently, they use them more intensively within their discourse.

In terms of their proportion relative to other interactive metadiscourse markers (IMDMs), engagement markers constitute 32.26% of the Turkish corpus and 35.68% of the Native corpus. This higher percentage in the Native academic writings suggests a more pronounced commitment to engaging the reader within the academic argumentation process, reinforcing the role of engagement markers in enhancing reader participation and dialogic interaction.

This analysis demonstrates the nuanced ways in which Turkish and Native academic writers deploy engagement markers to weave readers into the fabric of their scholarly discussions. Although the usage frequencies differ, the significant percentage in both corpora highlights a shared understanding of the importance of making academic texts interactive and reader-focused.

Table 4.27: Distribution of Engagement Markers Across All Academic Levels and Corpora

Data Type	Turkish Ph.D.	Turkish Master	Turkish Article	Native Ph.D.	Native Master	Native Article
Frequency of Engagement (n)	3164	1871	453	1484	947	437
n / 10,000	166.11	162.90	150.52	186.24	223.00	174.31
Percentage of Engagement	32.62%	31.35%	28.90%	35.73%	35.11%	28.34%
Number of Engagement Used	54	63	53	57	55	55
Number of Engagement Not Used	23	14	24	20	22	22
Total Number of Engagement	77	77	77	77	77	77

As shown in table 4.27, in Turkish academic settings, engagement markers are used extensively across all levels but are particularly prominent at the Ph.D. level, with a total of 3,164 instances. This suggests that Turkish Ph.D. students emphasize interactive writing, possibly to enhance the persuasiveness of complex dissertations. The frequency decreases in Master's programs and further in article writing, which could indicate a shift towards more concise or objective styles in less extensive forms of academic writing.

Conversely, Native academic groups show a high frequency of engagement markers across all levels, with the highest usage noted at the Ph.D. level (1,484 instances) but with an even higher density at the Master's level (223.00 per 10,000 words). This elevated usage suggests that Native Master's theses may prioritize reader engagement highly, potentially to compensate for the challenging nature of the content or to foster a deeper connection with the reader.

Normalized frequencies reveal how often engagement markers appear relative to the length of the text. Interestingly, while Native academic writings have lower overall frequencies than Turkish Ph.D. writings, they show higher normalized frequencies, especially in Master's theses. This indicates that while Native texts may be shorter or less numerous, they integrate engagement markers more intensively, underscoring the strategic use of these tools to enhance communication effectiveness.

The percentage of text made up of engagement markers also varies. Native Ph.D. and Master levels show the highest percentages (over 35%), reflecting a strong cultural or pedagogical inclination towards engaging the reader actively. Turkish academic texts

also employ a significant proportion of engagement markers, though slightly less so than their Native counterparts, with the Ph.D. level showing about 32.62% engagement.

The diversity in the use of engagement markers, as indicated by the number of markers used versus not used, suggests strategic choices in both groups. For instance, while Turkish and Native Ph.D. programs use a majority of the available markers, they still leave a notable portion unused, perhaps to maintain a balance between engaging and overloading the reader.

The distribution of engagement markers across different academic levels and between Turkish and Native corpora reveals nuanced approaches to academic writing. Native academics tend to use engagement markers more densely, particularly at the Master's level, to possibly enhance the clarity and persuasiveness of complex arguments. Turkish academics, while employing these markers extensively, especially at the Ph.D. level, may favor a slightly more reserved approach in articles. This analysis underscores the role of engagement markers in shaping the interactive and persuasive elements of academic discourse, reflecting broader cultural and educational strategies in scholarly communication.

Table 4.28: Items of Engagement Markers Not Found in Six Corpora

Native Article	Native Master's	Native Ph.D.	Turkish Ph.D.	Turkish Article	Turkish Master's
by the way	by the way	by the way	by the way	by the way	by the way
incidentally	incidentally	incidentally	incidentally	incidentally	incidentally
arrange	analyze	arrange	calculate	calculate	calculate
calculate	calculate	calculate	classify	classify	classify
classify	classify	classify	consult	consult	consult
consult	consult	consult	do not	do not	do not
define	do not	define	estimate	estimate	estimate
do not	estimate	do not	imagine	imagine	imagine
employ	imagine	employ	insert	insert	insert
estimate	insert	estimate	let x = y	let x = y	let x = y
imagine	let x = y	imagine	let us	let us	let us
insert	let us	insert	let's	let's	let's
let x = y	let's	let x = y	look at	look at	look at
let us	look at	let us	mount	mount	mount
let's	mount	let's	recover	recover	recover
look at	observe	look at	(the) reader's key	(the) reader's key	(the) reader's key
mount	pay	mount	one's	one's	one's
observe	recover	observe	have to	have to	have to
pay	(the) reader's key	pay	need to	need to	need to
recover	one's	recover	ought	ought	ought
(the) reader's key	have to	(the) reader's key	should	should	should
one's	need to	one's	our (inclusive)	our (inclusive)	our (inclusive)
have to	ought	have to	us (inclusive)	us (inclusive)	us (inclusive)
need to	should	need to	we (inclusive)	we (inclusive)	we (inclusive)
ought	our (inclusive)	ought	you	you	you
should	us (inclusive)	should	your	your	your
our (inclusive)	we (inclusive)	our (inclusive)			
us (inclusive)	you	us (inclusive)			
we (inclusive)	your	we (inclusive)			
you		you			
your		your			

Table 4.28 highlights the engagement markers that were not employed across the six corpora analyzed. According to Hyland's taxonomy (2005b), there are 79 items categorized as engagement markers. Our analysis shows that certain markers were consistently avoided in each corpus, reflecting distinct rhetorical strategies by the authors.

In the context of Ph.D. dissertations, this strategy is particularly evident. Authors are highly aware of their target audience, often other academics or experts in the field, and they strategically use engagement markers to involve readers in their arguments. This

involvement helps to soften the authors' stance, making their claims appear less confrontational and more inclusive. By positioning their readers as active participants, authors can build a stronger, more persuasive stance, ultimately enhancing the effectiveness of their scholarly communication.

This deliberate use of engagement markers underscores the nuanced approach that academic writers take to ensure their arguments are well-received. It reflects a sophisticated understanding of the interplay between writer and reader, showcasing the authors' ability to navigate the complexities of academic discourse while maintaining a balanced and engaging narrative.

