



**A COMPARATIVE ANALYSIS OF
HEDGING STRATEGIES USED BY
NATIVE AND NON-NATIVE SPEAKERS IN
ENGLISH ACADEMIC SPOKEN
DISCOURSE**

Doktora Tezi

Nejla SEYREK

Eskişehir 2025

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Nejla SEYREK

PhD THESIS

Department of Foreign Language Education

PhD in English Language Teaching

Supervisor: Prof. Dr. Ümit Deniz TURAN

Anadolu University

Graduate School of Educational Sciences

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APPROVAL OF JURY AND THE INSTITUTION

JÜRİ VE ENSTİTÜ ONAYI

Nejla SEYREK'in "A Comparative Analysis of Hedging Strategies Used by Native and Non Native Speakers in English Academic Spoken Discourse" başlıklı tezi 04.07.2025 tarihinde aşağıdaki jüri tarafından değerlendirilerek "Anadolu Üniversitesi Lisansüstü Eğitim-Öğretim ve Sınav Yönetmeliği'nin ilgili maddeleri uyarınca, Yabancı Diller Eğitimi Anabilim Dalı İngilizce Eğitimi Programında, Doktora tezi olarak kabul edilmiştir.

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ÖZET

ANADİLİ VE YABANCI DİL KONUŞURLARININ İNGİLİZCE AKADEMİK SÖZLÜ SÖYLEMDE KAÇINMA STRATEJİSİ KULLANIMLARININ KARŞILAŞTIRMALI İNCELENMESİ

NEJLA SEYREK

Yabancı Diller Eğitimi Anabilim Dalı

İngiliz Dili Eğitimi Doktora Programı

Anadolu Üniversitesi, Eğitim Bilimleri Enstitüsü, Haziran 2025

Danışman: Prof. Dr. Ümit Deniz TURAN

Kaçınma stratejileri akademik iletişimi önemli ölçüde etkiler. Konuşurlar, ihtiyatı belirtmek, ilişkileri yönetmek ve kesinlik düzeyini göstermek için bu stratejilere başvurur. Literatürde kaçınmaya yönelik birçok çalışma olsa da, ileri düzey yabancı dil konuşurlarının sözlü akademik kullanımlarına ilişkin çalışmalar sınırlıdır. Bu çalışmada, Türk ve anadili İngilizce olan İngiliz Dili Eğitimi uzmanlarının webinarlarında kullanılan zarf türü kaçınma ifadeleri karşılaştırılmıştır.

Çalışmada derlem pragmatiği yöntemi kullanılmıştır. Türk ve anadili İngilizce konuşurların webinar kayıtlarından iki ayrı derlem oluşturulmuştur. Analizde zarf türü kaçınma ifadelerinin sıklığı, sözcüksel çeşitliliği ve pragmatik işlevleri nicel ve nitel yöntemlerle incelenmiştir.

Türk konuşurlar zarf türü kaçınma ifadelerini daha sık ve biraz daha çeşitli kullanmış; ancak genel fark anlamlı bulunmamıştır. Buna rağmen, bazı kategorilerde dağılım, biçim ve işlev açısından anlamlı farklar ortaya çıkmıştır. Türk konuşurlar çoğunlukla sabit anlamlı, kalıplaşmış zarfları tercih ederken, anadili İngilizce olanlar farklı bağlamlara uyarlanabilen çok işlevli zarfları seçmiştir. Sonuçlar ilgili literatür bağlamında tartışılarak dil öğretimi ve ileri araştırmalar için öneriler sunulmuştur.

Anahtar kelimeler: Kaçınma, Zarf türü kaçınma ifadeleri, Pragmatik yeti, Sözlü akademik söylem, Derlem pragmatiği, Türk ELT uzmanları, Anadili İngilizce olan ELT uzmanları

ABSTRACT

A COMPARATIVE ANALYSIS OF HEDGING STRATEGIES USED BY NATIVE AND NON-NATIVE SPEAKERS IN ENGLISH ACADEMIC SPOKEN DISCOURSE

Nejla SEYREK

Department of Foreign Language Education

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Supervisor: Prof. Dr. Ümit Deniz TURAN

Hedging strategies affect communication in academic discourse. Speakers use hedges to express tentativeness and manage relationships. Although extensive research exists on hedging, studies on its use in spoken academic contexts, particularly among proficient non-native speakers (NNSs), are limited. This study compares adverbial hedging devices used by Turkish English Language Teaching (ELT) professionals and native English-speaking (NS) counterparts in academic webinars.

Two corpora were compiled: ELT webinars by Turkish professionals and webinars by native English-speaking professionals. The analysis examined frequency, lexical range, and pragmatic functions of adverbial hedges using quantitative and qualitative approaches.

Turkish speakers use adverbial hedges more frequently than native speakers, though differences were not statistically significant. While overall frequency did not differ, hedge distribution in forms and functions showed significant differences. Turkish speakers' adverbs are semantically fixed, often using expressions like just formulaically. Native speakers employ hedging where adverbs like maybe serve multiple functions and show adaptability across contexts.

Results were discussed in light of relevant literature, and implications and suggestions were offered for teaching and research.

Keywords: Hedging, Adverbial hedges, Pragmatic competence, Spoken academic discourse, Corpus pragmatics, Turkish ELT professionals, Native speaker ELT professionals

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ETİK İLKE VE KURALLARA UYGUNLUK BEYANNAMESİ

Bu tezin bana ait, özgün bir çalışma olduğunu; çalışmamın hazırlık, veri toplama, analiz ve bilgilerin sunumu olmak üzere tüm aşamalarında bilimsel etik ilke ve kurallara uygun davrandığımı; bu çalışma kapsamında elde edilen tüm veri ve bilgiler için kaynak gösterdiğimi ve bu kaynaklara kaynakçada yer verdiğimi; bu çalışmanın Anadolu Üniversitesi tarafından kullanılan “bilimsel intihal tespit programı”yla tarandığını ve hiçbir şekilde “intihal içermediğini” beyan ederim. Herhangi bir zamanda, çalışmamla ilgili yaptığım bu beyana aykırı bir durumun saptanması durumunda, ortaya çıkacak tüm ahlaki ve hukuki sonuçları kabul ettiğimi bildiririm.

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Bu tezi hazırlarken Grammarly (ücretsiz sürüm), Hemingway App (ücretsiz sürüm) gibi üretken yapay zekâ programlarından ve Mendeley adlı dijital araştırma ve kaynak yönetim aracından destek aldığımı beyan ederim Tezin hazırlığı aşamasında üretken yapay zekâ programlarından içerik özetleme ve makalelerle etkileşim kurma (örneğin literatürden alınan makalelerin ana fikirlerini anlamak ve analiz etmek için) desteği aldım. Üretken yapay zekâ programlarından aldığım bilgilerin doğruluğunu kontrol ettiğimi bildiririm.

Tezin hazırlık aşamasında bu araçlardan yazım ve dil bilgisi kontrolü, metinlerin sadeleştirilmesi ve akademik kaynakların düzenlenmesi amaçlarıyla yararlandım. Bunların dışında yapay zeka bilimsel içerik üretmek amacıyla kullanılmamıştır. Üretken yapay zekâ programlarından ve dijital akademik araçlardan aldığım bilgilerin doğruluğunu kontrol ettiğimi bildiririm

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I declare that I received support from generative artificial intelligence programs such as Grammarly (free version), Hemingway App (free version) and digital research tool, Mendeley while preparing this dissertation. I have received support from generative artificial intelligence programs and academic tools for purposes including grammar and spelling correction, enhancing clarity and readability, and organizing academic references during the preparation of the dissertation.

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Nejla SEYREK

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LIST OF ABBREVIATIONS

BNC2014	: British National Corpus 2014
CANCODE	: Cambridge and Nottingham Corpus of Discourse in English
CLC	: Cambridge Learner Corpus
DCTs	: Discourse Completion Tasks
EFCAMDAT	: Education First Cambridge Open Language Database
EFL	: English as a Foreign Language
ELT	: English Language Teaching
ICLE	: International Corpus of Learner English
IFIDs	: Illocutionary Force Indicating Devices
IPM	: Interpersonal Pragmatic Marker
JRC-Acquis	: Joint Research Centre - Acquis Communautaire
L1	: First Language
L2	: Second Language
LCR	: Learner Corpus Research
LINDSEI	: Louvain International Database of Spoken English Interlanguage
LL	: Log-Likelihood Test
LOB Corpus	: Lancaster-Oslo/Bergen Corpus

LOCNEC	: Louvain Corpus of Native English Conversations
LONGDALE	: Longitudinal Database of Learner English
MICASE	: Michigan Corpus of Academic Spoken English
NNSs	: Nonnative Speakers
NS	: Native Speakers
OPUS	: Open Parallel Corpus
PM	: Pragmatic Marker
POS	: Part of speech
PPM	: Propositional Pragmatic Marker
SLA	: Second Language Acquisition
TPM	: Textual Pragmatic Marker
UAMLESC	: Universidad Autónoma de Madrid Learner English Spoken Corpus
UCREL	: University Centre for Computer Corpus Research on Language

1 INTRODUCTION

Hedging represents a fundamental aspect of language use, as it reflects how speakers manage meaning in socially appropriate and context-sensitive ways. It is closely related to the broader communicative ability known as pragmatic competence. Fraser (2010) defines pragmatic competence as the knowledge and skill required to choose expressions appropriate to a given context and to interpret others' language based on shared assumptions and social norms. Pragmatic competence plays a central role in effective communication because it involves adjusting language use according to social intentions and situational demands (Kasper & Rose, 2002; Shirkhani, 2014). It enables individuals to perform functions such as making requests, expressing opinions, maintaining politeness, and managing relationships (Taguchi, 2009). This competence is particularly significant in intercultural contexts, where expectations regarding indirectness and politeness frequently vary (Xu, Case, & Wang, 2009). Pragmatic competence for second language (L2) learners involves more than grammatical knowledge; it requires an understanding of how context and interaction influence meaning (Shu, 2018).

Thus, hedging forms a core component of pragmatic competence, as it supports speakers in expressing uncertainty, maintaining politeness, and negotiating meaning. Expressions such as *I think*, *maybe*, and *it seems* allow speakers to introduce flexibility and soften claims (Brown & Levinson, 1987; Hyland, 1998a; Salager-Meyer, 1994). For example, *maybe it could work well in certain contexts* signals caution, while *it seems this conclusion is valid* reduces assertiveness. These expressions temper the force of statements and allow space for alternative perspectives, thereby enhancing cooperative communication (Markkanen & Schröder, 1997).

Both spoken and written discourse rely on hedging to manage interpersonal relationships and express epistemic stance. Corpus-based studies, including analyses of the British National Corpus (BNC) and the Michigan Corpus of Academic Spoken English (MICASE), have demonstrated frequent use of hedging forms such as *I think* and *maybe* to fulfill both interpersonal and informational functions (Hyland, 1998a; Salager-Meyer, 1994).

Non-native speakers (NNSs), however, often face challenges in using hedging effectively, particularly in spoken interaction where real-time decisions must be made (Hyland, 1996b, p. 278). According to Hyland (1996b), hedging remains “extremely troublesome” for NNSs—even advanced learners—leading to both underuse and misuse of hedging expressions. In contrast, native speakers (NS) typically manage politeness and uncertainty more effectively, drawing on a wider range of linguistic resources and culturally embedded norms (Hinkel, 1997). The multiple functions of hedging expressions add further complexity. For instance, *I think* may express hesitation, convey personal opinion, or soften a directive, depending on context (Fraser, 2010). Thus, successful use of hedging requires not only familiarity with its linguistic forms but also an understanding of how these forms operate across diverse communicative situations.

1.1 Background of the Study

Hedging is a discourse strategy that reduces the strength or certainty of an utterance, often through lexical items, syntactic structures, or discourse features such as agentless passives and *if*-clauses (Kaltenböck et al., 2010; Sanders, 2015). Over the past five decades, research on hedging has expanded significantly, with foundational reviews by Clemen (1997), Schröder and Zimmer (1997), and Fraser (2010). The term was introduced by Lakoff (1972), who defined hedges as linguistic devices that signal fuzziness, building on earlier concepts of semantic imprecision proposed by Zadeh (1965) and Weinreich (1966). Although definitions of hedging vary—due in part to its overlap with related notions such as modality and mitigation—it remains fundamentally linked to the management of interpersonal meaning in communication (Holmes, 1982).

Lakoff (1972) emphasized that real-world concepts often exhibit fuzzy category boundaries. His classic examples, such as the contrast between robins and penguins, illustrate how hedges allow speakers to adjust the precision of their claims by modifying category membership (pp. 459–471). Weinreich (1966) contributed to this perspective by framing hedges as metalinguistic operators that affect interpretation by shaping how referents are understood. Later research shifted from semantic fuzziness to the pragmatic functions of hedging, particularly in interactional settings (Taavitsainen & Jucker, 2015).

A significant development in the pragmatic tradition came from Fraser's (1975) theory of hedged performatives. He argued that modal verbs could reduce the illocutionary force of speech acts, introducing a distinction between strong explicit and weak ambiguous performatives. This view marked a shift in focus from propositional uncertainty to speech act modification, a perspective that continues to inform studies on modality (Fraser, 2010). It also aligned with Brown and Levinson's (1987) politeness theory, which positioned hedging as a means of managing face during interaction.

Brown and Levinson (1987) expanded the concept of hedging within their politeness framework, associating it with the protection of both positive and negative face. Hedges mitigate face-threatening acts by softening assertiveness and reducing imposition (p. 65). Their definition of hedges as modifiers of category membership underscored the role of hedging in maintaining social harmony. However, their model has faced criticism for its Anglo-centric orientation and its emphasis on speaker needs at the expense of hearer perspectives (Beeching, 2016; Yeung, 1997; Spencer-Oatey, 2002; Eelen, 2001). Despite these critiques, the model remains foundational for understanding hedging as a pragmatic strategy.

Parallel contributions emerged from Grice's (1975) theory of implicature. His cooperative principle and the associated conversational maxims—quantity, quality, relation, and manner—outlined how speakers are expected to contribute meaningfully and appropriately to discourse. Hedging often signals partial compliance with these maxims, particularly the maxim of quality, which concerns truthfulness. For example, in the utterance *As far as I know, there are three cookies left*, the speaker limits commitment to the truth of the statement. According to Grice (1975), this form of expression constitutes a case of flouting or opting out of a maxim, where the speaker invites the listener to infer meaning from context rather than explicit assertion.

Empirical studies in the late 1970s and 1980s further advanced the field by proposing classification systems for hedging. Prince, Frader, and Bosk (1982), in their analysis of hospital ward rounds, introduced a taxonomy that distinguished between approximators, which affect propositional content, and shields, which relate to speaker commitment.

Approximators include adaptors and rounders, while shields divide into plausibility and attribution types. Although influential, their framework has been criticized for limited applicability outside clinical contexts (Skelton, 1988).

Hübler (1983) contributed an early systematic account by distinguishing between understatements and hedges, focusing on their pragmatic roles. He maintained a binary classification of propositional versus speaker-proposition hedges, emphasizing how speakers manage uncertainty to improve the acceptability of their statements.

Subsequent work by Salager-Meyer (1994) and Hyland (1996, 1998) expanded the field by offering more refined taxonomies. Salager-Meyer's analysis of medical discourse emphasized functions such as precision enhancement and criticism mitigation. While drawing on Prince et al.'s categories, she introduced new distinctions, including *author's personal doubt* and *compound hedging*. Hyland (1996, 1998) proposed a framework that distinguished between content-oriented hedges, which target propositions, and reader-oriented hedges, which address the relationship between writer and audience. Although Hyland's model has faced criticism for its complex and sometimes ambiguous subcategories (Diewald, 2006; Kaltenböck et al., 2010), it helped establish hedging as a socially interactive device grounded in pragmatics.

Since the 1980s, hedging research has expanded across genres and languages. Genre-specific investigations, such as those by Salager-Meyer (1994) and Hyland (1996, 1998), have examined hedging in scientific discourse, while contrastive studies have compared usage across languages and cultures (Markkanen & Schröder, 1997). Cross-linguistic work by Kärkkäinen (1990) and Kranich (2011) has revealed both universal patterns and language-specific variation. However, most of these studies have focused on written texts, particularly those produced by non-native speakers (NNSs). As a result, relatively little is known about how NNSs use hedging—especially adverbial hedges—in spoken academic interaction, where real-time language processing places additional demands on pragmatic competence.

Although contrastive research has highlighted important differences in hedging across cultures and language backgrounds (e.g., Markkanen & Schröder, 1997; Kärkkäinen, 1990; Kranich, 2011), few studies have explored hedging in spoken academic discourse involving

both NSs and NNSs. Comparative analyses in this domain are especially valuable for revealing how pragmatic and linguistic competence interact with contextual and cultural expectations. By examining similarities and differences in hedging strategies across speaker groups, researchers can identify shared tendencies as well as language-specific norms. These findings can also inform language pedagogy by highlighting gaps in pragmatic development and offering models of effective interaction for L2 learners. The present study adopts a comparative approach to investigate how Turkish EFL speakers and native English speakers use adverbial hedges in spoken academic contexts. In doing so, it aims to contribute to both theoretical understanding and applied language instruction.

In the Turkish context, research on hedging among EFL learners has focused primarily on written academic discourse. Studies have shown that Turkish writers use hedging to express politeness, soften claims, and conform to academic norms (Çiftçi, 2016; Uysal, 2010). Compared to NSs, Turkish learners tend to use fewer and less varied hedging devices, relying heavily on modal verbs and adverbials (Uysal, 2010). These patterns reflect broader cultural communication norms that value indirectness and deference (Çiftçi, 2016). However, studies examining hedging—especially adverbial hedging—in spoken academic contexts remain limited (Algı, 2012).

Despite extensive research on written academic hedging, especially in texts produced by NNSs, studies of hedging in spoken academic interaction are comparatively scarce. In spoken contexts, the immediacy of communication, the need for spontaneous relational management, and the absence of revision opportunities make pragmatic strategies such as adverbial hedging particularly important. Yet little is known about how Turkish EFL learners use these devices to express tentativeness, manage interpersonal relationships, and negotiate meaning in real-time academic discourse. Addressing this gap is essential for understanding the pragmatic challenges faced by NNSs and for informing instructional practices aimed at improving spoken interaction skills. This study, therefore, investigates the use and pragmatic functions of adverbial hedging in spoken academic English by Turkish EFL speakers and native English speakers.

1.2 Statement of the Problem

Adverbial hedges play a critical role in managing stance, signaling uncertainty, and facilitating interpersonal alignment in spoken academic discourse. Despite their communicative importance, limited research has examined how non-native English speakers—particularly Turkish EFL professionals—use adverbial hedging strategies in real-time academic interaction. Prior studies have concentrated primarily on written texts, leaving a notable gap regarding the pragmatic functions and usage patterns of adverbial hedges (e.g., *probably*, *maybe*, *perhaps*) in spoken contexts.

While hedging in academic writing has been extensively studied, spoken academic discourse has received comparatively less attention. In writing, hedging helps authors balance certainty with caution and maintain interpersonal rapport. Decades of research have established its dual function in protecting face and conveying epistemic stance (Hyland, 1998b; Salager-Meyer, 1994). However, most studies have focused on genres such as research articles and theses, rather than speech-based academic genres.

Spoken academic communication introduces challenges that differ significantly from those in writing. Real-time interaction requires speakers to adapt their language spontaneously to manage politeness, audience expectations, and degrees of certainty, all without the opportunity for revision. Genres like lectures, conference presentations, and, more recently, academic webinars require a significant level of practical adaptability. Webinars, which gained prominence during the COVID-19 pandemic and have since become a standard mode of academic exchange (Rapanta et al., 2020; Bond, 2020), combine formal monologue with interactive dialogue. This hybrid format presents a compelling site for examining hedging practices in contemporary academic English. Yet studies specifically investigating hedging in webinars remain limited.

Another shortcoming in existing research concerns the participant profiles. Many studies attribute NNSs hedging behavior to grammatical or lexical limitations (Hinkel, 1997), overlooking highly proficient NNSs speakers whose linguistic competence allows a clearer view of pragmatic strategies. Investigating Turkish EFL professionals—language experts

with advanced command of English—helps distinguish between hedging driven by linguistic limitations and that shaped by culturally embedded pragmatic norms.

Methodological issues also affect the depth of current hedging research. Although mixed-methods designs combining frequency counts and discourse analysis are common, few studies explicitly adopt a corpus pragmatics framework. Corpus pragmatics integrates quantitative patterns from corpus linguistics with the context-sensitive interpretation of pragmatics (Aijmer & Rühlemann, 2015; Jucker, 2009). This dual perspective enables researchers to examine both surface-level frequencies ("*vertical reading*") and the contextual meanings of language use ("*horizontal reading*"). Applying this approach reveals not only which adverbials (e.g., *probably*, *perhaps*, *generally*) are used, but how their functions vary across interactional contexts (Aijmer, 2002; O’Keeffe & McCarthy, 2010). The absence of corpus pragmatics in studies on Turkish EFL discourse has limited the analytical depth of prior work.

In addition, many previous investigations treat hedging as a broad category encompassing diverse linguistic forms, rather than isolating specific subtypes. Focusing exclusively on adverbial hedges allows for greater analytical precision. Adverbials are among the most frequent and pragmatically versatile hedging devices in spoken academic discourse (Hyland, 1998b; Salager-Meyer, 1994), making them particularly suitable for targeted analysis.

Finally, although academic webinars are now a regular part of scholarly communication, their discourse features remain underexplored. As a genre that requires both domain expertise and real-time responsiveness, webinars offer a rich site for analyzing how speakers—especially NNSs—manage uncertainty, negotiate meaning, and adapt to audience needs through hedging.

In summary, five key gaps emerge in the existing literature:

1. Limited research on spoken academic discourse;
2. Lack of focus on highly proficient NNSs speakers;
3. Underuse of corpus pragmatics as an analytical framework;

4. Insufficient attention to adverbial hedges as a distinct category; and
5. The relatively unexplored nature of academic webinars as a discourse genre.

These gaps form the rationale for the present study, which investigates the use and pragmatic functions of adverbial hedges in the spoken academic discourse of highly proficient Turkish EFL speakers. Using a corpus of ELT webinar recordings and applying a corpus pragmatics approach, the study examines the frequency, distribution, and contextual roles of adverbial hedges. It also compares usage patterns between NSs and NNSs to identify whether systematic differences exist. The findings aim to advance our understanding of pragmatic competence in EFL contexts and inform pedagogical strategies for teaching spoken academic communication.

1.3 Overall Aim

Previous research has demonstrated the central role of hedging in academic communication, yet it has largely concentrated on written discourse. Spoken academic discourse, where speakers manage meaning and relationships in real time, remains much less explored. Studies that investigate hedging in spoken contexts are relatively few, and research focusing on NNSs' spoken academic discourse is even more limited. In addition, while some studies combine corpus-based and discourse-analytic methods, few explicitly adopt corpus pragmatics as a systematic framework. The lack of attention to spoken academic genres and non-native speaker performance indicates a need for more targeted research grounded in both corpus linguistics and pragmatics.

This study aims to investigate the use and pragmatic functions of adverbial hedging devices in the spoken academic discourse of NNSs of English, comparing them to those used by NSs. The study addresses the following research questions:

Research Question 1: How do the range and frequency of adverbial hedging devices used by Turkish speakers of English compare to those used by native English speakers in spoken academic discourse?

Research Question 2: Do the pragmatic functions of adverbial hedges used by Turkish speakers of English differ from those used by native speakers of English in spoken academic discourse? If so, how?

By addressing these questions, the study seeks to deepen the understanding of hedging practices in contemporary spoken academic interaction and to offer insights into the pragmatic competence of highly proficient NNSs.

1.4 Significance of the Study

This study addresses several important gaps identified in the existing literature. First, while hedging has been extensively studied in written academic discourse, research on spoken academic discourse remains limited (Hyland, 1998a; Holmes, 1988; Prince, Frader, & Bosk, 1982). Spoken academic communication presents distinct challenges, as speakers must manage meaning dynamically and maintain interpersonal relationships without the opportunity for revision. By investigating hedging in the real-time context of academic webinars, this study contributes to a fuller understanding of how hedging strategies operate in contemporary spoken academic genres.

Second, previous research has seldom focused on the hedging practices of highly proficient NNSs. Most studies either focus on written productions or attribute non-native patterns of hedging to grammatical or lexical deficiencies (Hinkel, 1997). By selecting NNSs who possess advanced grammatical competence and professional expertise, this study isolates pragmatic competence more clearly. It examines how cultural and communicative norms influence hedging behavior when basic linguistic proficiency is not an inhibiting factor.