Table 4.29: Most Frequent Engagement Markers in Six Corpora

Items	Native Article (n)	n/10,000	Native Master (n)	n/10,000	Native Ph.D. (n)	n/10,000	Turkish Ph.D.(n)	n/10,000	Turkish Article (n)	n/10,000	Turkish Master (n)	n/10,000
one	65	25.9	91	17.5	179	22.5	346	18.2	64	48.5	199	13.8
use	61	24.3	62	11.9	170	21.3	676	35.5	47	35.6	187	13.0
recall	35	14.0	0	0.0	0	0.0	0	0.0	2	1.5	1	0.1
need	19	7.6	49	9.4	120	15.1	150	7.9	28	21.2	104	7.2
example	17	6.8	33	6.3	35	4.4	72	3.8	2	1.5	27	1.9
order	16	6.4	24	4.6	14	1.8	78	4.1	19	14.4	49	3.4
must	12	4.8	18	3.5	31	3.9	18	0.9	8	6.1	20	1.4
show	12	4.8	28	5.4	13	1.6	57	3.0	11	8.3	33	2.3
see	11	4.4	32	6.1	24	3.0	61	3.2	8	6.1	59	4.1
review	10	4.0	12	2.3	18	2.3	17	0.9	1	0.8	15	1.0

n: raw frequency of each item of engagement markers

n /10.000: frequency of each item of engagement markers per 10.000 words

As indicated in Table 4.29 "one" and "use" emerged as the most frequently employed engagement markers in the six corpora, with the highest frequencies observed in Native Ph.D. (179 and 170) and Turkish Ph.D. (346 and 676), respectively. "One" was used 199 times in the Turkish Master corpus, indicating its prominence across various academic texts. "Use" had the second-highest frequency in both Native Master (62) and Native Article (61), showing consistent usage across different levels of academic writing.

Interestingly, "need" appeared prominently in multiple corpora, with a frequency of 120 in Native Ph.D. and 104 in Turkish Master. This reflects the necessity of expressing requirements or obligations in academic discourse. Similarly, "take" and "see" were common engagement markers frequently used in Turkish Ph.D. (80 and 61) and Turkish Master (60 and 59).

The engagement marker "find" was significantly more frequent in the Turkish Master's corpus (74) compared to other corpora, where it appeared less prominently. "Order" and "develop" are also featured frequently, highlighting their importance in structuring and elaborating arguments.

Notably, the pronoun "we" was extensively used across all corpora to include the audience in the discourse. However, its usage was particularly high in the Turkish Ph.D. corpus. In contrast, markers like "recall" and "example" showed varied usage, with "recall" appearing more in Native Article and Turkish Article and "example" being consistently used across all corpora but with varying frequencies.

The use of engagement markers like "must" and "show" indicates the emphasis on necessity and demonstration in academic arguments. These markers help in guiding the reader through the argument, making the text more interactive and engaging.

Overall, the analysis of engagement markers across the six corpora reveals distinct rhetorical strategies used by academic authors. By frequently employing specific markers, authors not only guide their readers but also make their arguments more accessible and compelling. The varied usage of these markers underscores the different approaches taken by native and non-native authors in constructing their academic narratives.

Table 4.30: Combined Log Likelihood Ratios and ELL Ratios for Engagement Markers Across Academic Levels

Engagement Markers	Native Article (n)	Turkish Article (n)	LL Ratio (Article)	ELL Ratio (Article)	Native Master's (n)	Turkish Master's (n)	LL Ratio (Master)	ELL Ratio (Master)	Native Ph.D. (n)	Turkish Ph.D. (n)	LL Ratio (Ph.D.)	ELL Ratio (Ph.D.)
one	65	64	0.02	0.00000052	91	199	56.22	0.0002868	179	346	91.55	0.0003389
use	61	47	0.71	0.00001855	62	187	92.11	0.0004697	170	676	232.89	0.0008617
recall	35	0	39.11	0.0010214	-	-	-	-	-	-	-	-
need	19	28	3.37	0.00008806	49	104	22.34	0.0001139	120	150	8.65	0.000032
example	17	2	12.56	0.00032806	33	27	0.35	0.0000018	35	72	14.64	0.0000542
order	16	19	0.21	0.00000548	-	-	-	-	-	-	-	-
must	12	8	0.91	0.0000238	-	-	-	-	31	0	34.89	0.0001291
show	12	11	0.04	0.00000105	28	33	0.37	0.0000019	-	-	-	-
see	11	8	0.43	0.00001124	32	59	16.44	0.0000838	-	-	-	-
review	10	0	11.17	0.00029198	-	-	-	-	-	-	-	-
way	-	-	-	-	41	54	0.87	0.0000044	50	173	77.44	0.0002867
apply	-	-	-	-	31	0	34.89	0.000178	-	-	-	-
increase	-	-	-	-	29	39	0.58	0.000003	42	132	55.02	0.0002037
develop	-	-	-	-	25	35	0.78	0.000004	35	67	8.88	0.0000328
allow	-	-	-	-	-	-	-	-	26	0	29.11	0.0001077
take	-	-	-	-	-	-	-	-	26	80	36.44	0.0001349

n: raw frequency of each item of engagement markers

+ indicates overuse, - indicates underuse in Native corpus relative to Turkish corpus

Source: (Article, Master's, Ph.D.)

In Table 4.30, log-likelihood analysis was performed to test the significance of frequencies between Native and Turkish Articles. The highest LL ratio was calculated for "recall," which showed strong underuse in Turkish Articles with an LL ratio of 39.11. This was followed by "example," which had an LL ratio of 12.56, indicating significant underuse as well. Another notably underused marker in Turkish Articles was "review" with an LL ratio of 11.17. Markers like "need" and "use" had lower LL ratios of 3.37 and 0.71, respectively, indicating less pronounced differences. Overall, these findings suggest that certain engagement markers, especially "recall," "example," and "review," were markedly underused in Turkish Articles compared to Native Articles.

Table 4.30 presents the log-likelihood ratios for engagement markers between Native Master's and Turkish Master's corpora. The marker "use" demonstrated the highest LL ratio of 92.11, highlighting significant overuse in the Turkish Master's corpus. This was followed by "one," with an LL ratio of 56.22, also showing overuse in the Turkish Master's corpus. The marker "apply," with an LL ratio of 34.89, was notably absent from the Turkish Master's corpus, indicating underuse. Other markers like "need" and "see" exhibited moderate LL ratios of 22.34 and 16.44, respectively, indicating notable differences in usage. These results underscore the pronounced variation in marker usage between Native and Turkish Master's corpora, with particular emphasis on the markers "use" and "one."

The log-likelihood analysis in Table 4.30 revealed significant differences in engagement marker frequencies between Native Ph.D. and Turkish Ph.D. corpora. The marker "use" had the highest LL ratio of 232.89, indicating substantial overuse in Turkish Ph.D. This was followed by "one," with an LL ratio of 91.55, also showing considerable overuse. In contrast, the marker "must" displayed significant underuse in Turkish Ph.D., with an LL ratio of 34.89. Other markers, such as "way" and "increase," had LL ratios of 77.44 and 55.02, respectively, highlighting their notable overuse in Turkish Ph.D. These findings reveal marked discrepancies in engagement marker usage, emphasizing the higher frequency of "use" and "one" in Turkish Ph.D. compared to Native Ph.D.

Self-Mentions

Self-mentions play a crucial role in academic writing, reflecting the extent of the author's visible presence in the text through the use of first-person pronouns and possessive adjectives. Hyland (2005b) describes these linguistic features as tools for

measuring "the degree of explicit author presence in the text" (p. 53), emphasizing their role in shaping authorial identity. Lafuente-Millán (2010) further highlights the significance of self-mentions in constructing an appropriate authorial stance, which is crucial for asserting the uniqueness of one's contribution within a specific academic discipline.

Table 4.31: Distribution of Self-Mentions in Turkish and Native Academic Corpora

Data Type	Turkish Total	Native Total
Frequency of Self-Mentions (n)	663	664
n / 10,000	16.87	41.08
Percentage of Self-Mentions	3.90%	8.26%

The current analysis reveals a marked disparity in the use of self-mentions between Native Academic Writers (NAWEs) and Turkish Academic Writers (TAWEs). As illustrated in Table 4.31, while NAWEs frequently employ self-mentions in their texts (664 instances), TAWEs are considerably more reserved, with only 663 occurrences. This difference is more pronounced when normalized per 10,000 words, showing a frequency of 41.08 for NAWEs compared to just 16.87 for TAWEs. The percentages of self-mentions further underscore this contrast, with 8.26% in the Native corpus versus 3.90% in the Turkish corpus.

These figures not only highlight a substantial cultural divergence in how self-mentions are integrated into academic writing but also suggest different approaches to establishing an authorial presence. NAWEs appear to leverage self-mentions more extensively to assert their stance and engage the reader, reflecting a possibly more individualistic or assertive academic culture. Conversely, TAWEs show a more restrained use of self-mentions, potentially indicating a cultural preference for a less assertive presentation of personal views.

Self-mentions are essential linguistic devices that mark the author's explicit presence in academic texts through first-person pronouns and possessive adjectives. These elements are crucial for asserting authorial identity and personalizing the discourse, which can enhance the persuasive power of academic arguments. By explicitly marking the author's contribution and viewpoint, self-mentions help to foreground the personal voice and stake in the research outcomes.

Table 4.32: Distribution of Self-Mentions Across All Academic Levels and Corpora

Data Type	Turkish Ph.D.	Turkish Master's	Turkish Article	Native Ph.D.	Native Master's	Native Article
Frequency of Self-Mentions (n)	245	286	132	325	274	65
n / 10,000	12.86	24.90	43.86	40.79	64.52	25.93
Percentage of Self-Mentions	2.53%	4.79%	8.42%	7.83%	10.16%	4.22%
Number of Self-Mentions Used	11	11	11	11	9	5
Number of Self-Mentions Not Used	0	0	0	0	2	6
Total Number of Self-Mentions	11	11	11	11	11	11

As seen from Table 4.32, the usage of self-mentions varies significantly across academic levels and between Turkish and Native academic groups. In Turkish academia, self-mentions are most frequently used in Master's programs (286 instances), suggesting a preference for a pronounced authorial presence in thesis writing, potentially due to the narrative style or academic conventions that emphasize personal contribution. This is followed by the Ph.D. level with 245 mentions and the lowest in articles with 132 mentions, indicating a more restrained use in published work.

Conversely, Native academics exhibit the highest frequency of self-mentions in Ph.D. dissertations (325 instances), which significantly surpasses their usage in Master's theses (274) and articles (65). This pattern suggests that Native scholars place great importance on establishing a clear and personal voice in more extensive and significant research projects, possibly reflecting different cultural or institutional expectations about authorial visibility in scholarly writing.

When considering the normalized frequency (per 10,000 words), Native Master's theses exhibit the highest rate at 64.52, indicating an intensive embedding of self-mentions relative to the length of the text. This intensive use underscores the role of self-mentions in marking scholarly identity and authority in thesis work. Turkish articles, despite having a lower overall frequency, show a high normalized rate of 43.86, suggesting a strategic emphasis on authorial voice in journal publications.

The percentages of self-mentions within the broader interactive metadiscourse marker use also reveal significant insights. Native Master's theses again lead with 10.16%, reinforcing the observation that Native academic writing at the Master's level is particularly keen on emphasizing the researcher's personal voice. In contrast, Turkish

articles, with a percentage of 8.42%, also highlight a notable reliance on self-mentions, pointing to a similar emphasis on authorial presence in published research.

The detailed counts of self-mentions used versus not used indicate a selective and strategic deployment of these markers. Most academic levels and groups utilize nearly all available self-mentions, with few exceptions in Native Master's theses and articles where some remain unused. This selective usage might reflect a tactical choice to balance personal voice with the objective tone typically expected in academic writing.

The distribution and use of self-mentions across Turkish and Native academic corpora illustrate varying strategies for integrating personal voice into academic texts. Native academics, particularly at higher research levels, tend to use self-mentions more extensively and intensively, highlighting a cultural or educational emphasis on strong authorial presence. Turkish academics show a more moderate but still strategic use, especially in article writing, to assert their stance within scholarly discourse. This analysis sheds light on how different academic traditions and levels of study influence the deployment of self-mentions, reflecting broader rhetorical and cultural practices in academic writing.

The table highlights self-mention items that were absent in the six corpora. It is clear from this data that certain self-referential expressions were avoided by both Native and Turkish academic writers when conveying their subjective views. This may indicate that using particular self-referential terms did not contribute to the authors' ability to make their texts more persuasive.

Table 4.33: Unused Self-Mentions Across Different Corpora

Corpus	Unused Self-Mentions
Native Article	mine, the author's, the writer, the writer's
Native Master	I, the author's, the writer's
Native Ph.D.	None (All self-mentions were used)
Turkish Ph.D.	None (All self-mentions were used)
Turkish Article	None (All self-mentions were used)
Turkish Master	mine, the author's, the writer, the writer's

As table 4.33 presents, it appears that terms such as "mine," "the author's," "the writer," and "the writer's" were selectively unused, indicating a potential avoidance of these personal identifiers in academic writing. The non-use of "I" in the Native Master corpus further illustrates a stylistic or disciplinary preference for depersonalizing the narrative.

Table 4.34: Most Frequent Self-Mentions in Six Corpora

Items	Native Article (n)	n/10,000	Native Master (n)	n/10,000	Native Ph.D. (n)	n/10,000	Turkish Ph.D.(n)	n/10,000	Turkish Article(n)	n/10,000	Turkish Master (n)	n/10,000
I	29	1.16	130	2.49	138	1.73	69	0.36	5	0.38	42	0.29
we	10	0.40	54	1.04	85	1.07	43	0.23	52	3.94	145	1.01
me	4	0.16	3	0.06	7	0.09	7	0.37	7	0.53	4	0.03
my	11	0.44	27	0.52	14	0.18	45	0.24	14	1.06	27	0.19
our	4	0.16	37	0.71	42	0.53	33	0.17	32	2.42	63	0.44
us	7	0.28	15	0.29	28	0.35	19	0.10	10	0.76	4	0.03
the author	0	0.00	2	0.04	3	0.04	7	0.04	5	0.38	1	0.01
the author's	0	0.00	0	0.00	2	0.03	1	0.01	2	0.15	0	0.00
the writer	0	0.00	5	0.10	2	0.03	8	0.04	1	0.08	1	0.01
the writer's	0	0.00	1	0.02	1	0.01	1	0.01	1	0.08	0	0.00

n /10.000: frequency of each item of self-mentions per 10.000 words

As displayed in table 4.34, LL statistics were administered to test whether these differences were statistically significant. The most notable finding was related to "we," which had a normalized frequency of 3.94 per 10,000 words in the Turkish Article corpus, indicating significant overuse compared to the Native Article corpus, where it appeared only 0.40 times per 10,000 words. Similarly, "I" was prominently used in the Native Master corpus with a frequency of 2.49 per 10,000 words, compared to only 0.29 times per 10,000 words in the Turkish Master corpus.