Third, although corpus-based and discourse-analytic approaches have been widely used, few studies systematically integrate corpus linguistics and pragmatics under the framework of corpus pragmatics (Aijmer & Rühlemann, 2015; Jucker, 2009). This study adopts corpus pragmatics as its guiding methodology, combining vertical analysis (pattern and frequency identification) with horizontal analysis (pragmatic function interpretation). Such an integrated approach enables a more comprehensive understanding of how adverbial hedging

devices function beyond their surface forms, depending on discourse context (Aijmer, 2002; O'Keeffe & McCarthy, 2010).

Fourth, most hedging research has treated hedging devices broadly, analyzing a wide array of forms together. This approach sometimes results in conceptual ambiguity. By concentrating specifically on adverbial hedging devices, this study establishes a clear analytical scope. Adverbials such as *probably*, *perhaps*, and *generally* are among the most frequent and pragmatically flexible forms in spoken academic English (Hyland, 1998a; Salager-Meyer, 1994). Focusing on adverbials allows for a systematic and detailed investigation of their range, frequency, and pragmatic functions.

Finally, academic webinars represent a relatively new and under-researched genre of spoken academic discourse. Their hybrid nature, combining formal presentation and interactive discussion, demands sophisticated pragmatic management from speakers. Investigating hedging within webinars responds to the evolving forms of academic communication and provides insight into how speakers adapt traditional academic norms to new digital environments (Bond, 2020; Rapanta et al., 2020).

1.5 Limitations of the Study

While this study offers important insights into adverbial hedging strategies in spoken academic discourse, several limitations must be acknowledged. First, the analysis is restricted to adverbial hedges. Other forms of hedging, such as modal verbs, epistemic adjectives, or hedging realized through prosodic features, are not systematically examined. Although focusing on adverbials allows for a more targeted and coherent investigation, it necessarily narrows the overall picture of hedging practices.

Second, the corpus consists exclusively of advanced NNSs of English. Although these speakers possess high grammatical proficiency, readers should be cautious in generalizing the findings to NNSs with different levels of fluency or to learners from other linguistic backgrounds. In the same vein, the focus on adverbials excludes other parts of speech commonly used for hedging purposes. Any generalizations about hedging behavior in academic spoken English must therefore take this restricted scope into account.

Third, an inherent limitation in all pragmatic studies is the context-dependent nature of pragmatic functions. The meaning and role of adverbials often shift depending on discourse context. Although a native English-speaking co-rater with a degree in linguistics was involved in the selection and interpretation of hedging devices, and although decisions were based on established pragmatic functions from the literature, some degree of subjectivity remains inevitable.

Fourth, the data come from academic spoken discourse, specifically academic webinars. The communicative conventions of webinars differ from other spoken academic and non-academic settings. Therefore, the findings may not transfer directly to other forms of spoken interaction such as casual conversation, interviews, or classroom dialogue.

Finally, the study is constrained by the limited availability of earlier research on hedging in spoken academic discourse, particularly studies that compare NSs and NNSs. Although form-based comparisons are possible to some extent, as previous studies occasionally group adverbials under lexical categories, pragmatic-function comparisons present more challenges. Earlier research often combines different lexical items under broad functional headings, which reduces opportunities for precise comparison between the pragmatic use of adverbials by NSs and NNSs.

These limitations do not detract from the contribution this study aims to make but provide essential context for interpreting the results with appropriate caution.

1.6 Definition of Key Terms

Hedging: In the context of this study, hedging refers specifically to the use of adverbial expressions that convey tentativeness, reduce the assertiveness of statements, or signal partial speaker commitment to a proposition. These adverbs serve to soften claims, express epistemic uncertainty, and manage interpersonal dynamics in spoken academic discourse (Lakoff, 1972; Hyland, 1998a).

Hedges: Hedges, as defined in this research, are adverbial forms—such as probably, perhaps, usually, and technically—that function pragmatically to qualify statements or mitigate certainty. While hedging can be realized through various linguistic means (e.g., modal verbs,

adjectives, syntactic structures), this study is limited to the analysis of adverbs that perform hedging functions in spoken academic English.

Spoken Academic Discourse: In this study, spoken academic discourse refers specifically to the language used in English Language Teaching (ELT) webinars, where academic content is delivered orally to professional audiences. This type of discourse combines features of formal academic speech—such as expert explanation, topic elaboration, and structured argumentation—with the spontaneous and interactive nature of real-time communication. While spoken academic discourse more broadly includes formats such as lectures, seminars, and conference presentations, the focus here is on webinars as a hybrid genre that blends prepared academic content with on-the-spot audience engagement and instructional delivery.

Native Speakers of English (NS): In this study, native speakers of English are defined as ELT professionals who are native speakers of American English and currently teach English Language Teaching (ELT) at the university level in the United States. They acquired English as their first language and use it as their primary means of communication in both academic and professional contexts.

Non-Native Speakers of English (NNSs): Non-native speakers of English in this study are Turkish ELT professionals whose first language is Turkish and who teach English Language Teaching at the university level in Turkey. Although English is not their native language, all NNSs possess advanced proficiency and regularly use English in academic and instructional settings.

1.7 Conclusion

This chapter has introduced the topic and background of the study, defined the research problem, stated the study's aim and research questions, and explained its significance and limitations. Key terms essential to the analysis have also been defined to ensure conceptual clarity. The next chapter reviews the relevant literature. It traces the development of hedging as a linguistic and pragmatic phenomenon, examines theoretical approaches to pragmatic competence, and surveys previous studies on hedging in both first and second language academic discourse.

This study is organized as follows. Chapter 2 reviews the literature on hedging, emphasizing theoretical developments and previous research on adverbial hedges in academic discourse. Chapter 3 describes the analytical framework and methodology, addressing both form-based and function-based perspectives. Chapter 4 presents the corpus and data collection procedures. Chapter 5 reports the findings: first the patterns of grammatical forms (RQ1), then the distribution of their pragmatic functions (RQ2), without offering interpretation. Chapter 6 discusses these findings in relation to earlier studies, highlighting similarities and differences between native and non-native speakers. Chapter 7 concludes the thesis by summarizing key results, outlining implications, noting limitations, and suggesting directions for future research.

2. LITERATURE REVIEW

2.1 Introduction

Understanding hedging as a discourse strategy requires tracing its conceptual roots across philosophy, science, and linguistics. The concept did not emerge merely as a matter of stylistic choice, but as part of a broader intellectual shift from rigid models of categorization and absolute truth toward more flexible, graded, and context-sensitive approaches to knowledge (Lakoff, 1972). This chapter establishes the theoretical foundation for the thesis by examining hedging and corpus pragmatics within the broader landscape of pragmatic research. It begins by defining hedging and situating it within key developments in semantics and pragmatics, with particular emphasis on its role in spoken academic discourse. The discussion then turns to corpus pragmatics as a methodological and theoretical framework, highlighting how it enables the investigation of hedging in authentic language use. Together, these two strands provide the conceptual basis for exploring how highly proficient NNSs use adverbial hedges in real-time academic interaction.

2.2 The Evolution of Hedging Research

The recognition that language reflects uncertainty and gradience forms the foundation for understanding hedging as a discourse strategy. Hedging involves expressing meaning in ways that allow for imprecision, approximation, or partial commitment—practices that challenge traditional views of language as fixed and absolute. These communicative strategies did not emerge in isolation; rather, they reflect broader intellectual shifts across philosophy, science, and linguistics that transformed how scholars have conceptualized categorization, knowledge, and meaning. To fully understand the theoretical basis of hedging, it is necessary to examine how early models of categorization evolved from rigid, essentialist frameworks toward more flexible, graded, and context-sensitive approaches that allow for variation and speaker stance.

2.2.1 Classical Categorization Theory

Categorization is a foundational cognitive process that enables humans to organize experience by grouping objects, events, and concepts according to shared characteristics.

This process supports both thought and communication, which allows individuals to refer efficiently to complex aspects of the world. Classical Categorization Theory, which dates back to Aristotle's *Categories* (c. 350 BCE), holds that category membership is determined by fixed sets of necessary and sufficient features. Under this model, categories are sharply defined, their members are equally representative, and an item either fully belongs or does not belong to a given category (Smith & Medin, 1981; Lakoff, 1987).

This binary and essentialist model of categorization influenced early developments in logic, mathematics, and science, reinforcing the view that knowledge should be precise, measurable, and universally valid (Kuhn, 1962). It also shaped early linguistic theory by promoting the idea that language should correspond to a stable and unambiguous external reality. In this framework, expressions that suggested approximation, partial belonging, or context sensitivity were regarded as vague or imprecise deviations from ideal use (Smith & Medin, 1981; Lakoff, 1987).

The relevance of classical categorization theory to the study of hedging lies in the contrast between these rigid models and the flexible nature of natural language. Hedging functions as a linguistic strategy precisely because many concepts do not conform neatly to classical definitions. Instead, they occupy intermediate or peripheral positions within a category. Phrases such as *kind of*, *sort of*, or *somewhat* reflect this indeterminacy by signaling that a statement holds only partially or that a referent does not entirely fulfill the prototypical features of a category (Lakoff, 1973; 1987). By softening categorical assertions, hedging enables speakers to accommodate variation, uncertainty, and context—elements not accounted for by classical categorization theory. As such, the limitations of this theory help explain the communicative need for hedging in both everyday and academic discourse.

2.2.2 Heisenberg's Uncertainty Principle

This long-held belief in stable, sharply defined categories came under serious challenge in the early twentieth century. Werner Heisenberg's Uncertainty Principle (1927) demonstrated that certain properties of physical entities—specifically, position and momentum—cannot both be measured with complete exactness simultaneously. Greater precision in determining one property inevitably leads to less precision in determining the other. This limitation does

not arise from technological deficiencies but reflects an inherent feature of nature itself. It was evident that uncertainty is not an error to be corrected but a fundamental aspect within reality. So, the classical view that all concepts could be defined by fixed and measurable properties could no longer be applied universally. Heisenberg's findings influenced not only physics but also developments in logic, mathematics, and linguistics, and assumptions about clear category membership and absolute meaning came under increasing criticism. Human understanding could no longer fix uncertainty but had to recognize it as a fundamental condition of knowledge in order to represent reality more accurately.

2.2.3 Wittgenstein and family resemblance

Another important challenge to rigid categorization was brought up in philosophy through Ludwig Wittgenstein's concept of "*family resemblances*" (1953). Wittgenstein argued that many everyday concepts cannot be defined by a single set of *necessary* and *sufficient* features. Instead, category membership is based on a set of overlapping similarities, where no one feature is common to all instances. For example, the category of "*games*" includes board games, card games, ball games, and video games, but there is no single characteristic shared by every type. Some games involve competition, while others do not; some require skill, while others rely on chance. What connects them is a series of *resemblances* across different examples, not a strict definition. This understanding supported the growing realization that human categorization, like language, is based on flexible patterns rather than fixed boundaries.

2.2.4 Fuzzy Set Theory and Zadeh (1965)

By the mid-20th century, scholars sought new models to illustrate the uncertainty and gradience inherent in human reasoning. One of the most influential contributions to this effort was Lotfi Zadeh's (1965) theory of Fuzzy Sets, which provided a formal mathematical framework for describing categories with indistinct boundaries. Zadeh argued that many everyday concepts—such as *truth*, *tall*, or *young*—cannot be captured by rigid definitions. Instead, they exist along a continuum of membership, where items may belong to a category to varying degrees rather than in an all-or-nothing manner. A fuzzy set, in his terms, is “a

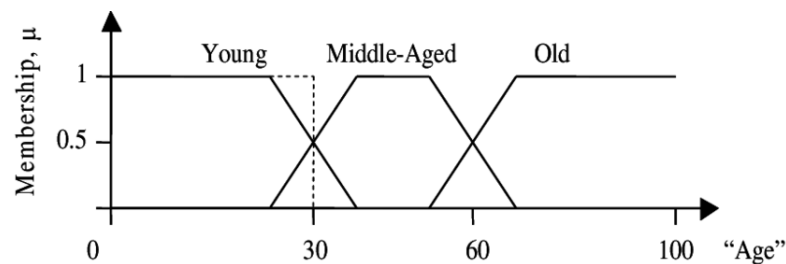
class with unsharp boundaries in which the transition from membership to non-membership is gradual rather than abrupt” (Zadeh, 1965, p. 339).

This conceptual shift is directly relevant to the study of hedging, as hedging functions by softening categorical assertions and signaling partial or uncertain membership within conceptual sets. For example, in natural discourse, describing someone as *somewhat tall* or *kind of experienced* reflects a fuzzy categorization process, in which the speaker deliberately avoids rigid classification. This aligns closely with Zadeh’s approach, which models such expressions using degrees of membership between 0 and 1.

A practical illustration of fuzzy set theory appears in Figure 2.1, which shows overlapping membership functions for the age-based categories *young*, *middle-aged*, and *old*. According to this model, a 45-year-old may have a high degree of membership in the *middle-aged* category, while a 40- or 50-year-old may have partial membership. This overlapping, non-binary structure mirrors how language users rely on hedging to express intermediate category positions in statements like *He’s still kind of young* or *She’s almost middle-aged*.

Figure 2.1

Overlapping Membership Functions for Age Categories in Fuzzy Set Theory



Zadeh’s framework further clarified the linguistic mechanisms of hedging by identifying specific linguistic hedges—modifiers like *very*, *slightly*, *more or less*, and *essentially*—that alter the intensity or scope of category membership. He categorized these into Type I hedges, which adjust the degree of set membership (e.g., *very tall*), and Type II hedges, which affect

the underlying structure or interpretation of a category (e.g., *technically correct*). This distinction parallels pragmatic understandings of hedging as a strategy that adjusts the speaker's level of commitment to a proposition or claim.

Zadeh's theory was groundbreaking in that it treated gradience not as a communicative failure, but as a central feature of human reasoning and language. His model provided a formal explanation for why speakers hedge—to reflect context-sensitive judgments, express degrees of certainty, and maintain interpersonal alignment. In this way, fuzzy set theory directly supports the view of hedging as a pragmatic tool for managing meaning in dynamic, real-world situations. Beyond linguistics, fuzzy logic influenced developments in artificial intelligence and natural language processing, especially in systems that must interpret imprecise or context-dependent language. In spoken academic discourse, hedging fulfills a parallel role: it enables speakers to avoid overgeneralization, present arguments more cautiously, and navigate social or epistemic risks.

In sum, Zadeh's (1965) theory of fuzzy sets offers not only a conceptual bridge between mathematical reasoning and natural language use but also a robust foundation for understanding how and why hedging operates in communication. By modeling category membership as a matter of degree, fuzzy set theory legitimizes hedging as an essential and systematic strategy—one that reflects the inherently variable and interpretive nature of both meaning and knowledge.

2.2.5 Prototype Theory

Later in the twentieth century, Eleanor Rosch's work in cognitive psychology played a pivotal role in reshaping theories of categorization. Drawing on experimental studies conducted in the early 1970s, Rosch (1973, 1975) introduced Prototype Theory, which fundamentally challenged the classical model of category structure. Unlike the traditional view that categories are defined by a strict set of necessary and sufficient features (e.g., Katz & Fodor, 1963), Rosch proposed that categories are instead organized around their most representative or "*prototypical*" members. Her research demonstrated that category membership is not binary but graded, with some members perceived as more central or typical than others depending on their similarity to the prototype (Rosch, 1975). Rosch's

findings highlighted the flexible and context-dependent nature of human cognition. Her research provided strong empirical support for the view that linguistic and cognitive categories are not defined by strict boundaries but operate along fuzzy and overlapping continua. This understanding contributed to a broader shift in cognitive science and semantics, where categories came to be seen as fluid constructs shaped by usage, perception, and context (Lakoff, 1987; Taylor, 2003).

2.2.6 Graded category membership

Lakoff (1972) used the concept of “*birdiness*” to explain how category membership varies in typicality. A robin is commonly viewed as a clear example of a bird because it flies, sings, builds nests in trees, and lives in familiar bird environments. A penguin, although biologically classified as a bird, lacks these features and is therefore seen as less typical. Speakers may describe a penguin as *sort of a bird* to reflect this partial fit.

This approach helps explain why some classifications are avoided. For example, a bat is not described as *sort of a bird*, even though it flies, because it does not share key features such as feathers or egg-laying. These examples show that category judgments often depend on how closely something matches a prototype, rather than on fixed definitions. Expressions like *sort of* and *kind of* reflect this way of thinking and are used to adjust claims when an item only partially fits a category.

This shift toward graded categorization laid the foundation for later research on hedging. As views on meaning and classification changed, researchers began to examine how speakers use hedging devices to manage imprecision, soften claims, and adjust interpersonal stance. The next section reviews how hedging has been defined and analyzed in linguistic studies, with attention to its core functions in spoken and written discourse.

2.3 Definition of Hedging

Hedging is commonly defined as a discourse strategy that reduces the strength of statements in both spoken and written language (Kaltenböck et al., 2010). As a discourse strategy, it involves a range of linguistic choices used to achieve communicative aims. These include

lexical and syntactic features such as passive constructions, question tags, and conditional clauses, as well as non-verbal cues like intonation, pitch, and facial expressions.

While hedging can occur across many linguistic levels and modalities, this study focuses on a specific subset: adverbial hedges. For the purposes of this study, hedging refers specifically to adverbs that soften the degree of speaker commitment, signal uncertainty, and support polite interaction in academic discourse. Adverbs such as *perhaps*, *possibly*, and *probably* allow speakers to adjust the force of their claims while maintaining an appropriate interpersonal tone during academic talk.

Most studies consider hedging a strategy that weakens the force or truth value of an utterance, in line with Kaltenböck et al. (2010). There is broad consensus among researchers that hedging involves features such as non-prototypicality, uncertainty, doubt, and caution directed toward both the proposition and the audience. However, definitions differ slightly in wording, with hedging typically characterized as a communicative strategy, a form of behavior, or the linguistic means through which it is conveyed. This variation is evident in Table 2.1, which presents a range of theoretical and empirical definitions across spoken and written discourse and shows that hedging is multifunctional and sensitive to context.

Some researchers define hedging as a rhetorical or pragmatic strategy that reduces a speaker's level of commitment to a proposition (Fraser, 2010; Hyland, 1998a). Others focus on its interpersonal role in managing politeness and minimizing imposition (Brown & Levinson, 1987). Corpus-based studies have broadened these views by examining hedging as a multifunctional feature of both spoken and written discourse (Salager-Meyer, 1994; Farr & O'Keeffe, 2002). These differing definitions reflect shifts in how hedging has been studied across various methodological approaches and discourse contexts.

As Adamczyk (2015) notes, hedging remains difficult to define consistently due to overlapping concepts such as mitigation, vagueness, modality, and pragmatic markers. This complexity stems from the gradual expansion of the term since the late 1960s and from the range of frameworks through which it has been analyzed. The following sections examine these conceptual overlaps and classification challenges in more detail.

Table 2.1*Definitions of Hedging in Linguistic Research*

Theme	Definition	Key References	Type of Study / Mode
Pragmatic & Interactional Strategy	Hedging is used to manage interpersonal dynamics, reduce imposition, and soften the impact of statements.	Brown & Levinson (1987); Kaltenböck et al. (2010); Gries & David (2007); Tchizmarova (2005)	Theoretical, discourse-pragmatic / Spoken, Both
Epistemic Uncertainty & Tentativeness	Hedging signals partial commitment or uncertainty about the truth of a proposition or claim.	Crompton (1997); Hyland (1996, 1998); Fraser (2010); Prokofieva & Hirschberg (2014)	Theoretical, corpus-based / Written, Spoken
Rhetorical & Discourse Strategy	A strategy to present claims cautiously, maintain politeness, and avoid overgeneralization in academic discourse.	Myers (1989); Salager-Meyer (1994); Sutherland (2016)	Corpus-based, pragmatic / Written
Linguistic & Structural Function	Linguistic elements (e.g., approximators, shields) that adjust precision or strength of propositions.	Lakoff (1973); Prince et al. (1982); Schröder & Zimmer (1997)	Theoretical, semantic / General, Spoken
Empirical & Corpus-Based Perspectives	Observed strategies in real discourse that reflect hedging behavior in academic and professional settings.	Farr & O’Keeffe (2002); Knight et al. (2013); Hyland (1996, 1998); Gries & David (2007)	Corpus-based / Spoken, Written

2.4 Previous Research on Hedging

The study of hedging is relatively recent and spans approximately fifty years of academic inquiry. Despite its brief history, the growing body of work on the topic has led to the publication of several review articles, including those by Clemen (1997), Schröder and Zimmer (1997), and Fraser (2010). The concept of "*hedge*" was first formally introduced by Lakoff as a category of words that convey implicit fuzziness or add vagueness to statements (Lakoff, 1972). However, the foundational ideas related to hedging had already been addressed earlier (see 2.2.4), as Lotfi Aliasker Zadeh (1965) and Uriel Weinreich (1966) explored similar concepts during the mid-1960s.

2.4.1 Lakoff (1972) and the origins of hedging

Although Lakoff (1972) mainly focused on expressions that adjust the category boundaries of a concept (Apróné, 2011), he acknowledged that the meaning of hedges depends on context and that they can soften requests or alter claims (Lakoff, 1972, p. 484), even though he did not pursue this line of inquiry further. Over time, research on hedging shifted its emphasis from logico-semantic aspects, associated with *langue*, the abstract system of language rules, to pragmatic aspects, related to *parole*, the use of language in specific contexts (Taavitsainen & Jucker, 2015). This transition moved attention away from theoretical structures and toward the practical impact of hedges in communication, particularly their influence on speech acts such as requests or promises.

2.4.2 Fraser (1975) and Hedged Performatives

Building on this shift toward pragmatics, researchers distinguished between different types of hedging. One important distinction is between category membership hedging and speech act hedging. Fraser (1975) proposed hedged performatives, where performative verbs introduced by modal verbs result in weakened illocutionary force, as in "*I must advise you to leave*" (Fraser, 1975). He differentiated between strong performatives, where the act is explicitly conveyed by the performative verb, and weak performatives, where the performative interpretation is less certain. This shift from propositional to speech act hedging predicted the division of hedging into two main types, a framework that shapes descriptions of hedging today. Although Lakoff (1972) originally included strengthening elements, known as boosters, within hedging, they have since been treated separately (Fraser, 2010). Nevertheless, boosters remain important in modality and stance research, where forms that amplify utterances are commonly discussed.

2.5 Frameworks for Hedging Analysis

By the late 1970s, hedging was firmly established in pragmatic research (Kaltenböck et al., 2010). As the field expanded, scholars explored its functions across diverse communicative contexts. In the 1980s, researchers focused on categorizing hedges in response to the complexity observed in real-world language. These efforts aimed to develop classifications

grounded in empirical data rather than theory. Prince, Frader, and Bosk (1982) offered a key model through their analysis of medical discourse, in which they explained how professionals manage uncertainty and soften assertions with patients, while Salager-Meyer (1990) examined scientific writing and showed how authors temper claims to align with disciplinary norms.

2.5.1 Prince, Frader, and Bosk (1982)

Prince, Frader, and Bosk (1982) proposed a foundational classification of hedging strategies based on a corpus of recorded hospital morning rounds from 1978 to 1979. Drawing on Lakoff's (1972) definition, they identified between 150 and 450 hedges per hour of speech and distinguished two types of hedges based on their function. Hedges that modify the propositional content were labeled *approximators*, while those that affect the speaker's commitment to the proposition were labeled *shields*.

This distinction reflects two separate dimensions of meaning. Approximators relate to semantics by adjusting category membership or precision within the proposition. Shields concern pragmatics by signaling the speaker's level of commitment or certainty. The authors linked this division to the Gricean distinction between truth-conditional and non-truth-conditional meaning. Their framework laid the groundwork for later studies and remains central to current discussions of hedging as a multifunctional discourse feature.

Building on this classification, approximators are subdivided into adaptors and rounders. Adaptors relate to class membership and lexical options available to speakers. Prince et al. (1982, p. 9) explained that when describing symptoms, speakers select from prototypical terms. If symptoms don't fit these prototypes, the speaker might use a non-prototypical term, an irrelevant term, coin a new term, pick the nearest available term, or choose the nearest suitable term while indicating through hedging that the match isn't fully precise. Hedges marking such adjustments are called adaptors. Rounders are hedges that indicate the speaker doesn't know, or consider it important to specify, the precise term. Fraser (2010, p. 19) illustrates rounders with examples such as "*The baby's blood pressure was something between 40 and 50,*" where the exact value is left unspecified. Both adaptor and rounder

hedges convey that "the actual situation is close to but not identical to the prototypical situation" (Prince et al., 1982).