Other self-mentions, such as "our" and "my," also showed notable differences. In the Turkish Article corpus, "our" had a frequency of 2.42 per 10,000 words, while in the Native Article corpus, it appeared only 0.16 times per 10,000 words. Additionally, "my" was used 1.06 times per 10,000 words in the Turkish Article corpus, compared to 0.44 times per 10,000 words in the Native Article corpus.

Conversely, self-mentions like "me" and "us" displayed more balanced usage between the corpora. For instance, "me" appeared 0.53 times per 10,000 words in the Turkish Article corpus and 0.16 times per 10,000 words in the Native Article corpus, indicating a slight inclination towards more frequent use in the Turkish Article corpus.

In the comparison between Native Ph.D. and Turkish Ph.D., "I" was most frequently used in the Native Ph.D. corpus, with a frequency of 1.73 occurrences per 10,000 words, compared to 0.36 times per 10,000 words in the Turkish Ph.D. corpus. This highlights a stronger personal assertion in Native Ph.D. academic texts.

The differences in self-mentions not only reflect distinct cultural and academic preferences but also underscore varied rhetorical strategies employed by authors to establish authority and credibility in their respective academic communities. This analysis provides valuable insights into the self-representation practices among different academic groups, emphasizing how personal and collective pronouns are strategically used to align with the communicative goals and stylistic norms prevalent in different academic settings.

Table 4.35: Combined LL and ELL Ratios for Self-Mentions Across Academic Levels

Self-Mention	Native Article (n)	Turkish Article (n)	LL Ratio (Article)	ELL Ratio (Article)	Native Master's (n)	Turkish Master's (n)	LL Ratio (Master)	ELL Ratio (Master)	Native Ph.D. (n)	Turkish Ph.D. (n)	LL Ratio (Ph.D.)	ELL Ratio (Ph.D.)
I	29	5	-10.16	0.00027	130	42	-147.36	0.00075	138	69	-138.58	0.00051
we	10	52	+71.32	0.00186	54	145	+0.03	0.00000015	85	43	+83.02	0.00031
me	4	7	+3.27	0.00009	3	4	+1.55	0.000008	7	7	+3.56	0.00001
my	11	14	+3.62	0.00009	27	27	-20.37	0.000104	14	45	+1.71	0.000006
our	4	32	+36.61	0.00096	37	63	+4.73	0.000024	42	33	+20.49	0.00008
us	7	10	+2.27	0.00006	15	4	-12.61	0.000064	28	19	+13.76	0.00005
the author	0	5	+4.36	0.00011	2	1	-1.76	0.000009	3	7	+0.005	0.00000002
the author's	0	2	+1.51	0.00004	0	0	0	0	2	1	-2.12	0.000008
the writer	0	1	+0.58	0.00002	5	1	-6.35	0.000032	2	8	+1.12	0.000004
the writer's	0	1	+0.58	0.00002	1	0	-2.63	0.000013	1	1	+0.77	0.000003

n: raw frequency of each item of self-mentions

+ indicates overuse, - indicates underuse in Native corpus relative to Turkish corpus

Source: (Article, Master's, Ph.D.)

According to the comparison of self-mentions in Table 4.35, between Native and Turkish Article corpora, "we" exhibited the highest LL ratio of +71.32, indicating significant overuse in the Turkish Article corpus. This is supported by an ELL ratio of +0.00186. The self-mention "our" also showed a substantial difference, with an LL ratio of +36.61, reflecting a notable preference for collective language in Turkish Articles. Conversely, "I" was underused in the Native Article corpus, with an LL ratio of -10.16 and an ELL ratio of -0.00027, suggesting a more individualistic approach in Turkish Articles. "me" had the smallest difference, with an LL ratio of +3.27, indicating relatively balanced usage between the two corpora.

In the Master's level comparison, "I" was significantly underused in the Turkish Master's corpus, with a high negative LL ratio of -147.36, indicating a stronger personal assertion in Turkish academic writing. The self-mention "our" showed an LL ratio of +4.73, suggesting a more collaborative tone in Turkish Master's dissertations. The marker "we" had a minimal LL ratio of +0.03, indicating balanced usage. The least difference was observed with "me," which had an LL ratio of +1.55, suggesting minimal variation between the two corpora.

At the Ph.D. level, "I" was again underused in the Turkish Ph.D. corpus, with an LL ratio of -138.58, indicating a preference for a more individualistic tone in Turkish Ph.D. dissertations. Conversely, "we" showed a high LL ratio of +83.02, reflecting its more frequent use in Turkish Ph.D. writing. The marker "our" had an LL ratio of +20.49, indicating a higher emphasis on collective ownership or collaboration in the Turkish corpus. The least difference was observed with "the author," which had an LL ratio of +0.005, showing balanced usage between the two corpora.

CHAPTER 5
DISCUSSION AND CONCLUSION

5.1. INTRODUCTION

This thesis aimed to delve into the use of interactional metadiscourse markers within scholarly doctoral dissertations, master's theses, and articles about foreign language teaching penned by both Turkish and American academics. The core objective was to unravel how these markers are utilized in a bid to bridge communicative gaps between authors and readers across different linguistic and cultural milieus. By examining articles written in both English and Turkish, the study sought to illuminate the potential linguistic nuances and cultural underpinnings that influence academic writing practices.

5.2. DISCUSSION

The comprehensive analysis conducted reveals that both Turkish academic writers (TAWEs) and Native academic writers (NAWEs) strategically deploy interactional metadiscourse markers to foster reader engagement and articulate clearer arguments. However, the data indicated notable variations in the frequency and type of metadiscourse markers utilized by each group, showcasing distinct approaches to reader engagement.

Research Question 1: What interactional metadiscourse markers are predominantly used, and how frequently are they employed, in English master's theses, doctoral dissertations, and research articles on foreign language teaching written by Turkish academic writers compared to those written by native English-speaking academic writers?

The analysis reveals distinct patterns in the use of interactional metadiscourse markers (IMDMs) across the different academic levels (PhD, Master's, and Articles) by Turkish Academic Writers of English (TAWEs) and Native Academic Writers of English (NAWEs).

The comparison between Turkish Academic Writers of English (TAWEs) and Native Academic Writers of English (NAWEs) reveals intriguing patterns in the use of interactional metadiscourse markers (IMDMs) across various academic levels. One striking observation is the frequent use of hedges by TAWEs, particularly at the PhD level, where they employ these markers at a rate of 157.42 per 10,000 words. This prevalent use of hedging, often through modal verbs like "might" and "could," can be attributed to a culturally influenced preference for cautious discourse. This finding

resonates with earlier research by Hyland (2005b) and Çapar (2014), who noted that Turkish writers often adopt a less assertive style. In contrast, NAWEs utilize hedges such as "may" and "might" with a slightly higher frequency, striking a balance between scholarly caution and robust engagement in academic debates. This balanced approach aligns with studies that have documented significant differences in the use of hedges across various academic genres and cultural contexts, particularly in research articles and book reviews by non-native English speakers (Gezegin & Baş, 2020).

Moreover, the use of boosters, which are employed to assert research findings, also exhibits noteworthy differences between TAWEs and NAWEs. TAWEs, especially at the PhD level, use boosters less frequently, indicating a more cautious stance. However, as the formality of the discourse decreases at the Master's and Article levels, the frequency of booster use by TAWEs increases, possibly reflecting a heightened need to assert authority and expertise. In contrast, NAWEs employ boosters such as "clearly" and "indeed" more liberally, reinforcing the credibility and relevance of their research. This pattern is consistent with research that compares Turkish and English academic writers, showing that Turkish writers tend to use boosters less frequently, which underscores their more cautious academic style (Kirişçi & Duruk, 2022).

In addition to hedges and boosters, the use of attitude markers, though the least prevalent among IMDMs, also highlights cultural differences. TAWEs at the PhD level tend to use more attitude markers, thereby introducing a personal voice and emotional evaluations into their academic work. This tendency aligns with the findings of Hyland (2001b) and Akbaş (2012b), who suggest that Turkish writers may feel more comfortable expressing attitudes in their native language. Conversely, NAWEs use attitude markers less frequently, adhering to the more objective tone that is typically expected in Western academic norms. These findings are in line with research showing that attitude markers vary across cultures, with Turkish writers tending to be more evaluative in specific contexts (Akbas, 2014).

Furthermore, engagement markers are used extensively by NAWEs, particularly at the PhD level, to actively involve readers and enhance the dialogic nature of their texts. This practice confirms Hyland's (2001) emphasis on the active role of readers in academic discourse. On the other hand, TAWEs use engagement markers less frequently, possibly due to academic conventions that prioritize formality over direct reader engagement. This pattern is consistent across Master's theses and research articles and is supported by

studies indicating that proficient writers typically employ a broader range of engagement markers, reflecting their higher academic proficiency (Susanti et al., 2017).

Finally, the use of self-mentions reveals a significant contrast between the two groups. NAWEs frequently use self-mentions to establish a personal academic voice, especially at the PhD level, which reflects the interactive norms of the Anglophone academic community. In contrast, TAWEs tend to use self-mentions sparingly, adhering to a more impersonal style likely influenced by cultural norms that value humility and objectivity. This contrast is further substantiated by research showing significant differences in self-mention usage between Turkish and native English-speaking writers, with the former adhering to a more impersonal style (Çapar & Turan, 2020).

Overall, these findings demonstrate that NAWEs consistently employ a broader range of IMDMs across different academic levels, effectively asserting their presence and engaging their audience more actively. In contrast, TAWEs exhibit a more cautious and restrained use of these markers, particularly in their Turkish-language publications, suggesting a cultural preference for a more formal academic style.

Research Question 2: Is there a significant difference in the use of interactional metadiscourse markers among English master's theses, doctoral dissertations, and research articles on foreign language teaching written by Turkish academic writers compared to those written by native English-speaking academic writers?

The data analysis reveals significant differences in the use of interactional metadiscourse markers between TAWEs and NAWEs, highlighting the impact of cultural and linguistic contexts on academic writing styles.

TAWEs demonstrate a clear adaptation when writing in English, aligning their use of IMDMs more closely with international norms. This adaptation is influenced by the specific linguistic and cultural context in which the writing occurs, as shown by how writers adjust their metadiscourse practices across different languages and academic settings (Lee & Casal, 2014). This is particularly evident in their increased use of hedges and boosters at the Master's and Article levels, where they may feel a greater need to assert authority and expertise in a more globally recognized academic format (Li & Wharton, 2012). However, when writing in Turkish, TAWEs show a marked reduction

in the use of these markers, suggesting a preference for a more formal or restrained academic discourse that is consistent with Turkish academic conventions.

Conversely, NAWEs exhibit a consistent use of IMDMs across their English publications, which reflects the established norms within the Anglophone academic community. This consistency is evident across different academic disciplines, showing how proficient writers maintain a broad application of metadiscourse markers to align with disciplinary expectations (Yoon & Römer, 2020). Such practices are consistent with the metadiscourse patterns observed in international research articles, further supporting the idea of standardized academic conventions in English (Esfandiari & Khatibi, 2022).

The findings underscore the profound influence of cultural and linguistic factors on the deployment of IMDMs as writers adapt their rhetorical practices to meet the expectations of their target audience. This adaptive strategy is particularly evident among Turkish writers, who adjust their use of IMDMs when writing in English to align with international academic norms.

5.3. CONCLUSION

5.3.1. Summary of the Study

The comprehensive analysis conducted in this study underscores the strategic deployment of interactional metadiscourse markers (IMDMs) by both Turkish and native English-speaking academic writers. These markers are crucial for articulating authorial presence and engaging readers across various academic texts (Çapar & Turan, 2020). The contrasts in IMDM usage patterns between Turkish Academic Writers of English (TAWEs) and Native Academic Writers of English (NAWEs) reveal underlying academic, and cultural norms and writer-reader interaction strategies shaped by both linguistic and educational backgrounds (Akbas, 2014).

This research significantly contributes to the understanding of academic writing conventions across cultures, emphasizing the need for greater awareness among Turkish academic writers regarding the interactive elements favored in English academic writing (Kirişçi & Duruk, 2022). By delineating the nuanced differences in IMDM usage, this thesis enriches the discourse on effective scholarly communication and provides insights into the adaptation of rhetorical strategies across cultural boundaries in academic writing (Ahmadi, 2022).

Embarking on a detailed exploration, the study examined the use of IMDMs in English master's theses, doctoral dissertations, and research articles on foreign language teaching authored by TAWEs and NAWEs. Utilizing advanced text analysis tools such as NVivo10 and log-likelihood statistics, the research explored the nuanced ways these groups construct academic discourse and establish authorial stance across various scholarly genres (Yüksel & Kavanoz, 2018). The findings reaffirm the critical role of interactional metadiscourse in academic writing, highlighting its importance in bridging the writer's intentions with the reader's understanding (Kirişçi & Duruk, 2022).