Shields constitute the second major category in Prince et al.'s (1982) classification. Shields differ from approximators as they do not alter propositional content but adjust the speaker's commitment. This category includes plausibility shields and attribution shields. Plausibility shields are hedging devices that let speakers convey varying levels of doubt about the belief communicated. Prince et al. (1982, pp. 85–86) explain that plausibility shields reduce assertion force by signaling that claims appear reasonable but lack full certainty. Words like *probably*, *possibly*, and *apparently* serve as plausibility shields by introducing doubt and lessening the risk of being proven incorrect. Attribution shields shift responsibility for information to external sources. Prince et al. (1982, p. 88) and Hyland (1998a, p. 5) describe speaker-oriented hedging expressions as lexical choices that lessen personal commitment, mark personal stance, or express evaluative distance without altering propositional accuracy. In "*I think his feet were blue*," the expression *I think* functions as a plausibility shield, conveying speaker epistemic uncertainty (Prince et al., 1982).

Although Prince et al.'s (1982) classification system was based on spoken physician discourse, it has maintained broad influence beyond its original context. Many studies continue to adopt the framework directly, such as Prokofieva and Hirschberg (2014), while others have used it to develop new classifications for different discourse types, as seen in Salager-Meyer's (1994) study of written scientific texts. Its continued relevance may be explained by Prince et al.'s (1982) model being one of few based on authentic spoken data, providing an empirical foundation for studying hedging strategies. However, not all scholars accept the practical applicability of Prince et al.'s (1982) framework. Skelton (1988) contends that their subdivisions work theoretically but not in actual discourse. He notes that while the categories seem clear in principle, they often overlap or prove difficult to distinguish in real language use, limiting their practical usefulness.

2.5.2 Hübler (1983)

Following these early critiques, attention turned to broader theoretical treatments of hedging. Hübler (1983) produced the first monograph on hedges. His approach posits that assertive

sentences function as hypotheses about reality, which may be negated if inaccurate (Hübler, 1983). In this framework, speakers use hedging devices to reduce the risk of their propositions being rejected by listeners. Such devices lessen the speaker's liability by decreasing the conditions necessary for acceptance (Hübler, 1983). Hübler distinguishes between understatements and hedging devices: understatements modify the phrastic component, or propositional content of an utterance, whereas hedges affect the neustic, which represents the speaker's stance toward the proposition (Hübler, 1983). He defines understatements as a metalinguistic category grouping verbal expressions based on recognizable patterns of linguistic behavior (Hübler, 1983). While distinguishing between hedging and understatement, he also applies "*understatements*" broadly as a term encompassing both phenomena.

Building on earlier distinctions, Hübler (1983) argues that hedging and understatement act as content-oriented strategies rather than stylistic choices. These strategies operate within the proposition to enhance utterance acceptability and raise hearer approval probability. Hübler emphasizes the hearer's role, integrating audience reception into his conceptualization of hedging. He maintains a binary division between propositional hedging, which modifies proposition content, and hedging that mediates between speaker and proposition. This distinction aligns with earlier frameworks like Prince et al. (1982) and continues to inform later hedging discussions.

2.5.3 Brown and Levinson (1987)

Brown and Levinson (1987) extended earlier discussions of hedging by linking it to politeness theory and its role in managing the social force of speech acts. While Lakoff (1972) had focused on hedging at the propositional level and Fraser (1975) on performative verbs, Hübler (1983) broadened the scope by examining hedging as a way to manage speaker commitment and hearer ratification. Brown and Levinson moved beyond these approaches by framing hedging within the broader context of interpersonal relationships, grounding their analysis in the concept of *face*.

The notion of face, introduced by Hu in the 1940s and popularized through Goffman's (1955) work, refers to social value claimed during interaction. Goffman emphasized that face is

negotiated jointly, and failing to do so threatens interaction. Brown and Levinson adopted this concept and defined two dimensions: positive face, the desire for approval and recognition, and negative face, the desire to act freely without imposition. Speech acts that conflict with these wants are considered face-threatening. To manage such threats, speakers use redressive strategies. Hedging plays a central role in protecting negative face by softening assertions and reducing imposition on the hearer. Brown and Levinson define hedges as linguistic expressions conveying partial commitment or qualified truth, which helps speakers avoid appearing overly assertive. Performative hedges enable speakers to fulfill communicative intentions while minimizing social pressure.

They acknowledge hedges can reinforce propositions but focus on hedging to preserve politeness and cooperation. Many speech acts—like promises or suggestions—assume unmet obligations and can threaten interaction. Hedges moderate the speaker's commitment, reducing such assumptions' impact. Unlike Lakoff's limited hedging forms, Brown and Levinson see hedging as a function with various forms, depending on context. Despite their model's influence, it has critiques. Scholars question cultural assumptions, particularly its individualistic bias. Beeching (2016) and Yeung (1997) note the model reflects Western values, possibly overlooking collective orientations in other cultures. Spencer-Oatey (2002) argues their face definition omits social and group identity dimensions. Eelen (2001) criticizes the theory for favoring the speaker's perspective, neglecting the hearer's role in politeness.

These critiques encourage broader views of hedging as serving both negative and positive face needs. Later studies, like Holmes (1984) and Hyland (1998a), show hedging also supports solidarity, encourages involvement, and maintains cooperation in academic and professional settings. This expanded view positions hedging as a flexible tool for managing both content and interpersonal communication aspects.

2.5.4 Grice (1975) and the Cooperative Principle

Brown and Levinson's (1987) politeness theory played a major role in connecting hedging to pragmatics. However, Grice's (1975) theory of communication offered an equally important foundation, especially through his ideas about implicature and the cooperative

principle. Grice introduced a key distinction between what a speaker states directly and what the speaker intends to communicate. This distinction helped shift the view of hedging away from surface-level grammar or word choice. It presented hedging as a deliberate strategy for managing indirectness, caution, and social appropriateness in interaction.

Grice observed that communication often relies on meaning beyond literal interpretation of words. When a patient says, *"I sleep all the time, Doctor,"* the intended meaning implies sleeping more than normal (Archer, Aijmer, & Wichmann, 2012). This gap between sentence meaning and speaker meaning, discussed by Jaszczolt (2012), shows how listeners must infer meaning through context. These inferencing mechanisms are central to hedging, which invites interpretation rather than delivering definitive information. To explain how communication remains coherent when speakers deviate from literal expectations, Grice proposed the cooperative principle, with four conversational maxims: quantity (be informative), quality (be truthful), relation (be relevant), and manner (be clear) (Grice, 1975). Hedges function by modifying adherence to these maxims. For instance, *"As far as I know, there are three cookies left in the jar"* hedges commitment to quantity and quality maxims, signaling uncertainty and limiting responsibility for the statement's truth.

Grice further explained that speakers may depart from these maxims in three ways: flouting, opting out, or violating. Flouting occurs when a speaker intentionally appears to break a maxim to trigger an implicature; opting out involves an explicit refusal to engage (often for social or ethical reasons); and violating a maxim refers to misleading without overt cues (Grice, 1975). In this framework, hedging aligns most closely with flouting and partial opting out—the speaker does not fully reject a maxim but signals a reduced commitment, and leaves room for the listener to infer caution, doubt, or social sensitivity.

Thus, Grice's theory is highly relevant to hedging because it clarifies how meaning can be intentionally softened or shaped through indirect language. Hedging operates within the cooperative principle, as it enables speakers to signal tentativeness, politeness, or epistemic restraint without entirely abandoning communicative cooperation.

This theoretical grounding confirms that hedging is inherently pragmatic in nature, and relies on shared inferencing strategies and social expectations rather than formal logic alone.

2.5.5 Hyland's (1998a) model of scientific hedging

Earlier models, such as Prince et al.'s (1982) taxonomy, primarily addressed hedging in terms of the speaker's or writer's intention and offered limited attention to how hedges shape the relationship between producer and audience. Hyland (1996a; 1998a) addresses this gap by redefining hedging in scientific discourse as both an epistemic and interpersonal strategy. His model emphasizes that hedges do not simply express uncertainty but also manage how knowledge claims are presented to readers.

Hyland (1998a) argues that hedging forms are context-sensitive and serve multiple purposes. He adopts Zadeh's (1972) fuzzy set theory to explain why hedging cannot be confined to fixed categories. Instead, hedges form clusters around prototypes, with blurry and overlapping boundaries. Based on this framework, Hyland outlines pragmatic functions for hedges, including reducing claim force, softening modality, expressing deference, and indicating uncertainty. Hedging forms overlap with politeness strategies and expressions of typicality, complicating their classification. Hyland (1998a) introduces a functional taxonomy dividing hedges into content-oriented and reader-oriented categories. Content-oriented hedges manage the relationship between proposition and reality, without rejecting statement truth. Within this type, he identifies two subcategories. Accuracy-oriented hedges improve precision by acknowledging limits in representation or measurement. For example, "*The results appear to deviate slightly from theoretical expectations*" qualifies the claim without fully discrediting it (Hyland, 1998b, p. 161). Attribute hedges refer to differences between theoretical models and observed data, while reliability hedges mark subjective doubt or incomplete evidence. An example of the latter is "*It is likely that the observed trend will continue under similar conditions*" (Hyland, 1998, p. 162).

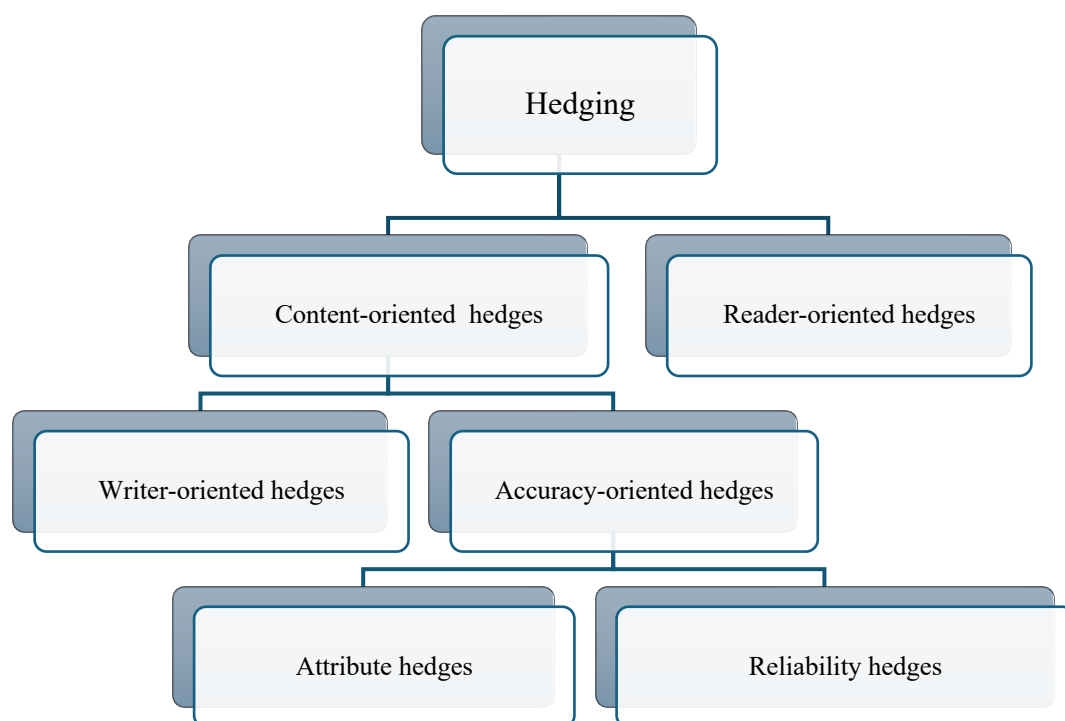
The second major type, *writer-oriented hedges*, allows authors to distance themselves from their claims. These hedges limit personal accountability and reduce the speaker's visible commitment to a statement. Expressions such as "*It may be argued that...*" or "*It appears that...*" enable writers to frame claims cautiously, without direct endorsement. While both writer-oriented and accuracy-oriented hedges affect the presentation of information, the former centers on rhetorical stance, whereas the latter concerns factual precision.

Hyland (1998b) also includes *reader-oriented hedges*, which are designed to engage the audience and invite interpretation. Asserting claims without qualification may alienate the reader by removing space for dialogue. Reader-oriented hedges respond to this by framing statements as provisional. This encourages active reader involvement and reflects an awareness of disciplinary expectations. Hyland identifies a range of hedging forms in this category, including modal verbs (e.g., *might*, *could*), lexical verbs (e.g., *appear*), epistemic adjectives (e.g., *possible*), adverbs (e.g., *probably*), and nouns (e.g., *possibility*). Syntactic structures such as conditionals, passives, concessives, tense variation, and source attributions also serve hedging functions.

The structure of Hyland's model is summarized in Figure 2.2, which outlines the hierarchical relationship between the main hedge types and their subcategories.

Figure 2.2

Hyland's (1998) Model of Scientific Hedging



To complement the diagram, Table 2.2 presents the linguistic forms and rhetorical functions associated with each category of hedge. This table classifies hedges across three main orientations—content-oriented (accuracy and speaker-oriented) and hearer-oriented—and further breaks them into *attribute* and *reliability* types.

Table 2.2

Classification of Hedging Functions and Devices

Content Oriented		Hearer-Oriented
Accuracy-Oriented	Speaker-Oriented	
Hedges propositional content	Hedges speaker commitment	Hedges assertiveness
Attribute type	Epistemic lexical verbs	Epistemic lexical verbs
Precision Adverbs	Judgmental	Judgmental
Content disjuncts	Evidential	deductive
Style disjuncts	Impersonal expressions	Personal attribution
downtoners	Passive voice	Personal reference to
Reliability type	Abstract rhetors	Methods
Epistemic lexical verbs	“empty” subjects	Model
Modal verbs	Modal verbs	Offer alternatives:
Epistemic adjectives	Thematic epistemic device	conditionals
Epistemic nouns	Attribution to literature	indefinite articles
Content disjunct adverbs	Impersonal reference to	Involve reader
Limited knowledge	Method	direct questions
	Model	reference to testability
	Experimental conditions	Assumption of shared goals
		Hypothetical, e.g. would

(Adapted from Hyland, 1998a:186).

Although originally developed for written academic texts, Hyland's framework is also applicable to spoken discourse, where similar strategies govern speaker commitment, proposition framing, and audience interaction. In later work (Hyland, 1996b; 1998a), he applies this model to research article results, identifying content- and reader-oriented hedges as central to the negotiation of knowledge. Reader-oriented hedges are especially important for building rapport and aligning with disciplinary norms. Research by Hyland (1994), Meyer (1997), Myers (1989), and Salager-Meyer (1994) supports this view, demonstrating that hedges contribute to the social acceptability of academic claims. Salager-Meyer (1997) further shows that hedges minimize potential threats in both written and spoken exchanges. Despite its influence, Hyland's model has attracted criticism. Diewald (2006, pp. 303–305) questions the clarity of the subcategories, suggesting that the overlap between functions may complicate classification. Kaltenböck et al. (2010) add that interpersonal effects are difficult to quantify, which may limit replicability. Hyland himself acknowledges that distinguishing between epistemic caution and personal detachment is not always possible. Still, he argues that analysis of co-text and discourse goals often allows for consistent interpretation.

Hyland's framework moves beyond earlier models by incorporating reader-oriented functions. Rather than viewing hedging solely as a means to express uncertainty, he treats it as a resource for shaping academic identity and managing relationships between writers and readers. This broader perspective aligns hedging with the interpersonal demands of scholarly communication, both written and spoken.

2.5.6 Salager-Meyer (1994) and medical English

Attempts to classify hedging strategies across various text types continued well into the 1990s, and several of the resulting taxonomies remain influential. Salager-Meyer (1994) studied hedging strategies in medical written discourse, focusing on research articles and case reports, and developed a classificatory framework based partly on the model proposed by Prince et al. (1982). In her article "*Hedges and Textual Communicative Function in Medical English Written Discourse*," Salager-Meyer analyzes fifteen medical texts to identify and

categorize hedging devices both formally and functionally. She proposes five main categories, referred to as "*modulation devices*," that reflect how scientific writers express caution and tentativeness. The first category, *shields*, includes modal verbs and epistemic expressions such as *may*, *might*, *appear*, and *suggest*, which qualify certainty and protect claims (Salager-Meyer, 1994, p. 152). The second, *approximators*, consists of degree, quantity, frequency, or time modifiers such as *approximately*, *somewhat*, and *often*, which soften the precision of statements (Salager-Meyer, 1994, p. 153). The third category, *authorial expressions of doubt or stance*, includes first-person expressions like *I believe* or *to our knowledge*, which enable writers to acknowledge subjectivity and limit personal commitment (Salager-Meyer, 1994, p. 153). The fourth, *emotionally-charged intensifiers*, involves evaluative or attitudinal expressions such as *extremely difficult* or *surprisingly*, which project caution while signaling emotional or evaluative stance (Salager-Meyer, 1994, p. 154). The fifth category, *compound hedges*, refers to sequences of two or more hedging elements in a single construction, as seen in examples like *it may suggest that* or *it would seem reasonable to assume*.

Salager-Meyer (1994) finds that shields, approximators, and compound hedges dominate scientific discourse and collectively account for over 90% of hedging instances. She also notes that hedging strategies vary according to the rhetorical purpose of different sections of research: shields and compound hedges are especially frequent in discussions, while approximators are common in methods and results. Beyond the medical corpus, Salager-Meyer's framework has been widely adopted in English for Academic Purposes pedagogy, learner corpus research, and intercultural discourse studies. Her taxonomy continues to serve as a practical tool for analyzing how writers across disciplines and languages manage epistemic caution and interpersonal relations in academic communication.

2.6 Expanding the Frameworks: Beyond Binary Classifications

Most classificatory frameworks for hedging rely on a binary distinction: propositional hedging, concerning statement content, and hedging on speaker–proposition relationship, concerning speaker commitment to truth. While this model accounts for how speakers express uncertainty or manage responsibility, it does not fully address other interaction

dimensions. A third perspective—focused on speaker-hearer relationship—appears in early work by Hübler (1983) and Holmes (1982), though neither develops it as a formal category. Hyland's (1996, 1998) model makes hearer-oriented hedging integral to classification. By incorporating reader- and hearer-directed strategies, Hyland expands hedging beyond epistemic caution and self-positioning. His framework treats hedging as a rhetorical tool for managing interpersonal dynamics, promoting solidarity, and inviting collaboration in meaning negotiation.

Another challenge in hedging research lies in the absence of a shared conceptual foundation. Classificatory models are often based on differing definitions of hedging, which makes it difficult to compare results across studies. In addition, most frameworks are derived from a narrow range of data—usually written academic texts in English—and may not apply across languages or genres. Holmes (1982) notes that the realization of hedging varies widely depending on cultural conventions, rhetorical norms, and the available linguistic resources.

Since the 1980s, alongside classification efforts, research has examined individual hedging expressions. Studies by Aijmer (1984), Holmes (1986), Farr and O'Keeffe (2002), and Fetzer (2010) show how specific forms function across discourse types and demonstrate their multifunctionality. This research overlaps with studies on pragmatic markers, exploring how language organizes discourse and manages speaker–listener relationships. Similar themes emerge in research on hedging by Turkish EFL learners, where pragmatic markers and modal particles are key areas. Studies by Babanoğlu (2014), Aşık (2015), Aşık and Cephe (2013), and Aysu (2017) examine these forms in learner speech and writing using a form-to-function approach. Studies by Şahin-Kızıl and Kilimci (2014) and Zorluel Özer and Okan (2018) use comparative designs to analyze pragmatic marker use across groups and contexts. These works, grounded in relevance theory and cognitive pragmatics, describe the semantic and pragmatic behavior of hedging expressions in academic and conversational settings (Markkanen & Schröder, 1997).

Two broader developments have shaped hedging research since the late 1980s: the rise of genre-based studies and the growth of applied research. Genre-based studies have focused primarily on scientific discourse. Salager-Meyer (1994) and Hyland (1996, 1998) examined

how hedging functions in academic writing, while Varttala (1998, 2001) explored its use in research articles. Vass (2004, 2017) extended this work to legal discourse, and Vold (2006) expanded the scope by analyzing Norwegian academic texts.

Applied studies have addressed hedging from contrastive, translational, and intervarietal perspectives. Vold (2006) compared hedging strategies in Norwegian, English, and French texts, while Kärkkäinen (1990) investigated differences between spoken Finnish and English. Translation-focused research, such as Kranich (2011), analyzed how hedging is rendered across English and German academic texts. Uysal (2014) added an intervarietal perspective by comparing hedging in conference abstracts written by NSs and NNSs.

2.7 Hedging in Related Research Fields

Research on hedging is closely linked to adjacent areas such as pragmatic markers, modality, vague language, and mitigation. These domains focus on how language expresses interpersonal positioning, degrees of certainty, and epistemic stance. While hedging remains a distinct phenomenon, its functions and forms often overlap with those studied in these areas. Examining these intersections helps clarify the communicative functions of hedging across different contexts and disciplines.

2.7.1 Pragmatic markers and hedging

The concept of pragmatic markers (PM) lacks a universally accepted definition, leading to terminological variation among researchers. Jucker and Ziv (1998) attribute this to language-specific elements serving similar functions across languages and differing theoretical approaches. Andersen (2010) supports this, noting that linguistic diversity and methodological variation contribute to inconsistent terminology. This thesis adopts "*pragmatic marker*" to describe linguistic elements that convey meanings beyond basic propositional content. According to Andersen and Fretheim (2000) and Fraser (1996, 1999), PMs include words, word endings, word order variations, and prosodic features. "*Marker*" refers to various linguistic forms, while "*pragmatic*" describes their diverse functions. This definition aligns with Brinton (1996, p. 30), though contrasting with Jucker and Ziv (1998), who prefer "*discourse marker*."

Discourse markers, a specific subclass of PMs, organize and connect parts of discourse. Aijmer and Simon-Vandenberg (2006) explain that they indicate relationships between speech segments and enhance coherence. PMs aid message interpretation and connect speaker, hearer, and context (Romero-Trillo, 2012).

Pragmatic particles, another subtype, convey speaker commitment or attitude toward shared presuppositions (Andersen, 2010). In English, they manage turn-taking (*well, so*), express attitudes (*actually, frankly*), signal uncertainty (*um, you know*), and facilitate listener engagement (*I mean*). While similar to modal particles expressing necessity or possibility, pragmatic particles primarily manage discourse flow. This thesis includes these elements under "*pragmatic markers*," reflecting their role beyond propositional communication.

PMs serve multiple functions in spoken conversation. They link utterances to context, indicate relationships between statements (Brinton, 1996, p. 30; Blakemore, 1987), signal information sequencing (Fraser, 1990), function as conventional responses, facilitate conversation, and manage speaker-hearer relations (Brinton, 1996). PMs also contribute to hedging by softening statements (Beeching, 2016, p. 126; Hasund, 2003). The particle *like* has five non-standard functions: exemplifying (e.g., *We like could go to Nepal*), approximating (e.g., *It will cost me like a couple of grand*), quoting (e.g., *an employer will be like "oh, you've actually worked"*), focusing (e.g., *there're loads of stories in the newspaper about a couple who went abroad and like she's found dead in the back of a car*), and hedging (e.g., *I wondered like, if your sister could find out for us*). In hedging, *like* modalizes propositions and fulfills face-saving roles (Beeching, 2016). Several non-standard uses may be interpreted as hedging forms, as exemplifying and approximating uses express non-prototypicality, while quotative *like* signals approximate speech. Although extensively studied, PMs' functions across contexts remain difficult to delineate. In conversations, markers often fulfill multiple roles simultaneously, complicating efforts to isolate their pragmatic contributions. The marker *like* frequently appears at sentence boundaries, acting as both a discourse organizer and focus device (Beeching, 2016, p. 132). Challenges persist in studying hedging and PMs. A central issue is whether hedging is a broader phenomenon including PMs or if markers serve as hedging devices in certain contexts. The distinction

between narrow and broad definitions of hedging is also important. Narrowly, hedging is a specific function of PMs used to downplay message force. Broadly, following Kaltenböck et al. (2010), hedging is a general communicative strategy, with PMs as one possible expression.

2.7.2 Hedging and epistemic modality

Hedging is often linked to epistemic modality, as both express confidence in a proposition's truth. However, some researchers argue that hedging should not be considered part of epistemic modality. Namsaraev (1997) and Vassileva (1997) assert that epistemic modality is semantic, while hedges are pragmatic due to their communicative functions. In contrast, Hyland (1998a, p. 2) reaffirms their connection, arguing that hedging reflects the writer's judgments about statements and their effects on interlocutors. He sees hedging as a subset of epistemic modality, particularly regarding personal judgments based on incomplete knowledge (Hyland, 1998a, p. 44). In this view, epistemic modality pragmatically expresses uncertainty about the truth of a proposition.