The ability to skillfully use these rhetorical tools across different languages and cultural contexts is essential in today's interconnected academic world. The study suggests that by embracing both global academic norms and local traditions, academic writers can enhance their engagement with a worldwide audience, contributing to a richer, more diverse global discourse (Mirshamsi & Allami, 2013).

Additionally, the study reveals that NAWEs consistently employ a broader range and higher frequency of IMDMs, such as engagement markers and self-mentions, across different academic levels (Çandarlı et al., 2015). This consistent usage reflects the interactive norms prevalent within the Anglophone academic community (Akbas, 2012). In contrast, TAWEs, while proficient in using IMDMs in English, demonstrate a more cautious and restrained approach, particularly in Turkish-language publications (Bal-Gezegin, 2016). This suggests a cultural preference for a more formal academic discourse, aligning with Turkish educational norms (Cubukcu, 2017). The findings also indicate that Turkish writers adapt their rhetorical strategies when writing in English, aligning their use of IMDMs more closely with international academic norms, which is crucial for effective participation in global academic discourse (Can & Cangır, 2019).

The study highlights the potential benefits of incorporating comprehensive academic writing training into Turkish higher education curricula. By fostering a deeper understanding of the strategic use of IMDMs and enhancing English academic writing skills, Turkish academics can more effectively engage with the global research community (Akbas, 2012). This training could significantly enhance the international visibility and impact of Turkish scholars' work, helping them navigate the complexities of academic discourse and ensuring their contributions are recognized and valued across cultural and linguistic boundaries (Shafique et al., 2019).

By analyzing the differences in IMDM usage across cultures, this research contributes valuable insights into how cultural and educational strategies affect scholarly communication, offering a foundation for further exploration into the global standardization of academic writing practices (Esfandiari & Khatibi, 2022). Finally, the study opens avenues for future research, particularly in exploring specific pedagogical approaches that could support academic writers in navigating the complexities of global academic communication (Benraiss, 2023). The findings suggest that by embracing both the diversity of global academic norms and the specificity of local traditions, academic writers can enhance their engagement with a worldwide audience, thereby enriching the global discourse with diverse perspectives and insights (Boginskaya, 2022).

5.3.2. Implications

The results of this investigation highlight a distinct contrast in the use of interactional metadiscourse markers (IMDMs) between Turkish and English academic writers, particularly in English-language publications (Çapar & Turan, 2020). Turkish scholars often adopt a more implicit approach to engaging with their readers, frequently utilizing passive constructions. This subtler mode of engagement may not align well with the more direct and explicit interactional styles typical of English academic writing, potentially limiting the international reach and impact of their research.

The implications of this study emphasize the strategic deployment of IMDMs by both Turkish academic writers (TAWEs) and Native academic writers (NAWEs) across different academic levels—PhD, Master's, and journal articles. The findings suggest a nuanced understanding of how IMDMs are employed to construct and negotiate authorial stance, which is crucial for effective academic discourse.

Both TAWEs and NAWEs predominantly utilized hedges and boosters, indicating a balanced approach between expressing certainty and tentativeness, essential in academic writing (Shafique et al., 2019). This balance helps modulate claims, making them more palatable and acceptable to scholarly audiences. Notably, the use of boosters was more pronounced in native writings at the PhD level, reflecting a confident stance in presenting groundbreaking research claims. In contrast, Turkish writers exhibited a restrained use of boosters, particularly in articles, suggesting a cultural preference for a more tentative expression of claims.

The limited use of attitude markers, especially at the PhD and Master's levels by TAWs, aligns with a focus on epistemic modality rather than emotional or affective expressions (Ahmadi, 2022). This may reflect academic norms within Turkish academic contexts that prioritize objectivity over subjectivity.

Engagement markers were significantly employed across all levels by NAWs, highlighting their strategic use of rhetoric to actively involve the audience, a reflection of pedagogical and cultural inclinations toward reader engagement in Anglo-American academic settings (Akbas, 2014). While Turkish academic texts also demonstrated substantial use of engagement markers, they did so slightly less than their native counterparts, possibly indicating evolving conventions among Turkish academics in adopting more interactive discourse practices.

A notable difference between the two groups was in the use of self-mentions. NAWs used these markers more frequently across all levels to establish a clear authorial presence, which is valued in Western academic traditions (Akbas, 2014). TAWs were more conservative in their use of self-mentions, particularly in PhD dissertations, possibly due to cultural norms that emphasize humility and objectivity.

These observations underscore the critical role of IMDMs in academic writing, reflecting both universal and culturally specific rhetorical strategies. They also highlight the need for greater awareness and training in the effective use of metadiscourse to enhance the clarity, persuasiveness, and engagement of academic texts. Academic institutions, particularly in non-native English contexts, should consider integrating targeted instruction on the strategic use of IMDMs into their curricula to better prepare students for participation in the global academic community. Such training could help bridge cultural differences in academic writing norms and promote more effective scholarly communication.

Given the global dominance of English in scholarly communication, it becomes imperative for Turkish academic writers to align more closely with the interactional strategies employed by their English-speaking counterparts. To address this gap, this study advocates for the integration of specialized academic writing courses at both the graduate (MA and PhD) and undergraduate levels (Yüksel & Kavanoz, 2018). These courses should not only focus on the mechanics of writing but also on the strategic use of metadiscourse to effectively engage and communicate with an international audience.

Furthermore, these proposed academic writing courses should emphasize cultural differences in writing conventions across languages. This would prepare Turkish scholars not only to write in an internationally comprehensible manner but also to appreciate and navigate the cultural nuances that influence academic discourse globally. Such awareness is crucial for writing that resonates with a diverse global audience and adheres to the accepted norms of scholarly communication.

For research assistants and academics aiming to publish internationally, proficiency in English is essential but not sufficient. Courses in English for Academic Purposes (EAP) that specifically focus on the language used in research articles could provide significant benefits. These courses should extend beyond basic language instruction to include training in the effective use of academic language and metadiscourse, enhancing the clarity and persuasive power of academic texts.

This study also highlights the need for Turkish academic writers to diversify their interactional strategies beyond the frequent use of modal verbs. Training should include the use of a broad range of linguistic tools to express hedging, boosting, and attitude, which are vital for nuanced academic argumentation. Practical exercises involving analyses of exemplary research articles could be instrumental in achieving these educational objectives.

The insights gleaned from this study are invaluable for the design of academic writing curricula, especially for non-native English speakers aspiring to publish internationally. Educational programs should emphasize the importance of understanding and navigating the rhetorical differences between languages and academic cultures. Training in metadiscourse could help enhance non-native speakers' ability to write more compelling, clear, and engaging academic texts, thereby increasing their visibility and impact within the global research community.

5.3.3. Limitations of the Study

This study's findings should be interpreted with caution due to several inherent limitations that constrain their broader applicability. Primarily, the research focused solely on the field of foreign language teaching, limiting its generalizability across different academic disciplines and topics. Each discipline may exhibit unique rhetorical and interactional norms that could significantly influence the use and interpretation of interactional metadiscourse markers (IMDMs).

Additionally, the analysis was confined to IMDMs identified within specific corpora of Turkish and English academic writing at different levels—PhD dissertations, Master's theses, and research articles. The corpora were selected based on a preliminary structure, which may not have comprehensively captured the full range of IMDMs typically employed in Turkish academic writing. Consequently, some potentially relevant markers might not have been included in the analysis.

Furthermore, the study exclusively utilized discussion sections from experimental and quasi-experimental studies. This choice of genre might have introduced a bias, as discussion sections often have different rhetorical purposes and structures compared to other parts of academic papers, such as introductions or literature reviews. This could potentially affect the generalizability of the findings to other sections of academic texts.

These limitations underscore the need for further research to explore IMDMs across a wider array of disciplines and in more diverse linguistic contexts. Future studies should aim to expand the corpora and include a broader spectrum of metadiscourse markers to provide a more detailed and nuanced understanding of how academic writers from different backgrounds and disciplines engage with their readers. Additionally, examining a variety of academic genres beyond discussion sections would help to offer a more comprehensive view of metadiscourse usage in academic writing.

5.3.4. Suggestions for Further Research

To deepen and extend the findings of this study, several avenues for future research are recommended. This study focused on the use of interactional metadiscourse markers (IMDMs) in Master's theses, doctoral dissertations, and research articles on foreign language teaching written by Turkish academic writers (TAWEs) and native English-speaking academic writers (NAWEs). Recognizing its limitations and exploring further research opportunities is crucial to gain a comprehensive understanding of metadiscourse practices in different contexts.

A comparative analysis spanning a broader range of disciplines—including both the sciences and social sciences—could provide a more comprehensive understanding of the use of interactional metadiscourse markers. Different disciplines may have unique rhetorical and interactional norms that significantly influence the use and interpretation of metadiscourse markers (Yoon & Römer, 2020). Such an investigation could reveal

how disciplinary conventions shape the use of IMDMs and contribute to a more nuanced understanding of metadiscourse across various academic fields.

The current study's corpus was selected based on a preliminary structure and may not capture the full range of IMDMs typically employed in Turkish academic writing. Further research should aim to expand the corpus, including more diverse academic texts, to provide a more detailed and nuanced understanding of how TAWEs and NAWEs use metadiscourse markers (Aluthman, 2018). A broader spectrum of markers and additional academic levels could yield more comprehensive insights into the patterns and strategies used by academic writers in different contexts.

Future studies should closely examine the syntactic frames and grammatical structures of IMDMs to understand their pragmatic functions in greater detail. This would provide a deeper understanding of how these structures contribute to the construction of an authorial stance (Abdi & Ahmadi, 2015). By analyzing the syntactic environments in which IMDMs occur, researchers could gain insights into the ways in which these markers are used to achieve rhetorical goals in academic writing.

An intriguing area of study would involve a cross-cultural comparison of interactional metadiscourse markers used by Turkish academic writers, native English speakers, and academicians from other non-native English-speaking backgrounds, such as Chinese, Spanish, or Italian. This comparative approach would help elucidate cultural differences in academic writing styles and the influence of native language on the adoption of metadiscourse strategies in English (Esfandiari & Khatibi, 2022). Such research could provide valuable insights into how cultural factors influence the rhetorical choices of academic writers in different linguistic contexts.

The present study compiled a corpus of PhD dissertations, Master’s theses, and research articles written between 2020-2023 but did not analyze them based on the years they were written. Historical studies would be fruitful to comprehend how the use of IMDMs has evolved over time. Examining historical changes in IMDM usage, similar to the approach taken by Gillaerts and Van de Velde (2010), would shed light on trends and shifts in metadiscourse practices over the decades (Liu & Yang, 2021). Such a diachronic analysis could reveal how academic writing conventions have developed in response to changing scholarly norms and practices.

Future research should also explore other types of metadiscourse beyond the scope of IMDMs to address the issue of authorial stance comprehensively. Investigating metadiscoursive nouns and other elements of metadiscourse would further deepen our understanding of academic writers' engagement with their readers and their identity construction in texts (Khedri et al., 2013). By broadening the focus to include various metadiscourse features, researchers can develop a more holistic understanding of how academic texts are structured to achieve their communicative goals.

An empirical investigation into the effectiveness of writing courses at Turkish universities could yield valuable insights. Such a study could assess whether formal education in academic writing helps improve the use of interactional metadiscourse markers among students and academics (Çapar & Turan, 2020). By comparing academic writing outputs in both English and Turkish before and after such interventions, researchers could identify specific areas where instruction on the use of metadiscourse could be enhanced to better support academic writers in achieving international publishing standards.

These suggested studies would not only build on the findings of the current research but also contribute significantly to the broader field of academic writing, particularly in understanding how metadiscourse is influenced by linguistic, cultural, and educational factors.

APPENDICES

Appendix1: Interactional Metadiscourse Markers Interactional Metadiscourse markers (Hyland, 2005b)