Simpson (1990) defines modality as the speaker's attitude toward a proposition's truth and the described situation. Collins (2009) describes modality as encompassing semantic notions like possibility, necessity, ability, obligation, and permission. Lyons (1977) defines epistemic modality as expressions where speakers qualify their commitment to a proposition's truth through verbal, prosodic, or paralinguistic means. Coates (1983) distinguishes between epistemic and root modality: epistemic modality concerns assumptions and assessments of possibilities, while root modality addresses permission, obligation, and necessity (Coates, 1992). Palmer (2001) defines epistemic modality as the speaker's judgment about a proposition's factual status. Nuyts (2001) views it as evaluating the likelihood of states of affairs, while root modality concerns actions by moral agents (Lyons, 1977; Coates, 1992). Palmer (2001) identifies three types of epistemic judgments: speculative (uncertainty), deductive (from evidence), and assumptive (based on general knowledge).

Subjectivity is often seen as central to epistemic modality (Lyons, 1977; Palmer, 1986). It refers to the speaker's personal attitude toward a proposition's truth value (Lyons, 1977). Modal adverbs like *probably*, *possibly*, and *maybe* signal varying degrees of confidence,

which enables speakers to moderate their commitment. Epistemic expressions may also convey other evaluations depending on context. Palmer (2001) illustrates the subjective-objective distinction: “*I think she might divorce Alfred*” reflects subjective evaluation, while “*She said she might divorce him*” is objective modality. “*She might divorce him*” is ambiguous without explicit attribution. As Palmer (2001) notes, this distinction often depends on the conversational context (p. 233). Modal auxiliaries convey meanings of possibility, permission, necessity, and obligation (Coates, 1983; Palmer, 1979). For example, *may* expresses epistemic possibility in “*I may be a few minutes late*,” while it conveys deontic permission in “*I tell you this so that you may make arrangements elsewhere if you are able to*” (Coates, 1983, p. 132). Epistemic modality extends beyond modal auxiliaries to lexical verbs, adjectives, adverbs, and nouns (Holmes, 1982, 1983; Hyland & Milton, 1997; McEnery & Hadie, 2012). Holmes (1988a, p. 27) identifies over 350 lexical items that can express epistemic judgments.

2.7.3 Vague language and hedging

Vague language overlaps with hedging and has been frequently studied alongside it. Schröder and Zimmer (1997, p. 255) cite about 30 studies from the late 1970s to mid-1990s examining hedging within vagueness. Vague expressions, especially modal adverbs like *probably* or *possibly*, are common in informal spoken language, often conveying imprecise meanings (O’Keeffe, McCarthy, & Carter, 2007, pp. 74, 177). Like hedging, vague language has different definitions across disciplines such as psychology, philosophy, literary criticism, and linguistics (Channell, 1994, p. 5). It includes generic nouns referring to broad categories and modal adverbs like *approximately*, which signal indeterminacy (Biber et al., 1999, p. 265). Other vague markers include general extenders like *or possibly something similar* and modifiers like *sort of* (Carter & McCarthy, 2006, p. 202). Stenström, Andersen, and Hasund (2002, pp. 87–88) identify additional expressions contributing to vagueness, such as *thingy*, *and so forth*, vague quantifiers, frequency adverbs, and approximations like *around ten people*. Fraser (2010) defines vagueness as a perlocutionary effect when information lacks expected precision.

The intentions behind vague language often overlap with hedging, as both involve communicative fuzziness through modal adverbs (O'Keeffe et al., 2007). Propositional vagueness can lead to hedging, introducing uncertainty about truth claims (Fraser, 2010). Vague language softens statements and indicates shared knowledge between speakers, whether oriented toward common ground or broader interpretations (Romero-Trillo, 2015). It helps speakers avoid excessive detail (Andersen, 2010) and supports social harmony in conversation.

Vague language can arise from memory limitations, restricted vocabulary, incomplete knowledge, or signaling group affiliation. According to Stenström et al. (2002), speakers—particularly teenagers—combine vague expressions with modal adverbs like *probably* to show indifference toward precision. In written communication, vague language allows writers to hedge claims, with modal adverbs such as *possibly* or *presumably* weakening assertions, particularly when reporting research findings (Carter & McCarthy, 2006). The degree of vagueness typically varies with the formality of the situation, being more common in informal contexts where precision is less emphasized (Stenström et al., 2002).

Examining vague language in relation to hedging presents challenges, as the literature often overlooks hedging despite their related lexical and syntactic features (Clemen, 1997). Definitions can overlap, leading to circular reasoning. Vague language functions as hedging when generic expressions combined with modal adverbs like *approximately* create uncertainty (Kaltenböck et al., 2010, p. 6). In Prince et al.'s (1982) framework, approximation words are considered hedging strategies. However, hedges are also classified as vague language alongside approximators, though not all approximating expressions function as hedges. For example, modal adverbs like *virtually* can act as boosters, reinforcing statements instead of softening them. Channell (1994, p. 89) illustrates this with the exaggerated example: "*A million students came to see me today.*"

2.7.4 Mitigation and hedging strategies

Mitigation significantly overlaps with hedging in both function and application. Studied for over three decades (e.g., Thaler, 2012), mitigation reduces the negative impact of speech acts on hearers, often through modal adverbs like *probably* or *possibly* (Fraser, 1980, p. 341).

Fraser (1980, pp. 341–344) outlines four aspects of mitigation: it softens the impact of speech acts, targets negative effects on hearers, is distinct from but related to politeness, and differs from hedging. Initially, hedging blurred propositions, while mitigation softened social impact (Fraser, 1980, p. 344). As hedging evolved, this distinction became less clear, and hedging is now viewed as claim mitigation that influences interlocutors' perceptions, often using modal adverbs like *perhaps* or *presumably* (Vold, 2006, p. 62). Both serve relational functions, and help speakers maintain positive relationships and facilitate interaction (Caffi, 1999, p. 885; O'Keeffe et al., 2007, p. 159).

Fraser (1980, p. 344) identifies two main mitigation strategies: self-serving and altruistic. Self-serving strategies soften impact while absolving the speaker of responsibility, often using modal adverbs like *probably* (Fraser, 1980, p. 345). For example, speakers may frame bad news with modal adverbs expressing doubt or obligation. Altruistic strategies aim to reduce negative impact on hearers, using adverbs like *hopefully* to soften statements (Fraser, 1980, p. 346). Both strategies may be used together, depending on communicative goals and dynamics.

Mitigation strategies are classified by scope within speech acts, per Prince et al.'s (1982) hedging framework. Caffi (1999) distinguishes propositional strategies from those affecting the speaker-proposition relationship. Mitigation operates on three levels: proposition, illocutionary force, and deictic origin—termed bushes, hedges, and shields. Bushes reduce precision in content using modal adverbs like *approximately*. Hedges affect illocutionary force by signaling epistemic stance with modal adverbs like *probably* (Caffi, 1999, p. 889), indicating limited commitment. Shields weaken the connection between speaker and utterance through syntactic adjustments, with modal adverbs like *hopefully* (Caffi, 1999, p. 891). These strategies can be used simultaneously. Contemporary views often see hedging as a subtype of mitigation within Caffi's framework, though some treat them as nearly equivalent.

2.7.5 Metadiscourse and interpersonal functions

Hyland and Tse (2004c, p. 156) define *communication* as a "social and communicative engagement between writer and reader," describing *metadiscourse* as "ways writers project

themselves into their discourse to signal their attitude towards both the content and the audience." In spoken interaction, hedges like *might* and *possible* serve as interactional resources, signaling a speaker's reduced commitment to the truth of a proposition. Metadiscourse in speech marks the speaker's presence and attention to both utterance construction and audience interpretation (Vande Kopple, 1980). Spoken discourse operates on two levels: one conveys propositional content, and the other helps listeners organize, interpret, and react to the message (Vande Kopple, 1985, p. 83). Metadiscourse aids in organizing, interpreting, and evaluating textual content, which helps writers express attitudes and negotiate relationships with readers (Hyland, 2005). According to Hyland (2005, p. 39), it makes content "coherent, intelligible, and persuasive to a particular audience."

Two main approaches to metadiscourse have emerged (Fuertes-Olivera et al., 2001). Mauranen (1993) limits metadiscourse to cohesion and coherence which aligns with Halliday's (1978) "*textual metafunction*." In contrast, Crismore and Farnsworth (1990), later expanded by Hyland (1998b), define it more broadly, including both organizational and interactive features, such as expressions of attitudes and certainty. Hyland (2005, p. 37) defines metadiscourse as "self-reflective expressions used to negotiate interactional meanings in text," which helps writers engage with readers. Through interpersonal resources, writers "construe their readers" and build relationships based on shared assumptions (Hyland, 2005, p. 58).

Crismore, Markkanen, and Steffensen (1993) divide metadiscourse into textual (e.g., logical connectives, sequencers) and interpersonal (e.g., hedges, certainty markers, attitude markers). Hyland (1998b) refines interpersonal metadiscourse into hedges, emphatics, attributors, attitude markers, and relational markers. Hyland and Tse (2004) later reclassify metadiscourse into interactive (e.g., transitions, frame markers) and interactional (e.g., hedges, boosters, attitude markers) dimensions. Hedges and boosters adjust the speaker's certainty and rhetorical force (Hyland, 1998b).

Research on hedges within metadiscourse shows they appear frequently across fields like marketing, microbiology, applied linguistics, and astrophysics, with hedges being the most common in three domains (Hyland, 1998b). In marketing and applied linguistics,

interpersonal metadiscourse is more prevalent. Effective argumentation relies on linguistic resources to represent writers, texts, and readers (Hyland, 1998b). The study of metadiscourse reveals communicative norms in specific discourse communities (Hyland, 1998b, p. 452). Fuertes-Olivera et al. (2001, p. 1298) show that copywriters balance persuasion and information with metadiscourse, using hedges and intensifiers to avoid excessive assertiveness (p. 1305). Dafouz-Milne (2008) finds that hedges are most common in Spanish and British newspapers, followed by attitudinal and certainty markers. Texts with balanced textual and interpersonal markers are perceived as more persuasive (Dafouz-Milne, 2008, p. 104). Writers rely more on hedges than attitudinal markers, using them to negotiate persuasion (Dafouz-Milne, 2008, p. 105). Baumgarten (2012) shows that both L1 and L2 students frequently use hedges in presentations, though L2 students use fewer hedges in politeness strategies.

2.7.6 Hedging in L2 learning and teaching

Early research by Stubbs (1986, p. 22) observes that speakers of English as a foreign language often risk sounding rude or tactless due to insufficient sociolinguistic competence when expressing polite or tentative statements about controversial topics. To address this problem, Stubbs (1986, p. 21) emphasizes the need for EFL teaching materials to include modal grammar combined with polite expressions. Modal adverbs such as *probably*, *possibly*, and *perhaps* provide effective tools for learners to soften their assertions and convey tentativeness. Extending this focus, Hyland (1994, p. 252) argues that ESP writing materials should incorporate appropriate hedging devices to reflect competence in a specialist register and to align with the sociolinguistic norms of English-speaking scientific communities. Subsequent studies by Hyland (1998; 2000; 2005) consistently recommend that teaching material developers systematically include hedging strategies.

Hyland and Milton (1997, p. 201) find that L2 students tend to use a limited range of hedges and boosters, which results in less precision when conveying degrees of certainty. Their study shows that NNSs use fewer tentative markers than NSs and often fail to moderate their propositions adequately. Hyland and Milton (1997, p. 200) argue that NNSs students should receive targeted practice with a wider range of epistemic categories to express the full range

of intended meanings. Modal adverbs such as *probably*, *possibly*, and *perhaps* support this development by allowing learners to soften assertions and manage the strength of their claims more effectively. When NNSs use a broader set of hedges, they are able to adopt forms that characterize expert academic writing, which helps them make more credible and contextually appropriate claims. (Hyland & Milton, 1997, p. 192). Hinkel (1997) also reports that L2 learners from various linguistic backgrounds often underuse hedges, and as a result, their statements often sound overly strong or inappropriate for academic discourse. Wood (2009) further supports this view by stating that the use of hedging expressions in instructional materials can significantly improve L2 learners' English fluency. The study emphasizes that teaching hedging helps learners manage interpersonal interactions more effectively by allowing them to express opinions with greater politeness and sensitivity. Modal adverbs such as *probably*, *possibly*, and *perhaps* function as valuable tools for softening assertions and avoiding abrupt or overly direct statements. According to Wood (2009), L2 learners who are trained to use hedging devices demonstrate increased awareness of social expectations in communication, which enhances both the clarity and appropriateness of their speech.

2.7.7 Hedging in ESP and EAP contexts

Hedging plays a significant role in academic and scientific discourse. While some scholars consider it essential for expressing nuance, others argue that academic writing should prioritize directness and objectivity for clarity. Varttala (2001, p. 54) argues that a direct style improves reader comprehension and scholarly credibility. Similarly, Alley (1987, p. 28) maintains that scientific communication must prioritize precision to avoid ambiguity, and Hedge (1994) emphasizes that directness and objectivity are foundational to effective academic writing. Varttala (2001, p. 54) also warns that vagueness can confuse readers, while Swales (1990) underscores transparency as vital for knowledge transfer across disciplines. Day (1995) stresses that clarity is essential for effective research communication.

Although hedging may seem inappropriate in certain academic contexts, studies suggest that it supports rationality through controlled, impersonal language (Varttala, 2001). From this perspective, hedging is crucial for balancing assertiveness with caution. Skelton (1988, p. 39) contends that imprecision is often acceptable in academic writing, and Myers (1989) shows

that hedging functions as negative politeness, reducing potential conflict. Salager-Meyer (1994) notes its frequent use in medical journal discussions. Hyland (1996b, p. 433) highlights hedging's importance in molecular biology, where precision and caution are paramount. Hyland (1998a, p. 1) explains that hedging allows scholars to express partial commitment and appropriate certainty, framing scientific language as both "content-oriented" and "reader-oriented"—key for credibility and audience acceptance (Hyland, 1998a, pp. 92–93).

Varttala (2001, p. 67) adds that scholars must anticipate skeptical responses and use hedges such as *probably*, *possibly*, or *perhaps* to manage expectations and present claims cautiously. Crompton (1997) emphasizes that hedging signals openness to alternative interpretations, supporting scientific collaboration. Similarly, Markkanen and Schröder (1997) frame hedging as a rhetorical strategy that balances assertion with academic modesty.

Hyland (1996b, p. 451) observes that hedging is more frequent in speech, especially in casual conversation, where its use nearly doubles compared to written contexts. Coates (1987) and Holmes (1983, 1995) find that conversational hedging often occurs in informal settings to manage relationships and soften assertions. Stubbs (1986) and Stubbs & Holmes (1995) argue that speakers use hedging to negotiate meaning, express uncertainty, and maintain politeness. Schiffrin (1987) shows that expressions like *you know* reduce tension and foster solidarity, while *I mean* allows speakers to revise propositions and preempt disagreement. Hyland (1998a, p. 255) notes that, unlike scientific writers, speakers use hedges to create informality, encourage discussion, display courtesy, and acknowledge knowledge gaps. Modal adverbs such as *probably*, *possibly*, and *perhaps* are common in these contexts to soften statements and avoid confrontation. Holmes (1990) stresses hedging's role in sustaining cooperative communication, particularly in sensitive exchanges. Brown and Levinson (1987) also identify hedging as a key face-saving strategy that helps avoid direct imposition.

Overall, Hyland (1998a, p. 257) concludes that hedging is a central feature of communication across domains, which serves epistemic, affective, and relational functions.

2.7.8 Empirical research on hedging and PMs in Turkish EFL contexts

Empirical research on hedging and related discourse features in Turkish EFL contexts has mainly focused on written academic discourse. In contrast, relatively few studies have investigated spoken interaction. Most studies on hedging—defined as the use of linguistic strategies to express tentativeness or reduce the speaker’s commitment—have analyzed argumentative essays, theses, and research articles produced by Turkish learners of English.

Table 2.3 summarizes these findings. Turkish learners tend to underuse hedging devices, depend heavily on modal verbs such as *can* and *may*, and show a limited use of lexical and structural hedges. For example, Tıkaç (2013) reported that *can* was primarily used to indicate ability, rather than functioning as a strategic hedge. Hatipoğlu and Algi (2018) observed frequent overuse of modal verbs in student writing, which reflected a lack of pragmatic awareness. Yagiz and Demir (2014) also noted that native English writers used a wider and more flexible range of hedging strategies compared to Turkish learners.

Table 2.3

Studies on Hedging Use in the Turkish EFL Context

Study	Cultural Group	Focus	Data Type	Main Findings
Söğüt (2014)	Turkish NNSs vs American NSs	Stance adverbials as hedges and boosters	Written-argumentative essays)	NS writers were more consistent and context-sensitive.
Tıkaç (2013)	Turkish EFL students	Use of <i>can</i> as a hedging device	Written (essays + interviews)	<i>Can</i> mainly used for ability; limited pragmatic awareness.
Ekoç (2008)	Turkish MA students	Lexical hedging strategies in abstracts	Written (MA theses abstracts)	Disciplinary variation influenced hedging patterns.
Yalavaç (2021)	Turkish RA writers (Natural vs Social Sciences)	Hedging and boosting practices	Written (research articles)	Hedging/boosting frequent in Discussions; minor disciplinary differences.
Hamamcı (2007)	Turkish NNSs vs NSs	Hedging strategies in social science RAs	Written (research articles)	NS writers used more varied hedges.

Algı (2012)	Turkish EFL students	Hedges and boosters in L1 and L2 writing	Written (argumentative paragraphs)	Transfer from Turkish to English evident.
Bayyurt (2010)	Turkish L1 vs L2 student writers	Hedging in academic writing	Written (argumentative essays)	Hedging stronger in L1; limited range in L2.
Demir (2018)	Turkish EFL learners vs NSs	Lexical hedging in academic writing	Written (research articles)	Turkish learners used fewer hedges and limited types.
Akıncı Oktay (2020)	Turkish advice column	Hedges and boosters in advice giving	Written (advice columns)	Hedges helped mitigate advice; solidarity emphasized.
Hatipoğlu & Algı (2018)	Turkish EFL learners	Modal hedges in argumentative paragraphs	Written (argumentative essays)	Modal verbs overused; difficulties with polysemy.
Akbaş & Hardman (2018)	Turkish L1, Turkish EFL, English NSs	Hedges and boosters in dissertations	Written (dissertations)	Turkish writers boosted claims more than English writers.
Akman & Karahan (2023)	Turkish and Physiotherapy researchers	Hedges and boosters across disciplines	Written (research articles)	ELT and Physiotherapy preferred hedging but used different linguistic strategies.
Atmaca (2016)	Turkish ELT MA vs PhD students	Hedging in MA and PhD theses	Written (theses)	PhD theses used more hedges, indicating academic maturity.
Bayraktar-Çepni & Kulaksız (2022)	Turkish ELT MA vs PhD students	Hedging in thesis Discussion sections	Written (theses)	MA favored modal hedges; PhD diversified strategies.
Ekoç Özçelik (2023)	Turkish and Chinese scholars	Hedging and boosting in RA abstracts	Written (research article abstracts)	No significant frequency difference; cultural preferences observed.
Taymaz (2021)	Turkish ELT MA vs PhD students	Hedges and boosters usage comparison	Written (theses)	MA students preferred hedging; PhDs leaned more toward boosting.
Uysal (2014)	Japanese, Turkish vs English NSs scholars	Indirectness and hedging in proposals	Written (conference proposals)	Turkish and Japanese scholars used more hedging/indirectness.
Yagiz & Demir (2014)	Turkish EFL vs English NSs writers	Hedging strategies in ELT RAs	Written (research articles)	NS writers used broader, more flexible hedges.

Unlike written discourse, studies on spoken English in Turkish EFL contexts have mostly focused on PMs rather than hedging in its narrow, epistemic sense. PMs such as *I mean*, *you know*, *I think*, and *sort of* help organize discourse, express stance, and maintain interpersonal relationships.

Table 2.4

Studies on Discourse Markers and Pragmatic Markers in Turkish EFL Spoken English

Study	Cultural Group	Focus	Data Type	Main Findings
Aşık (2012)	Turkish EFL vs NSs	DMs in academic presentations	Spoken (academic presentations)	Turkish learners used fewer DMs
Öztürk (2018)	Turkish ELT vs British	DMs and fluency	Spoken (interviews)	Fewer interpersonal DMs; broader DM use aid fluency.
Yakut (2019)	Turkish learners vs NSs	Pragmatic markers (<i>I mean</i> , <i>I think</i> , <i>you know</i>)	Spoken (LINDSEI-TR and LOCNEC)	Turkish learners underused markers; limited functions.
Aşık (2015)	Turkish EFL teachers	Perceptions about discourse markers	Spoken (teacher interviews)	Teachers valued DMs but lacked formal instruction.
Aşık & Cephe (2013)	Turkish EFL vs NSs	DMs in academic presentations	Spoken (MICASE corpus)	Turkish EFL students used fewer and narrower DMs.
Zorluoğlu Özer & Okan (2018)	Turkish EFL classrooms	Classroom discourse marker use	Spoken (EFL classroom sessions)	DMs multifunctional in managing interaction and instruction.

The studies listed in Table 2.4 show that Turkish learners often use PMs less frequently or with limited functional range. Yakut (2019), for example, used data from the LINDSEI-TR and LOCNEC spoken corpora and showed that Turkish learners often omitted interpersonal markers such as *you know* and *I mean*, which NSs used to structure interaction and express shared knowledge. Aşık and Cephe (2013) also found that Turkish students used fewer and

more restricted discourse markers in academic presentations. Öztürk (2018) reached similar conclusions in the context of informal interviews.

Some researchers have examined broader aspects of pragmatic competence, such as politeness, impoliteness, and learner perceptions. As shown in Table 2.5, these studies have revealed persistent difficulties in Turkish learners' ability to interpret pragmatic cues and manage interpersonal aspects of communication in academic contexts.

Table 2.5

Studies on Pragmatic Competence and Impoliteness in the Turkish EFL Context

Study	Cultural Group	Focus	Data Type	Main Findings
Çelebi (2012)	Turkish vs English NSs	Impoliteness in spoken discourse	Spoken corpus	English: overt; Turkish: implicit, context-based
Çiftçi (2015)	Turkish EFL students	Pragmatic competence	Spoken (university office hours)	Success with relational work; failures with politeness
Çoban (2020)	Turkish university students	Perceptions of hedging	Spoken-questionnaire	Hedging seen as informal, misunderstood pragmatically
Şahin-Kızıl & Kilimci (2014)	Turkish EFL learners vs NSs	Recurrent phrases in spoken interlanguage	Spoken (LINDSEI-TR and LOCNEC)	Turkish: simpler, "that"-clause overuse; NSs: more fluent DMs

Çelebi (2012) compared Turkish and English native speakers and found that Turkish speakers relied more on implicit, context-dependent expressions of impoliteness, whereas English speakers expressed impoliteness more directly. Çiftçi (2015) noted that learners were usually successful in performing relational tasks, but they often struggled with politeness strategies. Çoban (2020) pointed out that many Turkish students viewed hedging as informal and misunderstood its communicative function. Şahin-Kızıl and Kilimci (2014) found that

Turkish learners relied on simpler grammatical structures and frequently overused “*that*”-clauses. In contrast, NSs made more fluent use of discourse markers.

In summary, the studies reviewed above highlight different but related challenges in the development of pragmatic competence among Turkish EFL learners. Written discourse shows a need for greater awareness and diversity in hedging strategies. Spoken discourse reveals limited use of PMs that are essential for interactive and fluent communication. These findings suggest that EFL instruction in Turkey should address both written and spoken dimensions of pragmatic competence.

2.7.9 Summary of previous research

This thesis builds on previous research to define hedging as a pragmatic function within the interpersonal domain of language. Hedging can be realized through various linguistic forms and strategies, which speakers may use individually or in combination to achieve their communicative aims. As Fraser (2010) explains, hedging acts as a type of metalanguage that helps the hearer interpret an utterance by signalling that the speaker is not fully committed to the proposition or the force of the speech act. However, hedging does not include all expressions of attitude or emotion. As Caffi (1999) points out, expressions such as *frankly* or *honestly* signal emotional stance rather than a mitigation of commitment. For instance, in the sentence “*Honestly, I didn’t expect them to agree so quickly,*” the speaker communicates surprise or personal involvement but does not reduce their commitment to the truth of the statement. In contrast, hedging involves linguistic markers that express uncertainty or a reduction in the speaker’s commitment to the truth of a proposition. Fraser (2010) provides examples such as “*The pool has sort of an L-shaped design*” and “*Peter’s house is almost 100 feet wide,*” where the adverbs *sort of* and *almost* serve to soften the precision or assertiveness of the claims. Similarly, epistemic phrases like *I think* or *It seems* function to mitigate the force of assertions, as in “*I think that I must ask you to leave now*” or “*It seems that no one wants to go.*”. Similar views are reflected in the work of Hyland (1998a), Fraser (2010), and Caffi (1999), who regard hedging as a key discourse strategy for regulating propositional force and maintaining interpersonal alignment.