Category	Markers
A. Attitude Markers	Admittedly, Amazingly, Appropriately, Astonishingly, Correctly, Curiously, Desirably, Disappointingly, Dramatically, Essentially, Expectedly, Fortunately, Hopefully, Importantly, Inappropriately, Interestingly, Remarkably, Preferably, Shockingly, Strikingly, Surprisingly, Unbelievably, Understandably, Unexpectedly, Unfortunately, Unusually, Even, Agree, Agrees, Agreed, Disagree, Disagreed, Disagrees, Prefer, Amazed, Amazing, Appropriate, Astonished, Astonishing, Curious, Desirable, Disappointed, Disappointing, Dramatic, Essential, Expected, Fortunate, Hopeful, Important, Inappropriate, Preferable, Preferred, Interesting, Remarkable, Shocked, Shocking, Striking, Surprised, Surprising, Unbelievable, Understandable, Unexpected, Unfortunate, Unusual, Usual
B. Boosters	Actually, Always, Beyond Doubt, Certainly, Clearly, Conclusively, Decidedly, Definitely, Evidently, In Fact, Incontestably, Incontrovertibly, Indisputably, No Doubt, Obviously, Of Course, Never, Really, Indeed, Truly, Undeniably, Undisputedly, Undoubtedly, Without Doubt, Surely, Believe, Believed, Believes, Demonstrate, Demonstrated, Demonstrates, Establish, Find, Finds, Found, Know, Known, Obvious, Prove, Proved, Proves, Realize, Realized, Realizes, Show, Showed, Shown, Shows, Think, Thinks, Thought, Certain, Clear, Definite, Doubtless, Established, Evident, Incontestable, Incontrovertible, Indisputable, Sure, True, Undeniable, Must (indicating possibility)
C. Self Mention	I, We, Me, My, Our, Mine, Us, The author, The author's, The writer, The writer's
D. Engagement Markers	By the way, Incidentally, Add, Allow, Analyse, Apply, Arrange, Assess, Assume, Calculate, Choose, Classify, Compare, Connect, Consider, Consult, Contrast, Define, Demonstrate, Determine, Do not, Develop, Employ, Ensure, Estimate, Evaluate, Find, Follow, Go, Imagine, Increase, Input, Insert, Integrate, Let X = Y, Let us, Let's, Look at, Mark, Measure, Mount, Note, Notice, Observe, Order, Pay, Picture, Prepare, Recall, Recover, Refer, Regard, Remember, Remove, Review, See, Select, Set, Show, Suppose, State, Take (a look/as example), Think about, Think of, Turn, Use, (The) Reader's Key, One's, Have to, Must, Need to, Ought, Should, Our (inclusive), Us (inclusive), We (inclusive), You, Your
E. Hedges	Almost, Apparently, Approximately, Broadly, Certain Amount, Certain Extent, Certain Level, Fairly, Frequently, From My Perspective, From Our Perspective, From This Perspective, Generally, In General, In Most Cases, In Most Instances, In My Opinion, In My View, In This View, In Our Opinion, In Our View, Largely, Mainly, Essentially, Maybe, Mostly, Often, On the Whole, Perhaps, Plausibly, Possibly, Presumably, Probably, Quite, Rather, Relatively, Roughly, Sometimes, Somewhat, To My Knowledge, Typically, Uncertainly, Unclearly, Unlikely, Usually, Appear, Appeared, Appears, Argue, Argued, Argues, Assume, Assumed, Claim, Claimed, Claims, Doubt, Estimate, Estimated, Feel, Feels, Felt, Guess, Indicate, Indicated, Indicates, Postulate, Postulated, Postulates, Seem, Suggest, Suggested, Suggests, Suppose, Supposed, Supposes, Suspect, Suspects, Tend to, Tended to, Tends to, Apparent, Doubtful, Plausible, Possible, Presumable, Probable, Typical, Uncertain, Unclear, Likely, Could, Couldn't, Might, Ought, Should, Would, Wouldn't, May, About, Around

Appendix 2: Categorization of Hyland's Interactional Metadiscourse Taxonomy Regarding Syntactic Frames

Category	Markers
A. Attitude Markers - Single Adverbials	Admittedly, Amazingly, Appropriately, Astonishingly, Correctly, Curiously, Desirably, Disappointingly, Dramatically, Essentially, Expectedly, Fortunately, Hopefully, Importantly, Inappropriately, Interestingly, Remarkably, Preferably, Shockingly, Strikingly, Surprisingly, Unbelievably, Understandably, Unexpectedly, Unfortunately, Unusually, Even
A. Attitude Markers - Stance Verbs	Agree, Agrees, Agreed, Disagree, Disagreed, Disagrees, Prefer
A. Attitude Markers - Stance Adjectives	Amazed, Amazing, Appropriate, Astonished, Astonishing, Curious, Desirable, Disappointed, Disappointing, Dramatic, Essential, Expected, Fortunate, Hopeful, Important, Inappropriate, Preferable, Preferred, Interesting, Remarkable, Shocked, Shocking, Striking, Surprised, Surprising, Unbelievable, Understandable, Unexpected, Unfortunate, Unusual, Usual
B. Boosters - Stance Adverbials	Actually, Always, Beyond Doubt, Certainly, Clearly, Conclusively, Decidedly, Definitely, Evidently, In Fact, Incontestably, Incontrovertibly, Indisputably, No Doubt, Obviously, Of Course, Never, Really, Indeed, Truly, Undeniably, Undisputedly, Undoubtedly, Without Doubt, Surely
B. Boosters - Stance Verbs	Believe, Believed, Believes, Demonstrate, Demonstrated, Demonstrates, Establish, Find, Finds, Found, Know, Known, Obvious, Prove, Proved, Proves, Realize, Realized, Realizes, Show, Showed, Shown, Shows, Think, Thinks, Thought
B. Boosters - Stance Adjectives	Certain, Clear, Definite, Doubtless, Established, Evident, Incontestable, Incontrovertible, Indisputable, Sure, True, Undeniable
B. Boosters - Modals	Must (indicating possibility)
C. Self Mention - Stance Pronouns and Possessive Adjectives	I, We, Me, My, Our, Mine, Us
C. Self Mention - Stance Nouns	The author, The author's, The writer, The writer's
D. Engagement Markers - Stance Adverbials	By the way, Incidentally
D. Engagement Markers - Stance Verbs	Add, Allow, Analyse, Apply, Arrange, Assess, Assume, Calculate, Choose, Classify, Compare, Connect, Consider, Consult, Contrast, Define, Demonstrate, Determine, Do not, Develop, Employ, Ensure, Estimate, Evaluate, Find, Follow, Go, Imagine, Increase, Input, Insert, Integrate, Let X = Y, Let us, Let's, Look at, Mark, Measure, Mount, Note, Notice, Observe, Order, Pay, Picture, Prepare, Recall, Recover, Refer, Regard, Remember, Remove, Review, See, Select, Set, Show, Suppose, State, Take (a look/as example), Think about, Think of, Turn, Use
D. Engagement Markers - Stance Nouns	(The) Reader's Key, One's
D. Engagement Markers - Modals	Have to, Must, Need to, Ought, Should
D. Engagement Markers - Stance Pronouns	Our (inclusive), Us (inclusive), We (inclusive), You, Your
E. Hedges - Stance Adverbials	Almost, Apparently, Approximately, Broadly, Certain Amount, Certain Extent, Certain Level, Fairly, Frequently, From My Perspective, From Our Perspective, From This Perspective, Generally, In General, In Most Cases, In Most Instances, In My Opinion, In My View, In This View, In Our Opinion, In Our View, Largely, Mainly, Essentially, Maybe, Mostly, Often, On the Whole, Perhaps, Plausibly, Possibly, Presumably, Probably, Quite, Rather, Relatively, Roughly,

	Sometimes, Somewhat, To My Knowledge, Typically, Uncertainly, Unclearly, Unlikely, Usually
E. Hedges - Stance Verbs	Appear, Appeared, Appears, Argue, Argued, Argues, Assume, Assumed, Claim, Claimed, Claims, Doubt, Estimate, Estimated, Feel, Feels, Felt, Guess, Indicate, Indicated, Indicates, Postulate, Postulated, Postulates, Seem, Suggest, Suggested, Suggests, Suppose, Supposed, Supposes, Suspect, Suspects, Tend to, Tended to, Tends to
E. Hedges - Stance Adjectives	Apparent, Doubtful, Plausible, Possible, Presumable, Probable, Typical, Uncertain, Unclear, Likely
E. Hedges - Modals	Could, Couldn't, Might, Ought, Should, Would, Wouldn't, May
E. Hedges - Stance Prepositions	About, Around

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