The definition of hedging adopted in this thesis builds on Kaltenböck et al. (2010) and incorporates an additional perspective to refine its conceptual scope. Hedging refers to discourse strategies that soften the force, truth value, or interpersonal impact of an utterance. These strategies signal the speaker's degree of commitment to the propositional content and the speech act itself, and they provide a space for interpretive engagement by the listener. This communicative flexibility is strongly tied to epistemic modality, which represents the speaker's perceived certainty or belief in a given proposition. As Coates (1987) indicates, language users convey both epistemic stance and audience awareness through their lexical choices. For instance, Coates (1983) provides the example "*I think it was quite late*," where the modal verb *think* and the adverb *quite* work together to reduce the speaker's certainty and mitigate the assertiveness of the claim. This kind of hedging promotes negotiation of meaning between speakers. Similarly, approximators such as *somewhat*, *roughly*, and *almost* serve to reduce the precision of claims while preserving their essential truth, a practice that Hyland (1998a) identifies as "*strategic diplomacy*" in academic discourse. These hedging devices are particularly important in spoken academic contexts, where expressing tentativeness and managing interpersonal relationships are central to communicative success. The focus on adverbs in this study reflects their key role in performing hedging by signaling either reduced certainty or approximated meanings of quantity, degree, or extent.

While many studies have focused on the structural and functional dimensions of hedging, this interactional aspect has received comparatively less attention. Some exceptions can be found in the work of Hyland (1996, 1998), who explores how hedging in scientific discourse allows writers to involve readers in the negotiation of meaning. A similar function is evident in spoken interaction, where speakers use hedging to invite the listener's perspective and soften the delivery of statements. This is particularly common in casual academic talk or informal discussions, where modal adverbs such as *probably*, *maybe*, or *I guess* mark a tentative stance and encourage shared interpretation. Hyland (1998b), for example, discusses phrases like "*It seems likely that the results support...*" or "*This may suggest a correlation...*" as ways in which writers reduce epistemic certainty and foster engagement with the reader. In spoken discourse, Holmes (1982) documents similar strategies, including the use of "*I*

think it's probably better...” and “*Maybe we should look at this another way,*” which serve to soften assertions and invite dialogue. Aijmer (2002), working with spoken corpora, points to hedging expressions like *sort of* and *you know*, as in “*It was sort of strange, you know,*” which reduce the speaker's commitment while implicitly involving the listener in co-constructing the message. In this way, hedging fosters collaboration in meaning-making and helps manage interpersonal dynamics in both written and spoken academic contexts (Hyland, 1998m; Holmes, 1982; Aijmer, 2002).

In sum, previous research has established hedging as a central pragmatic strategy used to express tentativeness, manage speaker commitment, and foster interactional cooperation in both written and spoken discourse. While the specific linguistic forms may vary, modal and approximative adverbs play a key role in signalling uncertainty and adjusting the strength of assertions. These strategies not only reflect the speaker's stance but also contribute to the co-construction of meaning in academic contexts. The current study adopts this understanding as a foundation for analyzing hedging in spoken academic English, with particular attention to Turkish learners. The following section turns to the literature on corpus pragmatics, which provides the methodological framework for examining hedging as it occurs in real-world, data-driven language use.

2.8 Corpus Linguistics and Corpus Pragmatics

Corpus pragmatics provides the primary research framework for this study. The analysis focuses on how NNSs use adverbial hedging strategies in spoken academic discourse, compared to NSs. Corpus pragmatics, as defined by Romero-Trillo (2017), combines the systematic analysis of real-world language use from corpus linguistics with the contextual sensitivity of pragmatics. This approach allows the study to examine both the frequency patterns and communicative functions of hedging strategies (Huang, 2017; Rühlemann and Aijmer, 2015). Recent advances in corpus tools, including the tagging of PMs, have further enhanced the possibilities for analyzing spoken data (Love et al., 2017). The next section introduces the foundations of corpus pragmatics in more detail as the basis for the present study.

The study of describing language use in real-world situations through the study of corpora is referred to as corpus pragmatics (Romero-Trillo, 2017). It brings together corpus linguistics and pragmatics, two distinct but complementary fields. While corpus linguistics focuses on the systematic quantitative analysis of large text collections, pragmatics is concerned with how language conveys meaning in specific contexts, typically through qualitative methods. Initially, the contrasting methodologies of the two fields led many researchers to view them as incompatible (Rühlemann and Aijmer, 2015). However, recent developments have promoted efforts to combine their respective strengths: the statistical precision of corpus linguistics and the contextual sensitivity of pragmatics (Romero-Trillo, 2008). These developments have shaped differing views on the classification of corpus pragmatics. Some scholars regard it as a branch of corpus linguistics (Weisser, 2018), while others align it more closely with empirical pragmatics because of its emphasis on real-world language use (Huang, 2017a).

Although corpus pragmatics offers important opportunities for understanding language in context, it also faces persistent challenges. One major difficulty involves detecting implicit meanings shaped by situational, cultural, or social factors, which are often difficult to capture through corpus methods alone. Traditional corpora, originally designed for the large-scale analysis of linguistic structures, are not always suited to examining pragmatic features such as hedging (Flöck and Geluykens, 2015; Taavitsainen and Jucker, 2015). One factor contributing to the delayed integration of corpus linguistics into pragmatics, compared to its earlier adoption in fields like lexicography, is this limitation. As Romero-Trillo (2008) argues, corpus pragmatics remains a developing field that requires further research capable of fully combining the quantitative strengths of corpus linguistics with the contextual focus of pragmatics. Nevertheless, advances in corpus tools are beginning to improve the identification of pragmatic features, and offers promising ways to address earlier limitations and expand the potential of corpus pragmatics. Although the field is relatively recent, it draws on long-established traditions. Corpus linguistics as a concept gained popularity during the 1980s, yet the practice of studying language through collections of texts extends back centuries. The fact that corpus as a term has originated from Latin meaning body or collection

of facts or things, reflects this long history, with early examples such as 13th-century compilations of word indices and concordances for the Christian Bible (Yao, 2015).

2.8.1 Corpus Linguistics and its historical development

The use of corpora to study language has a long history. One of the first examples is Samuel Johnson's Dictionary of the English Language from 1755. It used about 150,000 sentences from real texts, each written on a separate piece of paper (Biber and Reppen, 2015). By the early twentieth century, authentic language archives had begun to influence grammar development and language teaching. An example of this trend is Otto Jespersen's *A Modern English Grammar on Historical Principles*, which incorporates naturally occurring data into the study of grammar. As corpus methods continued to gain prominence, their application expanded across a range of linguistic subfields. In lexicography and translation studies, corpora have been used to determine word meanings and usage patterns (O'Keefe and McCarthy, 2010). Sociolinguistics has drawn on corpora to study language variation across different social groups, while forensic linguistics has applied corpus methods to the examination of language evidence in legal discourse.

The development of corpus linguistics has been closely tied to technological advances that made it possible to collect and store large datasets. A major shift occurred in the 1960s with the creation of the first electronic corpora. The Brown Corpus, compiled by Kučera and Francis (1967), contained one million words of written American English and set a new standard for empirical language research. Around the same time, the Lancaster-Oslo/Bergen (LOB) Corpus provided a parallel dataset for British English. Although revolutionary at the time, these early corpora were relatively small by modern standards. The 1980s and 1990s saw the emergence of second-generation corpora, marked by a dramatic increase in size. Prominent examples include the British National Corpus (BNC), finalized in 1994 with a total of 100 million words, and the Bank of English, which expanded to 211 million words by 1995 (Sinclair, 2004). The availability of larger corpora enabled more thorough analyses of linguistic patterns across a wider range of contexts. By the late 1990s, the widespread adoption of quantitative methods allowed researchers to measure the frequency and

distribution of linguistic forms more systematically and to evaluate the generalizability of findings across diverse text types (Ädel and Reppen, 2008).

The expansion of corpus linguistics accelerated with the introduction of large and specialized corpora. Resources such as the Corpus of Contemporary American English (COCA), containing over a billion words across a variety of genres and time periods (Davies, 2008), have become essential for studying contemporary language use. In addition, the Michigan Corpus of Academic Spoken English (MICASE) provides a focused resource on academic spoken discourse and offers valuable insights into features such as hedging in academic settings (Simpson, Briggs, Ovens, and Swales, 2002). These developments contributed to what Rühlemann and Aijmer (2015) describe as a corpus revolution or paradigm shift in linguistics. The rise of advanced computational tools, such as keyword-in-context (KWIC) searches, has further transformed the field by enabling researchers to detect linguistic patterns that would be difficult or impossible to observe through manual analysis. As a result, modern corpus linguistics is now defined by its reliance on quantitative methods, its commitment to exploring real-world language, and its significant influence across a wide range of linguistic subfields.

2.8.1.1 Types of corpora and their applications

Modern corpus linguistics makes use of a wide variety of corpus types, each designed to serve specific research purposes. The most commonly used type is the monolingual corpus, which contains texts in a single language. In contrast, multilingual corpora include texts in multiple languages and allow for broader cross-linguistic analysis. A subtype of multilingual corpora is the parallel corpus, which consists of texts translated into two or more languages and aligned at the level of sentences, paragraphs, or other units for direct comparison (Oakes and McEnery, 2000). Parallel corpora can be unidirectional, with translations from a single source language, or bidirectional, where original texts in multiple languages are accompanied by translations (Hasselgård). According to Tognini-Bonelli (2001), another important type is the comparable corpus, which consists of monolingual corpora on similar topics, selected based on external criteria such as mode (spoken vs. written) or genre. Metadata such as sociolinguistic information is often included in comparable corpora to support contextual

analysis. However, the terminology surrounding these corpus types is not always consistent. Some scholars refer to translated corpora as parallel corpora, while others use the term comparable for datasets that are either cross-linguistic or monolingual, as seen in the treatment of the Brown and LOB corpora (Johansson and Oksefjell, 1998).

2.8.1.2 Learner Corpora and Learner Corpus Research (LCR)

Learner corpora consist of texts produced by second or foreign language learners and serve as valuable resources for investigating language development beyond native-speaker norms (Gilquin, 2015). Unlike standard corpora, they capture authentic learner language and are often annotated for error analysis (Callies & Paquot, 2015; Gilquin, Papp, & Díez-Bedmar, 2008). These collections allow researchers to explore recurring patterns, frequent errors, and developmental shifts across proficiency levels. Some are structured to enable cross-linguistic comparison by including learners from diverse first-language backgrounds. As their importance in applied linguistics has grown, they have contributed to the emergence of Learner Corpus Research as a distinct field (Meunier, Gilquin, & Granger, 2015). To contextualize learner corpora within the broader landscape of corpus-based research, Table 2.6 outlines five principal types of corpora commonly used in linguistic inquiry: monolingual, multilingual, parallel, comparable, and learner corpora.

Monolingual corpora, such as the Brown and LOB corpora, consist of texts in a single language and remain widely used in descriptive studies (McEnery & Hardie, 2012). Multilingual corpora include texts in multiple languages and support cross-linguistic investigations. Parallel corpora contain aligned translations and enable direct comparisons between languages. Comparable corpora include topic- or genre-matched texts across different languages or varieties, often with sociolinguistic metadata. Learner corpora, as detailed earlier, are particularly valuable for examining second language acquisition and instructional impact.

Table 2.6**Types of Corpora in Linguistic Research**

Type of Corpus	Description	Examples	Key Features
Monolingual Corpus	Texts in one language; used in linguistic description and analysis.	Brown Corpus, LOB Corpus	Supports lexical, grammatical, and stylistic studies within a language.
Multilingual Corpus	Texts in multiple languages for cross-linguistic research.	Europarl Corpus, JRC-Acquis	Enables contrastive analysis across languages.
Parallel Corpus	Original texts with translations, aligned at sentence or clause level.	OPUS, Canadian Hansard	Sentence-level alignment for translation studies.
Comparable Corpus	Separate monolingual corpora in similar domains across languages.	Brown Corpus (US), LOB Corpus (UK)	Topic-matched; includes sociolinguistic metadata.
Learner Corpus	L2 learner texts, often annotated for errors.	ICLE, EFCAMDAT, LONGDALE	Contains authentic learner data with error tags.

(adapted from Callies and Paquot, 2015; Gilquin, Papp, and Díez-Bedmar, 2008; Johansson and Oksefjell, 1998; Oakes and McEnery, 2000; Rühlemann and Aijmer, 2015; Tognini-Bonelli, 2001; Yao, 2015)

2.8.1.3 Text features in corpora: Spoken vs. written and raw vs. annotated

Corpora can also be categorized according to text type, distinguishing between spoken and written data, as well as between raw and annotated texts. Annotated corpora include extra layers of linguistic detail, such as POS tags that indicate the grammatical role of each word in the text (Leech, 2005). Annotated corpora provide additional linguistic information, such as part-of-speech (POS) tagging, which assigns grammatical categories to words (Leech, 2005). However, written corpora greatly outnumber spoken corpora, largely because collecting and transcribing spoken data demands significant time and financial resources. This imbalance has contributed to a persistent “*written language bias*” in linguistics, where written language has traditionally been regarded as the ideal form and spoken language viewed as less structured or refined (Linell, 2005, 2019). Early linguistic studies and

grammars focused almost exclusively on written texts, further entrenching this bias (Carter and McCarthy, 2015). Although contemporary linguistics now recognizes the equal importance of spoken language, practical constraints continue to reinforce the dominance of written corpora in corpus-based research.

Despite growing recognition of the importance of spoken data, written corpora continue to dominate linguistic research. This is largely due to practical considerations: written texts are easier to compile, more readily available in digital formats, and significantly less expensive to process. For instance, adding one million words from electronic sources such as newspapers costs about ten times less than transcribing the same amount of spoken material (Burnard, 2002). However, recent technological advances have improved access to spoken corpora. Examples include BNC2014 (introduced in 2017), the updated London-Lund Corpus (2019), and private collections such as CANCODE (McCarthy, 1998). Despite these developments, building spoken corpora remains challenging. It requires extensive transcription, as well as efforts to ensure diverse speaker representation and contextual coverage (Love et al., 2017). In addition, spoken language tends to be structurally fragmented and lacks the formal conventions found in written texts, which can pose difficulties for researchers trained in clause-based analysis methods (Conrad, 2002).

The continued emphasis on written corpora has restricted research into spoken linguistic phenomena, particularly features such as turn transitions and prosodic cues, which are rare or entirely absent in written texts. Carter and McCarthy (2015) identify several elements that are characteristic of spoken interaction, including response tokens and hedging strategies, both of which fall outside traditional clause-based grammar models. These spoken features play a critical role in communication by signaling politeness, conveying emotions, and providing contextual cues that assist listeners in interpreting speaker intent. The study of such elements has also prompted a revision of conventional grammatical categories. Words traditionally classified as adjectives or adverbs, such as *fine*, *great*, *absolutely*, and *definitely*, often function as response tokens in conversation rather than solely fulfilling their grammatical roles. Hedging strategies add further complexity, as they can take many

linguistic forms, span multiple word categories, and shift functions depending on the conversational context.

2.8.1.4 Corpus Linguistics: Theory or methodology?

There remains an ongoing debate over whether corpus linguistics should be regarded as a theoretical framework or simply as a methodology. Some scholars argue that it functions as a paradigm capable of generating new research questions and perspectives. Sinclair (2004) emphasizes that linguistic analysis should rely on large empirical datasets drawn from authentic text corpora, rather than being shaped by pre-existing theories. By focusing directly on raw text, researchers are able to uncover natural patterns that might otherwise remain unnoticed (Huang, 2017a). However, concerns have been raised about the risks of over-reliance on annotated corpora, such as part-of-speech-tagged data, which may obscure rather than reveal natural language usage (Stubbs, 2009). Supporters of the theoretical perspective, including Sinclair (2004), argue that linguistic insights should emerge organically from the corpus itself, without the imposition of external theoretical frameworks. Nevertheless, the prevailing view among researchers treats corpus linguistics primarily as a methodology, even though its broader influence on linguistic research continues to shape both empirical inquiry and theoretical development.

Corpus linguistics is more widely regarded as a practical methodology for studying language rather than a theoretical framework. Meyer (2002) describes it as "a way of doing linguistics," distinct from subfields such as sociolinguistics and cognitive linguistics, which directly link language to social or cognitive frameworks (Reppen and Biber, 2015). As a methodological approach, corpus linguistics focuses on representing specific domains of language use and providing a flexible foundation for empirical research (Leech, 1992). Its independence from any particular theoretical orientation allows it to adapt to a wide range of research contexts (McArthur, Lam-McArthur, and Fontaine, 2018). Nevertheless, despite its largely methodological orientation, there is ongoing debate about how corpus linguistics ought to be defined. There remains no clear consensus on which techniques and procedures should formally constitute corpus-based research (McEnery and Hardie, 2012).

2.8.1.5 Types of corpus studies

Johansson (2011) classifies corpus studies into three main types: corpus-informed, corpus-based, and corpus-driven. Corpus-informed studies use corpora to illustrate existing linguistic theories without allowing the data to shape the research design. Corpus-based research tests, refines, or challenges established theories through a top-down model guided by prior assumptions (Huang, 2017a). In contrast, corpus-driven studies rely entirely on the corpus for both data and theoretical insights. This bottom-up approach allows findings to emerge directly from the data, minimizing the influence of existing frameworks and emphasizing corpus representativeness to reduce bias (Tognini-Bonelli, 2001).

In practice, many studies do not fall neatly into these categories. Tognini-Bonelli (2001) and McEnery and Hardie (2012) identify a fourth type—a hybrid approach—where researchers shift between corpus-based and corpus-driven strategies. Scholars may begin with a theory-based hypothesis but revise it in response to unexpected corpus patterns. For instance, a researcher may expect non-native speakers to prefer indirect hedges such as *it seems*, yet the corpus may reveal frequent use of *arguably* and prompt a reconsideration of the original claim. This flexible model allows sensitivity to empirical evidence while maintaining theoretical orientation. Therefore, corpus study types are best viewed as points on a methodological continuum rather than as rigid classifications.

Table 2.7 summarizes four principal categories of corpus studies, namely corpus-informed, corpus-based, corpus-driven and a hybrid type that reflects the convergence of these methodological approaches. The table synthesizes information from Johansson (2011), Tognini-Bonelli (2001), McEnery and Hardie (2012), and related research, and provides concise explanations, examples, and methodological labels for each type.

Table 2.7*Types of Corpus Studies*

Type	Explanation	Process	Example
Corpus-Informed	Uses corpora to support existing theories; corpus provides examples but does not drive analysis.	Top-Down -Starts from theory; corpus used to find examples that support or illustrate existing claims. Goal is to reinforce, not generate, theory.	Researcher applies a theory of hedging to corpus data, retrieving examples (e.g., maybe, possibly) that illustrate the concept.
Corpus-Based	Theory-driven analysis where the corpus plays a central role in testing, refining, or challenging established frameworks.	Top-Down -Guided by existing theory; corpus is used to evaluate its validity, potentially confirming, modifying, or rejecting assumptions..	A researcher tests whether NNSs hedge more than NSs in academic talk by analyzing corpus data to support or revise the hypothesis.
Corpus-Driven	Relies on corpus data without prior theoretical assumptions. Patterns and categories emerge from the data.	Bottom-Up No predefined theory; analysis begins with raw data. Theory is developed from emerging patterns.	Researcher finds frequent use of <i>seemingly</i> and <i>arguably</i> in a corpus, leading to new theoretical insights..
Hybrid Approach	Combines theory-driven and data-driven methods; corpus insights may revise initial hypotheses.	Hybrid (Top-Down + Bottom-Up) -Starts with theory, adapts based on emerging patterns. Integrates deductive and inductive reasoning.	A researcher expects indirect hedges like <i>it seems</i> , but corpus data reveals frequent <i>arguably</i> , prompting framework revision.

(Based on Johansson, 2011; Tognini-Bonelli, 2001; McEnery & Hardie, 2012)

2.8.1.6 Learner Corpus Research (LCR)

Learner Corpus Research (LCR) represents a central strand of corpus linguistics that focuses on the systematic investigation of learner language. Emerging in the 1980s as a response to traditional second language acquisition (SLA) methodologies, LCR gained wider recognition during the 1990s (Romero-Trillo, 2018; Paquot & Plonsky, 2017). Its primary aim is to analyze second-language (L2) production by comparing it with first-language (L1) corpus in order to identify patterns of overuse, underuse, and developmental variation in specific linguistic features (Granger, 1993, 1994; Romero-Trillo, 2018). This line of research is largely quantitative in nature and applies statistical techniques to detect systematic differences between learner and NSs language.

Beyond theoretical insight, LCR plays a practical role in language pedagogy by informing the design of instructional materials and teaching strategies. By pinpointing specific areas of difficulty, it supports the development of targeted interventions to better align teaching practices with learners' actual linguistic performance (Granger, 2002, 2008).

2.8.1.7 Major contributions and resources in LCR

Sylviane Granger has played a central role in the development of LCR and made foundational contributions that helped establish the field (Romero-Trillo, 2018). Her work led to the creation of key learner corpora that serve as essential resources for analyzing second language development. The International Corpus of Learner English (ICLE) contains essays written by advanced English learners from various first-language backgrounds (Granger et al., 2009). Complementing this, the Louvain International Database of Spoken English Interlanguage (LINDSEI) offers spoken data through structured interviews and monologues (Gilquin, De Cock, & Granger, 2010). The Cambridge Learner Corpus (CLC), based on exam scripts from a wide range of learners, facilitates research into language development across different proficiency levels (Nicholls, 2003). Similarly, the Michigan Corpus of Academic Spoken English (MICASE) provides academic speech samples from both NSs and NNSs and enables the analysis of spoken language in institutional contexts (Simpson et al., 2002). The Lounge Corpus focuses on informal spoken interactions by NNSs (Meunier et. al., 2015), while the UAM Learner English Spoken Corpus (UAMLESC) tracks longitudinal changes in the spoken English of Spanish learners (Romero-Trillo & Llinares-García, 2008).

Despite its significant contributions to second language research, LCR has faced certain criticisms. Some scholars argue that comparing NNSs and NSs varieties risks misrepresenting the unique nature of interlanguage. Ishihara and Cohen (2010) and Bley-Vroman (1983) emphasize that interlanguage should be treated as a legitimate linguistic system in its own right, rather than simply as a deficient version of the target language (Hunston, 2002). This view challenges the assumption that NNSs norms should always serve as the benchmark for learner performance. Nevertheless, other researchers support the comparative approach adopted in much of LCR. Romero-Trillo (2018) argues that identifying differences between learner and NSs productions allows for the detection of

specific areas of difficulty, which can then inform individualized pedagogical interventions. Similarly, Mukherjee (2005) maintains that comparative analysis not only sharpens understanding of grammatical accuracy, acceptability, and idiomaticity but also strengthens both applied research and language teaching practices.

Typical studies in LCR are characterized as corpus-based, quantitative, cross-sectional, and comparative in nature (Callies, 2015). Much of this research has concentrated on written data, particularly argumentative essays produced by advanced learners within academic settings (Callies, 2018). Common sources of data include standardized examinations, school essays, proficiency tests, and research reports (Friginal et al., 2017), which offer consistent formats for cross-linguistic comparison. As the field evolved, researchers have increasingly adopted advanced statistical methods to enhance the precision and depth of their analyses (Paquot & Plonsky, 2017). However, concerns have been raised about an over-reliance on traditional statistical significance tests, which may sometimes obscure more meaningful insights into learner behavior. In response, scholars have proposed alternative measures, such as dispersion statistics, which capture how linguistic features are distributed across different contexts (Paquot & Plonsky, 2017; Gries, 2006; Gablasova, Brezina, & McEnery, 2017). Best practices now suggest combining both frequency and dispersion measures to achieve a fuller and more accurate understanding of linguistic variation between learner and NSs populations.

2.8.1.8 Focus on spoken learner language

While written corpora predominate LCR, there is a growing interest in spoken data, which presents particular challenges due to its fragmented form and variability. Despite this, spoken corpora offer useful insights into qualities used differently in written language, such as hedging and discourse markers (Carter & McCarthy, 2015). Several studies have focused on pragmatic features in spoken learner language, particularly hedging and discourse marker use. Research on Norwegian learners, for instance, has revealed frequent underuse of hedging expressions (Hasselgreen, 2004; Sandal, 2016) and limited variation in hedging strategies even when learners demonstrate an understanding of their functions (Thomson, 2016). Similar patterns emerge in other learner groups. Spanish learners were found to underuse

PMs and to adopt a more formal speech style (Romero-Trillo, 2002), while French learners showed a preference for directness over hedging (Gilquin & Granger, 2015). Studies of Indonesian and Mexican learners also report difficulties in using hedging and politeness strategies appropriately in requests (Félix-Brasdefer, 2008). Meanwhile, investigations into Irish and German learners during study abroad programs indicate that extended exposure to the target language environment remains crucial for developing pragmatic fluency, particularly in hedging and mitigation (Schauer & Adolphs, 2006; Taguchi, 2006).

Research within the Turkish EFL context has similarly focused on pragmatic features of spoken English, with particular attention to discourse markers and pragmatic strategies. Several studies have investigated how Turkish learners and teachers engage with these features. Aşık (2015) examined Turkish EFL teachers' perceptions of discourse markers and reported that although teachers recognized their importance for fluency, they noted the absence of systematic teaching approaches. Aşık and Cephe (2013) compared Turkish EFL students' use of discourse markers with that of NSs and found that learners used a narrower and less varied range. Similarly, Zorluoğlu Özer and Okan (2018) analyzed discourse marker functions in classroom discourse and demonstrated their role in structuring interaction and managing classroom communication. Şahin-Kızıl and Kilimci (2014) extended the scope beyond discourse markers and explored recurrent multiword sequences in Turkish EFL learners' spoken interlanguage. Their analysis revealed differences in structural complexity and pragmatic function compared to NSs. However, despite these contributions, direct research on hedging in spoken English remains limited. Among the studies reviewed, Çoban (2020) stands out as the only work that offers a focused investigation of hedging. This study provides a detailed analysis of the forms and functions of hedging devices and distinguishes it from broader research on related pragmatic features such as discourse markers or modality. The findings suggested that although students associated hedging with native-like fluency, they often misunderstood its underlying pragmatic functions.

LCR continues to develop as a dynamic and evolving area within corpus linguistics. Its core function is to identify patterns of overuse, underuse, and developmental gaps in learner language, and to provide critical insights for both second-language pedagogy and the

refinement of SLA theories. Although LCR has faced criticism for relying heavily on native-like benchmarks as a standard for evaluating learner performance, it remains an essential tool for understanding the nature of interlanguage and informing strategies to support learner development. Looking ahead, the field is expected to move toward the use of more refined analytical tools, the integration of quantitative data with deeper qualitative interpretation, and an expanded emphasis on spoken data in order to capture pragmatic features vital to real-world communication.

2.8.2 Pragmatics

Pragmatics is a major branch of linguistics that focuses on how language functions in context and examines the ways in which speakers use language to achieve communicative goals (Huang, 2017a). Its intellectual roots lie in the philosophy of language, where Morris (1938) introduced a tripartite division of semiotics into *syntax*, *semantics*, and *pragmatics*. Syntax concerns the relationships between signs, semantics deals with the relationships between signs and their meanings, and pragmatics examines the relationships between signs and their users. Although pragmatic concerns appeared earlier, pragmatics emerged as an independent field in the 1970s, largely due to Grice's theory of communication, which offered a systematic account of how speakers convey meaning beyond the literal content of utterances. Grice's work established a foundational framework that shaped subsequent pragmatic studies. The term pragmatics gained broader acceptance in linguistic research in the 1980s and subsequently established itself as a key area of inquiry within linguistics (Archer et al., 2012).

Although pragmatics was initially perceived as a residual category in linguistic studies, often described by Bar-Hillel (1971) as a "*wastebasket*" for phenomena not adequately addressed by syntax or semantics, its status has evolved significantly. Today, pragmatics is recognized as a central and expanding subfield within linguistics (Huang, 2017a). Lakoff (1972) aptly described pragmatics as the domain concerned with "the interesting stuff about language" and emphasized its central role in the study of context-dependent meaning. The scope of pragmatics now extends across several specialized areas, including computational pragmatics, cognitive pragmatics, cross-cultural pragmatics, and interlanguage pragmatics—

the latter being particularly relevant to the present study. Pragmatics extends beyond its internal subfields and intersects with related disciplines such as semantics, second language acquisition, artificial intelligence, sociology, and neuroscience. This breadth demonstrates its interdisciplinary significance.

Pragmatic theory has evolved along two main traditions: the Anglo-American and the European Continental. The Anglo-American, or cognitive-philosophical, tradition treats pragmatics as a distinct component of linguistic theory and considers it on par with phonetics, syntax, and semantics (Huang, 2017a). It maintains a strict separation between semantics, which deals with literal meaning, and pragmatics, which addresses meaning derived from context. This tradition includes influential theoretical models such as Neo-Gricean pragmatics and relevance theory (Horn & Ward, 2006). In contrast, the European Continental, or sociocultural-interactional, tradition conceptualizes pragmatics as a broader perspective rather than a discrete linguistic component. Drawing on Morris's (1938) framework, it emphasizes the relationship between signs and their users (Verschueren, 2017). However, this binary division has been challenged. Verschueren (2017) argues that the use of geographical labels is problematic, as many European scholars also adopt component-based frameworks traditionally associated with the Anglo-American tradition.

As pragmatics has developed through various traditions and perspectives, ongoing debates continue to shape the field. These debates center on its boundaries with semantics and grammar, its overall scope, and the appropriate terminology for describing pragmatic phenomena (Archer et al., 2012). Reflecting these discussions, different scholars have offered varying definitions of pragmatics. Mey (1993) characterizes pragmatics as "the societally necessary and consciously interactive dimension of the study of language" and states that it is inherently social and interactive in nature. Crystal (1997) defines pragmatics in more operational terms as "the study of language from the point of view of users, [including] the choices they make, the constraints they encounter in using language in social interaction, and the effects their use of language has on other participants." (p.301). Offering a more streamlined definition, Huang (2007) describes pragmatics as "the systematic study of meaning by virtue of, or dependent on, the use of language."

Although pragmatics lacks a single, universally accepted definition, scholars consistently agree that it centers on the role of context in shaping meaning. Pragmatics examines the influence of social, cultural, and situational settings on communication and acknowledges that meaning cannot be fully understood unless these factors are considered. Rühlemann and Aijmer (2015) observe that every utterance responds to prior discourse and, in turn, shapes subsequent interaction. Moreover, the notion of context extends beyond the immediate linguistic environment. It encompasses the physical setting, the shared cultural knowledge and social practices that influence identity and interaction (Schiffrin, 1987a), and cognitive elements such as individual experiences and internalized knowledge. Aijmer (2018) further specifies that context includes preceding discourse, immediate textual co-occurrence, the physical environment, social relationships between interlocutors, and the interplay of shared and personal knowledge. These complex layers of context have significant implications for pragmatic research, which often prioritizes qualitative methods. Rather than isolating linguistic elements, pragmatic analysis favors a horizontal reading approach that explores entire stretches of discourse within their full situational frames. As a result, pragmatic studies tend to focus on smaller, richly contextualized datasets to capture the nuances of real-world communication (Rühlemann & Aijmer, 2015).

2.8.2.1 Cross-Cultural, Contrastive, Intercultural, and Interlanguage Pragmatics

Contrastive pragmatics examines how speakers from different cultural backgrounds express social norms and values through language, therefore provides information regarding the influence of culture on communicative behavior (Holmes et al., 2020). This area intersects with several related domains, including cross-cultural pragmatics, intercultural pragmatics, and learner corpus research within pragmatics (Romero-Trillo, 2018; Aijmer, 2020). Cross-cultural pragmatics focuses on comparing language use among distinct cultural groups to identify both commonalities and divergences in pragmatic behavior (Kecskes, 2017). In contrast, intercultural pragmatics centers on communication between speakers from different cultural and linguistic backgrounds and analyzes how meaning is negotiated through a shared language, often a lingua franca (Kecskes, 2017).

Interlanguage pragmatics focuses on how NNSs use a target language to perform communicative actions in context (Kasper & Rose, 2002). At the center of this field is the concept of pragmatic competence, which refers to the ability to use language appropriately for specific purposes and to interpret meaning based on context (Thomas, 1983). Fraser (2010) expands this definition to include the capacity to express intentions clearly and to understand others' communicative goals within varying sociocultural settings. Pragmatic competence consists of two interrelated components: pragmalinguistic competence, which involves knowledge of linguistic forms used to perform speech acts (e.g., *I'm sorry, I apologise, Please forgive me*) (Félix-Brasdefer, 2017), and sociopragmatic competence, which entails an understanding of the social norms and contextual variables that govern appropriate language use. A key challenge in SLA is that pragmatic development often progresses more slowly than grammatical learning, which can result in pragmatic fossilization—learners may achieve grammatical accuracy but remain limited in their ability to adapt language use across diverse social contexts (Romero-Trillo, 2002, 2018). These challenges indicate the need for explicit instruction that supports both the linguistic and social dimensions of language use.

2.8.3 Corpus Linguistics and Pragmatics in shaping Corpus Pragmatics

While traditional pragmatics emphasizes interpreting contextual meaning through close, qualitative analysis—typically via horizontal reading of small conversational datasets (Aijmer, 2018)—corpus linguistics takes a contrasting approach. It employs vertical reading and large-scale, quantitative methods to identify statistical patterns across extensive corpora (Gries, 2009), relying on frequency-based evidence to reveal how often linguistic forms occur and whether they indicate broader language use. The integration of these two orientations—qualitative pragmatics and quantitative corpus linguistics—has led to corpus pragmatics, a framework that combines contextual sensitivity with statistical rigor. By supporting both horizontal and vertical analysis, it enables a more comprehensive investigation of pragmatic phenomena (Rühlemann & Aijmer, 2015). These key distinctions are summarized in Table 2.8.

Table 2.8*Core Differences Between Corpus Linguistics, Pragmatics, and Corpus Pragmatics*

Approach	Focus	Methods	Example
Corpus Linguistics	Quantitative; identifies patterns in large datasets; form-to-function mapping	Vertical reading, frequency counts, statistical analysis	Tracks modal verbs like might or would across genres to infer function
Pragmatics	Qualitative; contextual focus; function-to-form mapping	Horizontal reading, close analysis of smaller datasets	Examines how I think or maybe signal politeness or tentativeness
Corpus Pragmatics	Mixed-methods; integrates quantitative and qualitative; bidirectional mapping	Combines vertical and horizontal analysis; links forms with functions and vice versa	Analyzing hedging adverb frequencies in webinars (Form-to-Function) and their contextual use for communicative aims (Function-to-Form).

2.8.3.1 Form-to-function and function-to-form approaches

Corpus pragmatics generally follows two main methodological orientations: the form-to-function and the function-to-form approaches. The form-to-function approach begins with specific linguistic forms and investigates the range of pragmatic functions they perform, often through frequency-based and inductive analysis. In contrast, the function-to-form approach starts with a targeted pragmatic phenomenon and seeks to identify the linguistic forms used to express it across discourse contexts. Although they differ in their starting points, the two approaches are not mutually exclusive. Researchers frequently adjust their methods according to the research objective, the design and structure of the corpus, and the complexity of the pragmatic feature under investigation (Aijmer, 2018; Rühlemann & Aijmer, 2015). The following sections will outline the key procedures typically associated with each of these approaches.

2.8.3.1.1 Form-to-Function

In form-to-function studies, researchers start with specific linguistic forms—such as adverbs, modal verbs, or hedging expressions—and investigate the range of pragmatic functions these forms perform across contexts (Ädel & Reppen, 2008; Aijmer, 2018). This approach

typically follows a bottom-up process, so patterns emerge from authentic language use rather than from the application of pre-established functional categories. A major advantage of form-to-function research is its ability to uncover the multifunctionality of forms. However, this flexibility also poses challenges, as individual forms may realize different functions depending on context, and necessitates careful manual analysis to ensure accurate classification (Aijmer, 2018).

Methodologies in form-to-function research

In form-to-function studies, researchers begin with specific linguistic forms—such as adverbs, modal verbs, or hedging devices—and examine the range of pragmatic functions these forms serve across various contexts (Ädel & Reppen, 2008; Aijmer, 2018). This approach generally follows a bottom-up trajectory, which allows functional patterns to emerge from authentic language data rather than imposing predetermined categories. One of the main strengths of form-to-function analysis lies in its capacity to uncover the multifunctionality of linguistic forms. However, this same flexibility introduces challenges, as a single form may carry different pragmatic functions depending on the context. Therefore, manual analysis is often required to ensure accurate interpretation (Aijmer, 2018).

Methodologies applied in form-to-function research vary according to corpus size and the nature of the forms under investigation. Table 2.9 summarizes the principal techniques used in this approach, including one-to-one searching, sampling, sifting, and frequency-based listing. These methods enable researchers to trace patterns of usage while managing ambiguity and contextual variability.

This multi-step framework supports both top-down and bottom-up analyses which helps researchers trace patterns of pragmatic use across diverse contexts while accounting for ambiguity and variability inherent in natural language data.

Table 2.9*Common Techniques in Form-to-Function Corpus Research*

Method	Description	Example Sources
One-to-one Searching	Retrieves all instances of a target form using part-of-speech-tagged corpora. Though this may yield high recall, manual validation is necessary due to pragmatic ambiguity.	Ädel & Reppen (2008); Rühlemann & Aijmer (2015)
Sampling	Selects a representative subset of data when full corpus analysis is unfeasible. Enables manageable but principled investigation of pragmatic functions.	O'Keeffe (2018)
Sifting	Filters sampled data to remove non-relevant or ambiguous uses, particularly important for polysemous forms like <i>well</i> that perform multiple discourse or grammatical roles.	Rühlemann & Clancy (2018)
Frequency-Based Listing	Begins with a frequency list of corpus forms and investigates how high-frequency items function pragmatically across genres or registers.	Rühlemann & Clancy (2018)

2.8.3.1.2 Introduction to function-to-form

In function-to-form research, the investigative direction is reversed. Instead of beginning with specific linguistic forms, researchers start from a targeted pragmatic function—such as expressing doubt, politeness, or approximation—and explore which linguistic forms realize that function across discourse contexts (O’Keeffe, 2018; Kallen & Kirk, 2012). This top-down approach enables a focused examination of how communicative goals are encoded through lexical, grammatical, or discourse features.

Methodologies in function-to-form research

Function-to-form studies explore how communicative intentions are realized through linguistic forms. Methodologically, these studies lie on a continuum between corpus-based and corpus-driven approaches and vary by the degree to which hypotheses guide analysis versus patterns that emerge from the data itself (O’Keeffe, 2018, p. 599). Researchers may begin with expectations about the forms used to express a function, but the analysis often evolves in response to corpus evidence.

This methodological flexibility allows for both anticipated and unforeseen realizations of pragmatic meaning. Table 2.10 outlines the main techniques applied in function-to-form investigations:

Table 2.10

Primary Techniques in Function-to-Form Corpus Investigations

Technique	Description	Sources
One-to-One Searching	Directly retrieves instances of a pragmatic function (e.g., apologies, compliments) in annotated corpora. Manual checking is often required due to contextual ambiguity.	Kallen & Kirk (2012); Weisser (2015); Rühlemann & Aijmer (2015)
Sampling, Searching, Sifting	Researchers select a manageable corpus sample, search for target functions, and filter instances to ensure they serve the intended communicative purpose.	Garcia McAllister (2015)
Elicitation-Based Seeding	Expressions identified in DCTs or similar methods are used to initiate corpus searches and analyze their frequency and contextual variation.	Schauer & Adolphs (2006)
Refined Retrieval in Large Corpora	More advanced methods (e.g., IFIDs, metadata, collocational profiling) help improve precision when analyzing large datasets.	Deutschmann (2003); Lutzky & Kehoe (2017a, 2017b)

These methods support function-to-form studies by enabling systematic investigation into how pragmatic meanings are realized across diverse forms and contexts. Their use also reflects the conceptual overlap between form-to-function and function-to-form research, where many studies shift between approaches depending on emerging patterns.

Rather than rigid categories, these orientations represent methodological endpoints on a continuum (Tognini-Bonelli, 2001; McEnery & Hardie, 2012). For example, a study may begin with the assumption that academic speakers prefer indirect hedges (e.g., *it seems*) but later adjust focus if more assertive alternatives (e.g., *arguably*) prove more frequent. Such adaptability ensures that analysis remains rooted in empirical data while still addressing pragmatic intentions.

Despite its benefits, function-to-form research also faces challenges. A major issue is the contextual dependency of meaning, which can obscure the link between form and function (O'Keeffe, 2018). For instance, *sorry* may function as an apology or as a softening device in a clarification request, depending on context. Accurate interpretation, therefore, often requires manual validation or detailed analytic protocols.

Technological advancements in corpus linguistics have supported more refined approaches to such problems, especially in contrastive corpus pragmatics. This emerging field brings together pragmatics, corpus analysis, and contrastive linguistics to examine variation across languages and genres (Aijmer, 2020). Studies in this domain frequently rely on parallel corpora for direct cross-linguistic comparison or on comparable corpora when translations are unavailable (Holmes et al., 2020; Aijmer, 2020, p. 12).

2.8.4 Learner corpus pragmatics

Building on the expanding role of corpus-based approaches in pragmatics, recent developments have prompted discussions around the notion of "*learner corpus pragmatics*," although the term is not yet formally established within the field. This emerging area potentially describes research that integrates interlanguage pragmatics, LCR, and corpus pragmatics to explore how language learners use pragmatic features.

Learner corpora provide a substantial body of authentic learner language that supports empirical research into pragmatic competence (Vyatkina & Cunningham, 2015). They allow researchers to track patterns of use in a systematic way and offer a more detailed, data-driven understanding of interlanguage development. Furthermore, the availability of extensive learner corpora has encouraged a methodological shift away from earlier pragmatic studies that relied heavily on introspection and invented examples. Scholars increasingly advocate for the re-examination of pragmatic phenomena through the lens of authentic learner data and emphasize the need for evidence-based analysis to better understand real-world language use (Romero-Trillo, 2017).

The intersection of interlanguage pragmatics and LCR initially took shape through word-based studies that primarily adopted a form-to-function approach (Vyatkina & Cunningham,

2015, p. 283). These early investigations focused on identifying specific linguistic forms and analyzing the range of pragmatic functions they served in learner language. In studies of spoken learner language, researchers have placed significant focus on how learners use discourse markers, given their essential role in structuring conversation and conveying social and interpersonal nuances. Examples of such word-based studies can be found across analyses of both written and spoken learner texts, and reveal an early emphasis on mapping individual linguistic items to their contextual functions (Vyatkina & Cunningham, 2015, pp. 284–286).

Learner Corpus Pragmatics continues to face a range of theoretical and methodological challenges, as noted by Vyatkina and Cunningham (2015). One of the primary methodological difficulties lies in the limited access to contextual detail and metadata, especially when compared to controlled data collection methods such as DCTs (O'Keeffe et al., 2020). Another key limitation is the scarcity of pragmatically annotated learner corpora, which restricts researchers' ability to conduct detailed function-to-form analyses of pragmatic features. On the theoretical side, there is a need for a comprehensive framework that integrates both pragmalinguistic and sociopragmatic dimensions of pragmatic competence. Addressing this gap, Romero-Trillo (2018) proposed the Polyhedric Pragmatic Model, which accounts for how interlocutors draw on existing pragmatic knowledge and interpret communicative intentions to develop new competencies in the target language. Despite these conceptual advances, learner corpus pragmatics remains at a relatively early stage of development and requires further research to clarify the role of corpora in tracing the progression of learner pragmatic abilities.

3 THEORETICAL AND ANALYTICAL FRAMEWORK

This section develops the theoretical and analytical foundation necessary for investigating adverbial hedging in spoken academic discourse. Building on the issues identified in the literature review, it defines key concepts, explains the grammatical, pragmatic, and semantic properties of hedges, and justifies the form-based categorization adopted in this study. This framework enables a systematic comparison of hedging usage between NNSs and NSs.

3.1 Grammatical, Pragmatic and Semantic Properties of Hedges

This study examines adverbial hedges in spoken academic discourse. Hyland (1998a) notes that defining hedges is complex due to their multifunctionality and varied grammatical forms. Adverbial hedges—like *possibly*, *probably*, and *perhaps*—are prominent in spoken academic settings (Fraser, 2010). These expressions help speakers adjust claim strength and introduce uncertainty when presenting arguments (Salager-Meyer, 1994). In academic communication, speakers must balance authority and approachability, with adverbial hedges helping manage stance and credibility.

Grammatically, adverbial hedges modify statement certainty, while pragmatically, they show politeness and signal respect for alternative viewpoints. This study compares how NNSs and NSs use these strategies in academic webinars, examining cross-linguistic variation in communication practices.

Adverbial hedges function in several ways:

1. Modifying linguistic units: They modify sentence parts by introducing vagueness. Examples include *approximately* and *somewhat*, which soften statements while preserving meaning (Lakoff, 1972).
2. Modifying truth value: Adverbials like *possibly* and *probably* make statements less definite, lowering epistemic commitment.
3. Signaling speaker attitude: Adverbials like *likely* and *presumably* express careful positioning toward claims.
4. Contributing to interpersonal functions: Hedges like *frankly* and *honestly* moderate relationships by softening tone and promoting politeness.

In this study, the terms *mitigator*, *attenuator*, and *downtoner* are treated as interchangeable with *hedges*, while *upgrader* and *booster* refer to intensifiers. Collectively, these are understood as modifiers—linguistic devices that adjust the strength of a statement. Hedges reduce imposition and soften claims, often serving politeness functions, while boosters reinforce certainty and assertiveness. As Hyland (1998b) notes, both strategies play a crucial role in academic discourse: hedges help mitigate overstatement, while boosters strengthen arguments when greater conviction is needed.

3.1.1 Grammatical properties

Hedging can be examined through grammatical, semantic, and pragmatic dimensions, each revealing how speakers express caution or reduce commitment (Hyland, 1998a; Crompton, 1997). Grammatical studies identify syntactic forms like modal verbs and adverbials, semantic studies explain meaning vagueness, while pragmatic studies examine communicative intentions. The linguistic forms of hedges are context-dependent, making comprehensive lists impractical (Hyland, 1996b; Fraser, 2010). Hedging devices are categorized into groups like modal verbs (*might*, *could*), adverbials (*probably*, *perhaps*), and epistemic expressions (*it seems that*), with their properties determined by syntactic classification and communicative functions.

Hedging reflects judgments about certainty through lexical, grammatical, and strategic devices (Hyland, 1994). Common realizations include modal verbs, expressions, if-clauses, passive constructions, and impersonal phrases (Hyland, 1994, p. 240). Markkanen and Schröder (1992) identified pronouns and modal verbs as key syntactic resources. Hedging devices span across parts of speech (Darian, 1995) and are categorized into prosodic, lexical, syntactic, and strategic types, with lexical devices appearing most frequently (Hyland & Milton, 1997). In academic discourse, hedging includes impersonalizing statements and acknowledging limitations to moderate assertions while maintaining credibility (Hyland, 1998a, p. 4).

The grammatical categories of hedging reflect how speakers manage certainty and interpersonal stance, as illustrated in Holmes's (1984b) structured overview of hedging strategies, summarized in Table 3.1.

Table 3.1*Grammatical and pragmatic devices used for hedging across multiple levels of language*

Categories	Devices	Examples	Explanations
Prosodic	Fall-rise intonation	<i>You're sure 'you're o'kay?</i>	Rising tone signals uncertainty or politeness.
	Weak stress/low volume	<i>Put the TV `on...</i>	Low volume reduces assertiveness.
	Tag question	<i>He's not here, is he?</i>	Softens assertion, invites confirmation.
Syntactic	Double negation	<i>not unreasonable /not unlikely</i>	Reduces force, adds subtlety
	Passive /impersonal	<i>It is reported that...</i>	Avoids direct responsibility.
Lexical	Speaker-oriented	<i>I think, I guess, I suppose, it seems to me</i>	Shows personal stance or uncertainty.
	Hearer-oriented	<i>If you don't mind, would it be okay if...?</i>	Softens requests, adds politeness.
	Content-oriented lexeme: Phrases and verbs expressing uncertainty, possibility, or shifting responsibility.	a. Epistemic modals:	possibly, probably, likely
		Sentence adverbs:	allegedly, reportedly, presumably
		Reporting verbs:	argue, claim, suggest, maintain
		Appearance-based adverbs:	theoretically, technically, seemingly
		Attenuating adverbs	quite, rather, somewhat, pretty
	Topic shift	<i>By the way, it reminds me..</i>	Shifts topic without abruptness
Discoursal	Hesitation/filler	<i>I mean... you know...</i>	Marks hesitation or softens tone
	Strategic hedging	Discussing limitations, e.g., in findings	Signals tentativeness in claims

(Adapted from Holmes, 1984b and related sources)

3.1.2 Pragmatic properties

Grammatical hedges vary widely, but their pragmatic functions follow predictable patterns. Halliday (1970, 1979) outlines three language modes: textual, interpersonal, and ideational. The ideational mode, called propositional mode by Traugott (1982) and Brinton (1996, p. 38), shows how language represents the speaker's experience of external and internal worlds. It includes references to actions, participants, and circumstances shaping propositional meaning (Halliday, 1979). Hedges serve a propositional function when modifying category membership or adjusting statement factuality. The interpersonal mode addresses speaker attitudes, evaluations, and roles between speaker and hearer. Halliday (1979) states this manifests through mood, modality, tone, and intensity. Interpersonal hedges strengthen solidarity, reduce proposition commitment, show politeness, and project honesty. Adverbials like *frankly*, *honestly*, and *perhaps* exemplify this by softening claims or indicating alternatives.

The textual mode organizes language into coherent discourse through theme-focus structures and cohesive relations (Halliday, 1979). While hedges rarely function as textual organizers, expressions like *by the way* signal topic shifts. Propositional and interpersonal hedges serve textual roles through phrases like *that is to say* and *generally speaking*, which guide interpretation. Leech (1983, pp. 57–62) critiques Halliday's framework, arguing that integrating propositional, interpersonal, and textual modes into grammar overlooks the grammar-pragmatics distinction. Leech views interpersonal and textual components as pragmatic constraints on propositional content, arguing that hedging is pragmatic as speakers qualify statements for social reasons. Holmes (1984b) frames hedging as a strategy for modifying illocutionary force in speech acts. Representative acts can be softened by indicating speaker commitment, expressive acts by adjusting emotional intensity, and directive acts by reducing demand strength.

Holmes (1984b, p. 348) identifies two primary motives for modifying illocutionary force: modal meaning and affective meaning. Modal meaning relates to speaker certainty about content, while affective meaning concerns speaker stance toward the hearer. Modifying force allows speakers to express politeness or caution (Holmes, 1984b, p. 349; 1982). Holmes

connects modal and affective meaning to propositional and interpersonal functions. Her inclusion of discoursal devices implies hedges contribute to discourse organization. Boosting positive speech acts reinforces solidarity, while hedging increases social distance. Boosting negative speech acts amplifies emotional intensity. In neutral speech acts, hedging can reduce epistemic commitment while affecting interpersonal dynamics in teacher-pupil exchanges.

3.1.3 Semantic properties

Hedges share fundamental semantic features despite diverse functions. Their key characteristic is modifying illocutionary force by introducing gradations of certainty rather than absolutes. The core requirement is modifiability - the ability to adjust proposition strength. Ransom's (1991) option theory places mitigating expressions on a continuum based on modification degree. Expressions form what Nuyts (2001) calls a scalar structure of meaning, supported by Holmes (1988) and Hyland (1998b), who identify scales of assertiveness and certainty. Here, a hedge's obligatory semantic property is its modifiability to introduce variations in speech acts' strength.

While modifiability is essential, grammar, semantics, and pragmatic intent must combine for an expression to function as a hedge. Fraser (2010) and Crompton (1997) note that semantic modifiability alone doesn't qualify a hedge; it must serve a pragmatic purpose. The word *some* acts as a hedge when approximating quantity but not when specifying a subset. Prince et al. (1982) and Hyland (1998a) argue that pragmatic intention to express uncertainty distinguishes hedges from potential hedging forms. A hedge's realization depends on both modifiability and pragmatic use.

The features defining hedges—grammatical, semantic, and pragmatic—vary in prominence by item. Fully grammaticalized hedges like *perhaps* and *might* are easily recognized as their function is to qualify propositions. Items like *some* and *few* need pragmatic context to serve as hedges, as their basic roles may involve specification rather than mitigation. Nuyts (2001) describes this as partial grammaticalization, where verbs like *think* perform both propositional and hedging functions based on context. Many hedging devices evolve from lexical items into PMs expressing epistemic stance or discourse organization (Brinton, 1996;

Heine, 1992; Ramat, 1992; Traugott, 1982). An item's function as a hedge reflects its position between full grammaticalization and context-dependent use.

Few hedges are fully grammaticalized and recognizable without context. While *perhaps* and *might* are consistently identified as hedges, most hedging devices require interpretation through context and speaker intention (Markkanen & Schröder, 1997; Clemen, 1997). Hedges emerge from the interaction of linguistic forms, situations, and shared knowledge between speakers. Pragmatic properties are more important than grammatical features in hedge identification. Crompton (1997) and Hyland (1998b) emphasize that effective hedge identification requires analyzing both formal features and communicative purposes.

3.2 Establishing Hedging Categories for the Study Based on Form

No strict limitation exists on grammatical categories that function as hedges. As noted by Hyland (1998a), Crompton (1997), and Fraser (2010), hedging occurs across forms based on pragmatic use rather than grammar. The classification of an item as a hedge depends on its discourse operation. Certain linguistic domains provide rich sources of hedges by expressing scalarity. Quantificational adverbials (*approximately, roughly*), modal adverbials (*perhaps, possibly*), and PMs (*frankly, honestly*) represent resources for modulating speaker commitment and certainty (Nuyts, 2001; Holmes, 1988; Hübler, 1983; Aijmer, 2002; Fraser, 2010). PMs perform hedging functions through managing interpersonal relations (Müller, 2005). This study focuses on adverbial forms for adjusting epistemic stance in spoken academic discourse. Three categories of adverbial hedges are established: modal, pragmatic-marker, and quantificational adverbial hedges.

3.2.1 Modal adverbs

Modality forms the core framework of hedging. Scholars agree that modal auxiliaries are central to modality (Palmer, 1986). Broader accounts include adjectives, adverbs, nouns, and mental-state phrases. This study focuses on modal adverbs, which modulate speaker certainty and epistemic stance. Modal adverbs like *possibly, probably, and perhaps* adjust speaker commitment to truth values, providing flexible means for expressing probability without altering structure. As Hyland (1998a) and Holmes (1988) note, modal adverbs are frequent

hedging devices in academic discourse, particularly in spoken language where speakers manage certainty in real-time.

This study uses Palmer's (2001) framework of four modality types: epistemic, evidential, deontic, and dynamic. Epistemic modality concerns judgments about proposition probability based on knowledge (Lyons, 1977; Palmer, 2001). Deontic modality involves obligations from external authority (Lyons, 1977; Bybee & Fleischman, 1995). Evidential modality relates to information sources, covering direct knowledge and inference (Palmer, 2001). While epistemic modality involves truth judgments, evidential modality identifies judgment basis. Deontic modality stems from external obligations, dynamic modality from internal capacities. Modal adverbs encode epistemic or evidential meanings, with adverbs like *presumably* expressing both functions, while *seemingly* and *apparently* signal evidential modality. This study examines how these modal adverbs contribute to hedging in academic discourse.

Epistemic modality and hedging overlap, both addressing the speaker's evaluation of truth likelihood (Namsaraev, 1997). While some distinguish epistemic modality from hedging, this study treats them as related since modal adverbs like *probably* and *presumably* intersect epistemic judgment and pragmatic modulation. Deontic modality, expressing obligation or permission, often strengthens speaker claims (Meyer, 1997, p. 31). However, specific deontic necessity uses can hedge by shifting responsibility from the speaker. Statements like *I have to have it* and *I could not help doing it* show speakers constrained by external necessity, limiting agency and protecting face.

Abilitive modality, expressing possibility or ability to perform actions, supports hedging when writers shift responsibility to external methods (Meyer, 1997, p. 38). Modal expressions like *can* suggest ability derives from methodology rather than speaker authority. While abilitive modality expresses capability, in academic contexts it serves as hedging when findings are presented tentatively. Interpreting modal adverbials requires distinguishing between ability statements and hedged expressions.

Meyer (1997, pp. 38–39) outlines four ways abilitive modality functions as hedging. First, ability hedges appear when speech act verbs are used in imagined dialogue, with adverbials

like *conceivably* in statements like *what can conceivably be said is....* Second, abilitive expressions show politeness through adverbials like *reasonably* in phrases such as *we can reasonably agree that....* Third, ability hedges weaken assertions via verbs of discovery with adverbials like *apparently*, as in *the phenomenon can apparently be found in studies*. Fourth, abilitive modality questions knowledge completeness using adverbials like *partially*, as in *as far as can provisionally be ascertained...* Fraser (1975, p. 199) notes that ability-based hedging occurs when ability is newly acquired, marked by adverbials like *now*, as in *by now, the following can tentatively be confirmed*, positioning the speaker as cautious about epistemic limitations.

3.2.1.1 Modality and hedging through modal adverbials

Evidential modality overlaps with hedging as both concern speaker's relationship to knowledge claims. Chafe (1986, p. 271) defines evidentiality as expressing attitudes toward information sources and reliability, aligning with hedging. Evidential modality manifests through belief, induction, hearsay, or deduction. Palmer (2001, p. 35ff.) classifies evidentiality as related to reported sources or sensory evidence. While *apparently* is one of few clear evidential adverbials in English, terms like *seemingly*, *reportedly*, and *allegedly* function as hedges by attributing claims to indirect sources. These adverbials let speakers distance themselves from full commitment. Nuyts (2001) and Aikhenvald (2004) note that evidential adverbials blend epistemic judgment with inferential information recognition.

Nuyts (2001) argues evidential meaning emerges from context, not inherent to modal expressions. In academic discourse, epistemic evaluations reflect shared knowledge. While scholars like Watts (1984) and Hengeveld (1988) emphasize modal adverbs' subjective nature, Nuyts (2001, pp. 65–66) suggests adverbs like *probably* are neutral without clear context. Modal adverbs adjust meaning based on rhetorical stance, audience expectations, and genre conventions. Aikhenvald (2004) notes modal adverbs' evidential meaning requires pragmatic inference, supporting their role as hedging tools.

Nuyts (2001, p. 66) notes that modal adjectives carry evidential meaning in impersonal constructions like *it is probable that...*, where the copula links modal qualification to the situation. However, evidential meaning varies across syntactic forms, with double-negation

structures conveying higher epistemic subjectivity (Nuyts, 2001, p. 68). This study focuses on modal adverbs rather than adjectival realizations. Modals rarely express inherent evidentiality; their evidential meaning emerges from context (Nuyts, 2001). In scientific writing, modal adverbs like *presumably* and *reportedly* gain evidential readings contextually. Modal adjectives in impersonal constructions show stronger evidentiality, though evidential strength reduces hedging potential as information appears externally validated. Hedging through modal adverbs uses epistemic modality, with deontic or dynamic readings contributing (Palmer, 2001; Nuyts, 2001).

Table 3.2

Modality Types and Their Hedging Functions in Academic Discourse

Modality Type	Description	Hedging Mechanism	Adverb Examples	Other Examples
Epistemic Modality	Expresses uncertainty or possibility.	Reduces certainty to express doubt.	possibly, probably, maybe, perhaps,	<i>It might rain. This result could suggest...</i>
Deontic Modality	Relates to necessity or obligation	Shifts responsibility to external norms.	(Rare with adverbs)	<i>It must be done. You ought to consider....</i>
Dynamic Modality	Indicates ability or intention.	Uses polite forms to soften intent.	<i>to soften intent. (in speculative cases)</i>	<i>I would like to suggest... I can confirm...</i>
Evidential Modality	Refers to source or reliability of info.	Attributes claim to evidence; reduces commitment.	<i>apparently, obviously</i>	<i>It is apparent that...It is likely based on...</i>

(Adapted from van der Auwera & Plungian, 1998; Palmer, 2001; Nuyts, 2001)

Epistemic modality relates to hedging through certainty assessments (Nuyts, 2001; Palmer, 2001). Modal adverbs hedge by reducing speaker commitment to factuality. Deontic modality enables hedging by shifting responsibility to norms, while dynamic modality supports hedging through indirect performance (Palmer, 2001). Evidential modality's hedging depends on context rather than lexical properties (Chafe, 1986; Nuyts, 2001). These

modality types and hedging mechanisms are summarized in Table 3.2. Hedging through modal adverbs relies on epistemic modality, with context-specific contributions from deontic and dynamic readings.

3.2.2 Pragmatic markers

The study of PMs has generated numerous overlapping terms. Brinton (1996) identifies over twenty labels, including discourse marker (Schiffrin, 1986, 1987), PM (Brinton, 1996; Fraser, 1996), discourse connective (Blakemore, 1987, 1988), and hedge (Brown & Levinson, 1978). Brinton prefers *pragmatic marker* for its ability to cover words like *actually* and phrases like *you know* while emphasizing their functional role (Brinton, 1996, p. 29). This study adopts Brinton's terminology as it best captures these markers' pragmatic and hedging roles in spoken academic discourse.

PMs form a heterogeneous set from diverse grammatical sources (Fraser, 1988, 1990). They have been categorized as interjections (James, 1972), adverbs (Stubbs, 1983), function words (Fries, 1952), and verbs, conjunctions, and clauses (Fraser, 1988). Their inventories vary: Keller and Warner (1976, 1979) list over 500 items, while Fraser (1988, 1990) applies stricter criteria. Given these inconsistencies, Brinton (1996, p. 32) suggests building a practical inventory based on scholarly evaluation.

PMs occur mainly in spoken language and contribute minimally to propositional content (Fraser, 1990; Schiffrin, 1986). Their semantic shallowness complicates translation (Svartvik, 1979). While grammatically optional (Fraser, 1988), they are pragmatically essential for guiding discourse interpretation and managing speaker-listener relationships (Fraser, 1990). Their ability to mitigate claims makes them effective hedging devices.

PMs, though grammatically optional and semantically shallow, are pragmatically necessary for natural, coherent speech (Brinton, 1996, pp. 35–36). Their absence makes conversation sound awkward or impolite. They manage discourse boundaries, turn-taking, information status, and discourse repair (Brinton, 1996, pp. 37–38; Levinson, 1983). PMs express subjective reactions, hedge statements, and maintain social bonds through politeness and cooperation.

Brinton (1996, p. 38) applies Halliday's (1979) three-mode model: textual mode for structure and coherence, interpersonal mode for speaker attitudes, and ideational mode when markers frame topic shifts. Adverbials like *generally speaking* and *obviously* maintain coherence while modifying propositions. Nikula (1997, pp. 191–192) calls these "implicit" hedges as they influence meaning interpretation. Some markers serve textual functions, organizing discourse through words like *because*, *if*, and *but* (Keller, 1979, p. 220). They segment discourse for comprehension (Erman, 1986, p. 146) and connect segments (Even-Zohar, 1982, pp. 179–180). Others fulfill interpersonal functions - expressions like *you see* and *you know* prevent conversational gaps (Edmonson, 1981, p. 1554) and maintain flow (Brown, 1977, p. 109). These markers align communication with speaker attitudes (Stubbs, 1983, p. 70; Östman, 1981, p. 5; 1982, p. 152) and reinforce social solidarity (James, 1983, p. 193).

Despite their diverse grammar, PMs perform three core functions: structuring discourse, shading meaning, and managing relationships. Classification based on pragmatic function provides the best framework for understanding their role in hedging and discourse management.

3.2.2.1 Connections between pragmatic markers and hedges

PMs overlap with hedging based on their textual, propositional, or interpersonal functions. Structural markers like *because*, *if*, *and*, *but*, *or*, and *so* typically don't act as hedges. However, markers like *if* in *if you like* can soften claims, and *or* moderates reformulations. Some textual markers function as hedges when affecting commitment or relational tone.

PMs with propositional roles hedge by modifying statements through clarification or correction. Adverbials like *actually*, *obviously*, *exactly* clarify while shifting blame from the speaker. Others like *generally*, *strictly speaking*, naturally limit claims to specific conditions. Subjective markers like *personally*, *in my opinion* localize assertions to the speaker's perspective. PMs can clarify claims through reformulation. Markers like *I mean*, in other words act as propositional pragmatic-marker (PPM) hedges. Others like *you know* and *you see* function as interpersonal pragmatic-marker (IPM) hedges by fostering cooperation. Parentheticals like *I think* serve both functions, hedging while managing rapport.

Pragmatic-markers fall into textual (TPM), propositional (PPM), and interpersonal (IPM) categories. They differ from explicit hedging devices through implicitness. Their effects blend shielding and approximating, while serving discourse organization roles. Their downtoning effects require contextual interpretation. Pragmatic-marker hedges demonstrate multifunctionality. Adverbials like *admittedly*, *hopefully* express politeness, corrections, or hedged assertions depending on context. Not every PM involves hedging; *well* has multiple functions but few relate to hedging. Compared to shields and approximators, pragmatic-marker hedges work more subtly and context-sensitively.

3.2.3 Quantificational adverbs

Quantificational hedges use adverbs to express quantity, frequency, and degree, softening claims and signaling uncertainty. Frequency adverbs like *often* and *seldom* allow flexible generalizations (Quirk et al., 1985), while degree adverbs such as *about* and *somewhat* adjust intensity (Quirk et al., 1985). Quantity expressions like *some* and *few* limit statement strength, balancing precision and tentativeness in academic discourse (Hyland, 1998b; Salager-Meyer, 1994). Nuyts (2001) notes that hedging relies on scalar adverbs indicating partial certainty, while polar expressions like *always* imply absoluteness.

The pragmatic use of quantificational adverbs depends on context. Adverbs like *about* and *nearly* signal imprecision (Channell, 1994), while *often* and *seldom* can hedge or serve as descriptors (Channell, 1994; Holmes, 1988). In academic writing, hedges balance factual rigor with politeness (Hyland, 1998a; Salager-Meyer, 1994), with English academic texts, particularly in the social sciences, showing more hedging than other languages (Clyne, 1987; Mauranen, 1997). Context and grammatical role determine which hedges are appropriate; adverbs like *sort of* lower certainty, while *perhaps* acknowledges subjectivity (Hyland, 1998a). These hedges manage tone and audience relationships in academic settings (Salager-Meyer, 1994; Hyland, 1998a).

Adverbs of quantification position statements along a certainty scale (Quirk et al., 1985). Polar terms like *always* and *never* express extremes, while scalar terms like *often* and *usually* allow moderate claims. Negative scalars like *seldom* imply reduced frequency. Degree adverbs like *completely* express certainty, while *about*, *nearly*, and *sort of* introduce

imprecision (Quirk et al., 1985; Holmes, 1988). Scalar terms like *almost* hedge by suggesting partial certainty (Nuyts, 2001), while polar terms assert absoluteness, managing certainty in propositions.

Hedging adverbs must meet three conditions: they must belong to quantity or degree categories, express scalarity rather than polarization, and approximate meaning (Fraser, 2010; Hyland, 1996b). Context matters—some adverbs hedge when downplaying (e.g., *some injuries*) but quantify when reporting facts (Hyland, 1998b). Scalar adverbs like *somewhat* introduce vagueness (Nuyts, 2001), showing how structure and context affect hedging.

Quantificational hedges soften claims by introducing vagueness and thus provide flexibility for alternative interpretations (Quirk et al., 1985; Hyland, 1998b). Polar expressions like *completely* act as intensifiers but become hedges with negation (e.g., *not entirely*, *not completely*) (Fraser, 2010). Context determines whether these adverbs modify propositions or serve as factual quantifiers (Fraser, 2010; Hyland, 1996a). As shown in Table 3.3, different adverbial hedges shape speaker commitment, proposition precision, and interpersonal dynamics. In academic writing, hedges maintain tentativeness which enhances credibility and reader engagement (Mauranen, 2004). Cultural differences influence hedging practices, with English academic discourse showing more hedging than other languages (Markkanen & Schröder, 1997). Digital communication has increased the importance of hedging, especially in text-based exchanges where uncertainty must be conveyed without verbal cues (Taguchi, 2012).

This section has identified three main sources of hedging: modal adverbs, quantificational adverbs, and adverbs as PMs. Each type contributes to hedging, offering strategies to soften claims, express uncertainty, and manage interaction. Their relation to hedging shows how these forms adjust tone and commitment in discourse.

Three major categories of adverbial hedging have been established. Modal adverbial hedges express epistemic, deontic, dynamic, or evidential meanings, modulating commitment to propositions. Quantificational adverbial hedges involve scalar expressions of quantity or frequency, softening statements through approximation. Pragmatic-marker adverbial hedges

manage meaning, relationships, and discourse structure. These categories provide a framework for analyzing adverbial hedges across contexts.

Table 3.3

Types of Adverbial Hedges and Their Discourse Functions

Category	Effects On	Focus	By Moderating	Moderates	Examples	References
Quant. Adv. Hedges	Word /Phrase	Proposition	Precision	Proposition Proposition	<i>somewhat, slightly, barely, mildly</i>	Quirk et al. (1985), Prince et al. (1982)
Modal Adv. Hedges	Proposition	Proposition/ Interrelation	Commitment	Speaker- Proposition	<i>possibly, probably, maybe, perhaps, certainly</i>	Hyland (1998), Brown & Levinson (1987), Prince et al. (1982)
Pragmatic Markers Hedges	Utterance	Proposition/ Interrelation	Interaction	Speaker- Hearer	<i>honestly, generally, actually, admittedly, hopefully</i>	Nikula (1997), Fraser (1990), Markkanen & Schröder (1997)

(adapted from Quirk et al., 1985; Prince et al., 1982; Hyland, 1998a; Fraser, 1990; Nikula, 1997; Markkanen & Schröder, 1997)

3.3 Criteria and Guidelines for Hedge Identification

Identifying hedges requires analyzing their semantic, grammatical, and pragmatic features. Hedges are linguistic expressions that soften statements by introducing vagueness or reduced certainty. Semantic features determine if an expression functions as a hedge. Hedges must possess modifiability to adjust quantity, frequency, or degree. For example, *somewhat* modifies degree, *seldom* adjusts frequency, while non-modifiable terms like *stone* cannot serve as hedges (Quirk et al., 1985).

Scalarity differentiates hedges from intensifiers, with hedges occupying intermediate positions to mitigate claims, while intensifiers like *always* occupy extremes. Adverbs like

few and *sometimes* exemplify hedging, while *think* conveys less certainty than *know* (Nuyts, 2001). Grammatical features include modal verbs, quantifiers, and adverbial constructions. *I think* functions as a hedge parenthetically but not when describing cognitive activity. Grammaticalized hedges like *maybe* are easier to identify through their embedded function (Fraser, 1996). Pragmatic factors—speaker intention and context—determine hedge usage. Expressions like *some* can provide factual information or introduce vagueness. *Some people died* might be factual or hedge a tragic reality, based on context. Pragmatic interpretation requires consistent judgment in corpus-based research lacking prosodic features (Hyland, 1998b; Markkanen & Schröder, 1997). The interplay of semantic, grammatical, and pragmatic features is crucial. Semantic properties determine hedging potential, grammatical structures limit candidates, and pragmatic factors determine if an expression functions as a hedge. This approach is critical in written data where context may be less accessible.

Hedge identification requires semantic, grammatical, and pragmatic criteria. Hedges occupy middle positions on a continuum, introducing uncertainty, while polar expressions like *always* or *never* function as intensifiers (Nuyts, 2001). This applies to quantifying expressions and modality markers. Subjective expressions (*perhaps*, *maybe*, *might*) reflect personal evaluation, while objective expressions (*it is said*, *must*) suggest external information. This relates to evidentiality, assessing evidence reliability (Nuyts, 2001). Subjective hedges show speaker responsibility, while objective markers attribute claims to external sources. Strategic hedges soften claims or manage relationships (Carretero, 1996). According to Nuyts (2001), strategic hedging modifies likelihood or maintains politeness. Distinguishing strategic from non-strategic uncertainty expressions is challenging without intonation cues. For hedge identification, semantic, grammatical, and pragmatic criteria must work together. Semantic analysis determines hedging capability; grammatical analysis identifies candidates; pragmatic analysis evaluates context. Since communication involves multimodal signals, corpus studies require systematic application of these criteria (Hyland, 1998a).

Table 3.4*Integrated Hedge Identification of Selected Adverbs*

Step Criterion		Guiding Question	nearly NNSs-09- #94139	actually NS-01- #32879	just NS- 08#39029	just NNSs-19 #21465	maybe NNSs-41- #66200
1	Modifiability	Adjust degree/ quantity/freq.?	✓ modifies	✗ nongradable	✗ temporal	✓ limits scope	✓ possibility
2	Scalarity	Midpoint on scale?	✓ approx.	✗ emphasizer	✗ time- based	✓ minimizing	✓ non- extreme
3	Grammatical Form	Part of hedging structure?	✓ adverbial	✓ not hedging	✓not hedging	✓ adverbial	✓ hedge
4	Pragmatic Softening	Soften strength?	✓ lessens claim	✗ assertive	✗no mitigation	✓softens directive	✓ tentative
5	Subjectivity	Show speaker stance?	✓ estimate	✗ objective	✗ neutral	✓ intentional	✓ stance
6	Strategic Use	Used for politeness?	✓ reduces precision	✗ not soften	✗non- relational	✓ politeness	✓softens request
7	Evidential Strength	Lower commitment?	✓ low certainty	✗high certainty	✗ fixed point	✓ less direct	✓ tentative
Hedge Status		Final judgment	✓ Hedge	✗ Not a Hedge	✗ Not a Hedge	✓ Hedge	✓ Hedge
Sentences:							
NNSs-09- #94139	<s> So it's <i>nearly</i> twice, and so the male characters, are with more diverse jobs.</s>						
NS-01-#32879	<s> So really a bit with more detailed ways to <i>actually</i> enact your teaching. </s>						
NS-08-#39029	<s> So, I've <i>just</i> mentioned four ways. </s>						
NNSs-19- #21469	<s> Hocam, <i>just</i> keep in mind that our participants are actually in teaching. </s>						
NNSs-41- #66200	<s> <i>Maybe</i> you would like to add some more about things that you are doing. </s>						

Table 3.4 presents an evaluation of 4 adverbs—*nearly*, *actually*, *just*, and *maybe*—based on semantic, grammatical, and pragmatic criteria for identifying hedges. Each adverb is assessed through a framework examining modifiability, scalarity, grammatical form, pragmatic softening, subjectivity, strategic use, and evidential strength. The table shows how *nearly* and *maybe* fulfill hedging functions across all dimensions, while *actually* and *just* (in recent past use) do not, serving factual or temporal functions rather than mitigating claims. This approach emphasizes that hedge identification relies on linguistic form and pragmatic context, offering a model for analyzing hedging in discourse.

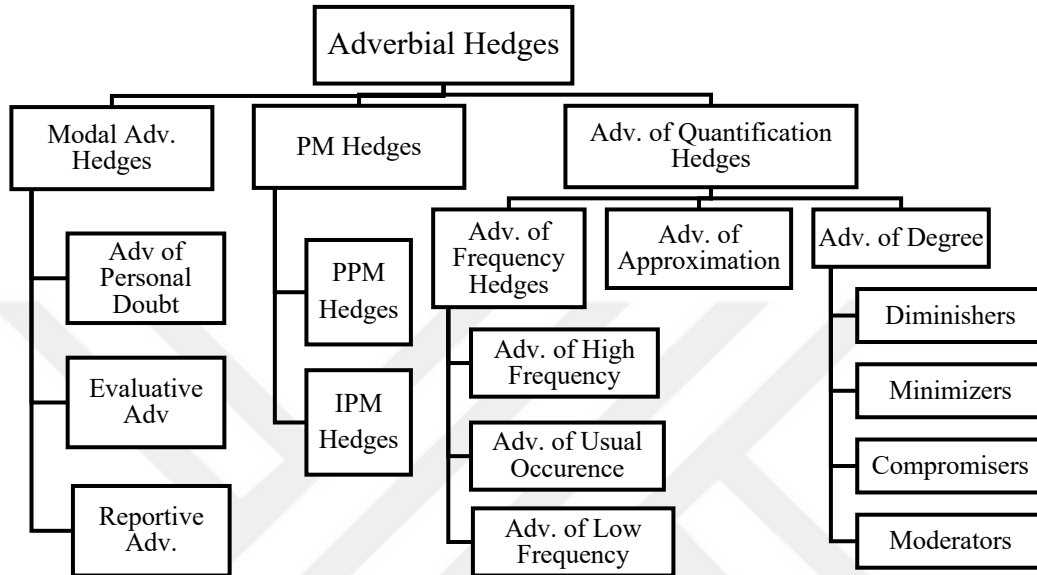
3.4 Introduction to Hedge Categorization Based on Form

Research Question 1 examines how adverbial hedging devices used by NNSs compare to those used by NNSs in spoken academic discourse. To address this question, the study uses a form-to-function approach within corpus pragmatics (Romero-Trillo, 2017; Rühlemann & Aijmer, 2015). The analysis generates frequency lists of adverbials from spoken academic discourse, specifically academic webinars. These lists are informed by prior studies identifying common hedging forms as "seeds" for initial selection (Love et al., 2017; Huang, 2017). From this frequency data, candidate adverbials are extracted for examination.

These candidate forms are analyzed through concordance lines to determine their hedging function in context. This step ensures that only adverbs which pragmatically mark epistemic stance, modulate claim strength, or manage interpersonal meaning are included. Forms not meeting these criteria are excluded. Once validated, the hedging adverbials are organized into three categories—modal adverbials, PMs, and adverbs of quantification—based on structural properties. Statistical comparisons assess variation in frequency and range across speaker groups. This process produces a functionally grounded and empirically supported classification of adverbial hedges, revealing patterns of usage that reflect differences in speaker background and discourse strategy. Figure 3.1 presents a taxonomy of adverbial hedges categorized according to formal criteria.

Figure 3.1

Form-Based Categorization of Adverbial Hedges



(Adapted from Quirk et al., 1985; Varttala, 2001; Biber et al., 1999; Huddleston & Pullum, 2002)

The classification draws on Quirk et al.'s (1985) functional model of adverbials and is informed by Biber et al. (1999) and Huddleston and Pullum (2002), who provide detailed grammatical descriptions of adverbials in both spoken and written English. Varttala's (2001) work on hedging in academic discourse further supports the inclusion of subcategories relevant to epistemic stance and discourse-pragmatic use. The three main types—modal adverb hedges, PM hedges, and adverbs of quantification—are divided into finer classes that reflect their role in signaling doubt, managing interaction, or adjusting claim precision.

3.4.1 Modal adverb hedges

Modality expresses attitudes, beliefs, or judgments about likelihood, necessity, or desirability of propositions. It indicates degrees of commitment to truth (Palmer, 2001; Lyons, 1977). Modality includes epistemic (certainty/possibility) and deontic (obligation/permission) types. The connection between modality and hedging stems from their role in adjusting speaker commitment. Modal adverbs signal degrees of probability within this system.

Quirk et al.'s (1985) typology classifies adverbials into adjuncts, subjuncts, disjuncts, and conjuncts. Adjuncts integrate into clause structure but rarely express modality. Subjuncts perform subordinate roles, including wide-orientation subjuncts for speaker viewpoint and narrow-orientation subjuncts like *actually* and *frankly*. Wide-orientation subjuncts reflect perspectives as in "*Morally, politically, and economically, it is urgent that the government should act*" (Quirk et al., 1985, p. 569).

Content disjuncts express speaker evaluation of truth or reality (Quirk et al., 1985, pp. 620–624). They include adverbs commenting on truth value and value judgments. Content disjuncts expressing truth comprise: (i) conviction adverbs (*undeniably*), (ii) doubt adverbs (*perhaps*), and (iii) reality-evaluating adverbs (*actually*). Groups (ii) and (iii) contribute to hedging by modulating certainty or contextualizing claims.

Following Quirk et al.'s (1985) classification, this study distinguishes Adverbs of Personal Doubt and Evaluative Adverbs as key categories of modal adverb hedging. It also introduces a third category, Reportive Adverbs, based on further research, to better capture how speakers hedge by referring to external sources.

3.4.1.1 Adverbs of personal doubt

Adverbs of Personal Doubt express speaker uncertainty about propositions while maintaining openness to alternatives. Adverbs like *potentially*, *likely*, *maybe*, *perhaps*, *possibly*, and *probably* lower epistemic commitment and expand interpretation space (Quirk et al., 1985). These correspond to Quirk et al.'s (1985) Group (ii), focusing on elements moderating speaker certainty. White (2003) and Martin and White (2005) describe these adverbs as dialogically expansive, signaling acknowledgment of alternative perspectives. In the Appraisal framework, they fall under "*entertain*," and they reflect openness to multiple outcomes. They support politeness by mitigating imposition and encouraging engagement (Martin & White, 2005).

3.4.1.2 Evaluative adverbs

Evaluative adverbs qualify statements by framing propositions within broader truths rather than asserting them absolutely. Adverbs like *theoretically*, *essentially*, *hypothetically*, and

fundamentally indicate propositions hold within specific frameworks (Quirk et al., 1985). This allows speakers to present claims cautiously. Quirk et al.'s (1985) Group (iii) classifies evaluative adverbs into: adverbs confirming reality, contrasting with reality, and asserting truths in principle. Those contrasting with reality or expressing truth in principle are key for hedging as they maintain interpretive flexibility.

3.4.1.3 Reportive adverbs

Reportive adverbs attribute information to external sources. Adverbs like *allegedly*, *apparently*, and *supposedly* allow speakers to present information while distancing themselves from direct responsibility (Quirk et al., 1985; Boye, 2012). Celle (2009) notes these adverbs operate disassertively, neither fully endorsing nor discrediting reported information. Their hedging operates through neutral acknowledgment and distancing. According to Wiemer and Socka (2017a, 2017b), reportive adverbs combine reportive, epistemic-agnostic, and epistemic functions, enabling speaker detachment in academic communication.

3.4.2 Pragmatic marker hedges

PM hedges form a subcategory of adverbial hedging by managing relationships between speakers, propositions, and listeners. These markers organize discourse, express stance, and signal uncertainty, with meaning shaped by context (Fedriani & Sansò, 2017; Schifffrin, 2005). Markers like *basically* and introduce subjective viewpoints and adjust speaker commitment (Aijmer, 2013). Their hedging role emerges when softening statements and reducing face-threatening potential (Aijmer, 2013; Nikula, 1996). PMs indicate evaluation or foster rapport, moderating assertions without making categorical claims (Aijmer, 2013; Nikula, 1996). These markers generally operate along two dimensions: propositional and interpersonal. The following sections examine these functions in more detail.

3.4.2.1 Propositional pragmatic marker hedges

Propositional pragmatic-marker (PPM) hedges adjust the speaker's relationship to utterance content by softening claims and signaling partial commitment (Brinton, 1996; Nikula, 1997). Unlike textual markers that organize discourse or interpersonal markers managing social

dynamics, PPM hedges reduce statement assertiveness while maintaining discourse flow. They allow reinterpretation by presenting propositions with less definitive force, enabling cautious communication. PPM hedges introduce uncertainty into statements. Brinton (1996) explains they soften propositional content, while Nikula (1997) notes their role in making utterances more acceptable. For example, "*It could be that they are not coming*" reduces certainty and frames statements as possibilities. These markers support flexible communication without direct confrontation.

3.4.2.2 Interpersonal pragmatic marker hedges

Interpersonal pragmatic-marker hedges (IPMs) manage social dynamics by softening assertions and promoting cooperation. Adverbs like *just*, *actually*, *basically*, and *hopefully* maintain positive speaker-listener relationships by mitigating imposition (Fraser, 2010; Watts, 1988). While propositional markers adjust truth commitment, IPMs prioritize interpersonal sensitivity. Brown and Levinson's (1987) Politeness Theory and Spencer-Oatey's (2000) Rapport Management Theory emphasize IPMs' role in maintaining relationships. IPMs facilitate conversation by encouraging participation and seeking agreement (Holmes, 1982, 1985; Mills, 2003). *Just* softens requests, as in "*Can I just ask you to explain?*" (Brown and Levinson, 1987). *Actually* introduces polite corrections, while *basically* helps generalize statements (Nikula, 1997; Aijmer, 2004). These markers contribute to relational management and collaborative communication.

3.4.3 Quantificational hedges

Quantificational hedges form a subcategory of adverbial hedging through expressions of approximation in quantity, frequency, or degree. Quantification includes quantity devices (e.g., *some*, *many*, *few*), frequency devices (e.g., *often*, *sometimes*, *seldom*), and degree devices (e.g., *about*, *nearly*, *approximately*) (Quirk et al., 1985). These devices express amplification, diminution, or neutral measurement. Amplifiers strengthen propositions and are not hedges, while diminishers weaken statements and serve as hedges. Measurement devices state quantity without adjustment and are not hedges. Hedging through quantification uses approximation rather than precise measurement to lower assertiveness (Quirk et al., 1985).

Quantificational hedging requires three conditions: grammatically, the expression must be quantity, frequency, or degree-related; semantically, it must show scalarity rather than polarity, as terms like *all* or *never* assert absolutes (Nuyts, 2001); and pragmatically, it must signal approximation rather than precise measurement. Examples include *some people died* versus exact casualties, or *we often lose* versus exact defeat records. Scalar quantifiers like *some*, *sometimes*, and *about* serve as hedges by softening certainty and managing speaker relationships to propositions.

The following section presents three types of quantificational hedges: adverbs of frequency, degree, and approximation, showing how speakers adjust their statements to express tentativeness.

3.4.3.1 Adverbs of frequency hedges

Adverbs of indefinite frequency (*often*, *typically*, *generally*, *occasionally*) indicate event occurrence frequency without specifying precise intervals (Greenbaum, 1969; Quirk et al., 1985). These "*indefinite frequency adjuncts*" allow writers to make general claims without committing to exact assertions. Their flexibility is useful when precise data is unavailable or unnecessary. In scientific writing, these adverbs hedge claims by suggesting patterns while allowing exceptions, avoiding rigid generalizations. Salager-Meyer (1994) notes these strategies form part of the "institutionalized language of science."

An adjunct provides information about time, place, manner, reason, or condition, such as "*on Monday*" in "*She arrived on Monday*" (Quirk et al., 1985). A time-frequency adjunct modifies how often something occurs, as in "*She is usually nice*" (Quirk et al., 1985). Frequency can be absolute (counting occurrences) or relative (tied to time frames). The verb's semantics affect expression: habitual actions suggest recurrence, while continuous ones show ongoing states.

Frequency is expressed through noun phrases, adverbs, or whenever-clauses (Quirk et al., 1985). Definite frequency expressions specify precise intervals. Indefinite frequency adjuncts convey general occurrence frequency, which Quirk et al. (1985) divide into usual occurrence, continuous/universal frequency, high frequency, and low frequency.

Continuous/Universal Frequency adverbs refer to persistent actions, expressed by words like *always* and *constantly*.

3.4.3.1.1 *Adverbs of high frequency*

Adverbs of high frequency are a subcategory marking actions that occur regularly without implying they are the norm. Examples like *frequently*, *often*, and *sometimes* indicate repeated occurrence while differing from adverbs of usual frequency. For instance,

- (3.1) We *often* see students asking for extra examples when we introduce new grammar points (NS-20-#209384).

According to Quirk et al. (1985) and Biber et al. (1999), adverbs of high frequency express recurrence without implying habituality.

3.4.3.1.2 *Adverbs of usual occurrence*

Adverbs of usual frequency are indefinite frequency hedges referring to regular actions, though not necessarily every time. Quirk et al. (1985) classify adverbs like *commonly*, *generally*, and *usually* as usual occurrence adjuncts, describing habitual tendencies while allowing exceptions. Biber et al. (1999) identify these as expressions of regularity avoiding categorical certainty. For example, "*He usually wakes up at 7 a.m.*" indicates a pattern without asserting invariability.

Generally and *normally* function as hedges by indicating typical occurrences without implying absolute consistency. According to Biber and Finegan (1988), *generally* expresses approximation, softening categorical statements. In

- (3.2) I mean, teachers *generally* find that students get more involved when the activity's interactive (NS-25-#210234),

generally presents a trend while allowing variability. Similarly,

- (3.3) *Normally*, I think students do better in group discussions, if they had a bit of time to prepare. (NNSs-18-#172634)

frames the assertion as typical rather than absolute (Huddleston & Pullum, 2002).

3.4.3.1.3 Adverbs of low frequency

Adverbs of low frequency, a type of indefinite frequency hedge, describe rare or irregular actions. Quirk et al. (1985) list adverbs like *infrequently*, *occasionally*, and *seldom* as indicating minimal occurrence without exact figures. Biber et al. (1999) also highlight these adverbs' role in generalizing rare events without implying patterns. For example, "*We occasionally go out for dinner*" uses *occasionally* to show an irregular habit without a set schedule. These adverbs hedge by presenting low probability claims, preserving flexibility, and avoiding absolutes.

Adverbs like *rarely* and *seldom* hedge by signaling infrequency, which in turn permits exceptions. Biber and Finegan (1988) note these adverbs generalize rare events without specifying rates, softening claims. In "*Students rarely ask questions during large lectures*," *rarely* suggests uncommon behavior without implying absence. Huddleston and Pullum (2002) observe that *seldom* acts as an approximate negator, indicating near-zero occurrence while allowing exceptions. For instance, "*Students seldom fail to complete their assignments on time*" uses *seldom* to indicate rare failure without asserting impossibility. This hedging expresses tendencies without overstating rarity.

3.4.3.2 Adverbs of degree

Degree adverbs describe the extent of a characteristic in an action, state or quality, indicating whether the degree is greater or less than a norm or comparison. They function as adverbials or modifiers. Examples include *slightly*, *partly*, *somewhat* (Biber et al., 1999). Biber et al. divides these into diminishers, which scale down intensity (e.g., *slightly different*), and amplifiers, which increase intensity (e.g., *very different*). Amplifiers are not addressed in this study. *Diminishers* are relevant as they function as hedges by softening statement intensity and allowing imprecision. While they overlap with hedges in conveying uncertainty, diminishers focus on reducing intensity rather than accuracy (Biber et al., 1999). Degree adverbs' hedging role depends on their strategic use to soften claims or introduce vagueness. Quirk et al. (1985) introduce subjuncts as adverbial elements providing information about speaker's attitude or perspective without changing core meaning. They classify *intensifiers*

as subjuncts that indicate points on an intensity scale, modifying predicates' meaning and expressing speaker's attitude. Intensifiers operate on a semantic scale indicating high and low degrees for gradable items (*very happy, slightly different*) (1972). They divide intensifiers into *amplifiers* and *downtoners*. *Downtoners* reduce verb intensity and function as hedges by expressing tentative positions. Quirk et al. (1985) classify *downtoners* into *minimizers*, *diminishers*, *compromisers* and *approximators* based on reduction type. Amplifiers indicate upper scale points and divide into maximizers, expressing highest degree (*completely, absolutely*), and *boosters*, which increase intensity without reaching maximum (*mainly, largely*).

The framework by Quirk et al. (1985) was modified in two ways: First, "*approximator*" was analyzed separately from adverbs of indefinite degree. This distinction arose because approximative adverbs focus on numerical estimations, while adverbs of indefinite degree operate on intensity scales related to predicates. Approximative adverbs hedge through imprecision, whereas adverbs of indefinite degree hedge by scaling down claim intensity. Second, while Quirk et al. (1985) classified some degree adverbs as *downtoners* expressing "part of the potential force," and others like fairly as *boosters*, this study recognizes degree adverbs as potential hedges regardless of their scalar position. For instance, *largely* in

(3.4) I think it would look *largely* the same (NS-25-#214024)

functions as a hedge by indicating partial rather than absolute sameness. Consequently, a new category "*Moderators of Degree*" includes adverbs like *broadly, heavily, largely, mainly, most, mostly, predominantly, primarily, and widely*, which represent scalar positions consistent with hedging criteria.

3.4.3.2.1 Minimizers of degree

Minimizers are adverbs of indefinite degree that function as *downtoners*, reducing statement intensity without negating it. According to Quirk et al. (1985), minimizers like *barely* and *hardly* modify verbs to express minimal occurrence. Biber et al. (1999) view minimizers as devices for softening claims, indicating outcomes just short of failure. For example, in

(3.5) We *barely* finished that step, so now we're moving on to the second one. (NS-22-#177904)

barely implies completion that almost failed. Huddleston and Pullum (2002) note that minimizers hedge by minimizing success extent.

3.4.3.2.2 *Diminishers of degree*

Diminishers are adverbs that reduce the force of a statement without negating it. Quirk et al. (1985) classify these into two categories: *expression diminishers*, which reduce the intensity of the proposition itself, and *attitude diminishers*, which downplay the perceived importance of the proposition from the speaker's perspective.

Expression diminishers function to scale down the strength of the propositional content. For instance, in

- (3.6) She asks what about using social media with closed groups with maybe *slightly* older learners like teenagers? (NNSs-10-#5560),

the adverb *slightly* qualifies the age difference, making the statement less categorical. Similarly, in

- (3.7) And most of you yeah it says that okay they are *somewhat* knowledgeable about the issue. (NNSs-5-#361691),

somewhat reduces the degree of certainty, indicating partial knowledge or understanding. These diminishers contribute to a more tentative and flexible stance by softening propositional intensity.

Attitude diminishers, on the other hand, reflect the speaker's evaluative stance by minimizing the significance or weight of the statement. As Quirk et al. (1985) note, adverbs such as *merely*, *only*, and *simply* can serve this function. In

- (3.8) Every literary work one could say is *merely* a selection from a given language, just as a work of sculpture has been described as a block of marble with some pieces chipped off. (NNSs-9-#405785),

merely downplays the creative contribution of the author, framing it as a limited act of selection. These diminishers allow speakers to distance themselves from strong claims, often as a form of politeness or intellectual caution. While *only* can function as an exclusive

marker, when used to reduce perceived importance, it also acts as a hedge that softens the overall force of a statement (Huddleston & Pullum, 2002; Biber et al., 1999).

3.4.3.2.3 *Compromisers of degree*

Compromisers are adverbs of indefinite degree that moderately reduce the intensity of a statement while preserving its core claim. According to Quirk et al. (1985), compromisers are a type of downtoner used to introduce tentativeness or express partial alignment with a norm or expectation. These adverbs signal qualified commitment, indicating that the proposition is generally valid but may fall short of complete certainty or full conformity.

For example, in

- (3.9) The first half will focus on looking at content-based instruction—what do we mean by content-based instruction, what are some other terms that are *quite* similar, and what are some different models of CBI? (NS-04-#42932),

the adverb *quite* softens the comparison by indicating similarity without full equivalence. As Quirk et al. (1985) note, *quite* functions as a compromiser when used with gradable adjectives (e.g., *similar*) but becomes a maximizer when applied to non-gradable adjectives (e.g., *perfect*).

Another example appears in

- (3.10) I don't like the assessment practices in my country. I can't assess students' writing and speaking skills *sufficiently*. Students can be good at traditional exams, but they are not good at real-life communication. (NNSs-27-#177601).

Here, *sufficiently* moderates the speaker's self-evaluation, acknowledging a shortcoming while maintaining that some level of assessment is taking place. According to Biber et al. (1999), such compromisers help speakers avoid categorical claims and adopt a more cautious, balanced stance in their evaluations.

3.4.3.2.4 *Moderators of degree*

Quirk et al. (1985) classify focusing subjuncts as a subcategory of conjuncts, identifying them as adverbials that highlight parts of sentences without altering meaning. Focusing subjuncts restrict statements to focused elements or emphasize predominant elements while

allowing other possibilities. They comprise exclusives and particularizers. Exclusives, like *only* and *purely*, limit propositions to focused items, excluding alternatives. Particularizers highlight predominant parts while acknowledging other aspects.

Particularizers function as degree adverbial hedges by moderating statement intensity and allowing partial commitment. Adverbs like *largely* and *mainly* indicate propositions hold true for emphasized elements while permitting exceptions. This vagueness reduces categorical force, fulfilling hedging functions (Biber et al., 1999; Huddleston & Pullum, 2002). In this study, particularizers, termed Moderators of Degree, include adverbs such as *broadly*, *closely*, *heavily*, *largely*, *loosely*, *mainly*, *most*, *mostly*, *predominantly*, *primarily*, and *widely*. Moderators of degree enable speakers to express measured generalizations. For example, in

- (3.11) Emotional labor is *mainly* centered on emotions, like the name suggests, but not everyone connects it to identity. (NNSs-01-#11187),

mainly signals focus on emotions while allowing alternative associations. Such uses demonstrate how moderators strategically introduce flexibility and soften claims.

3.4.3.3 Adverbs of approximation

Approximative adverbs are adverbs of quantification hedges that introduce imprecision in quantity, extent, or range. Unlike degree adverbs, which modify intensity of gradable elements on a scale (Quirk et al., 1985; Biber et al., 1999), approximators like *about*, *almost*, *nearly*, and *approximately* indicate that a statement is close to but not exact. They hedge by showing information is near a value rather than scaling proposition force. Quirk et al. (1985) differentiate approximators from degree adverbs: approximators adjust claim precision, while degree adverbs adjust strength. Huddleston and Pullum (2002) similarly classify approximators separately, noting they introduce vagueness without altering statement intensity.

Quirk et al. (1985) classify approximative adverbs like *almost*, *nearly*, and *virtually* as subjuncts that hedge by presenting statements as nearly realized. In

- (3.12) He *almost* succeeded, (NNSs-34-#244716)

almost reduces certainty and adds flexibility. Approximators modify proposition truth value without affecting force, avoiding absolute claims. Within downtoners, Quirk et al. (1985) categorize minimizers, diminishers, compromisers, and approximators, with approximators effective for softening assertions. Amplifiers, conversely, increase intensity through maximizers and boosters (Biber et al., 1999).

Approximative adverbs like *almost*, *approximately*, *nearly*, and *virtually* are adverbs of quantification hedges that express proximity to conditions without asserting complete realization. Salager-Meyer (1994) identifies them as essential in scientific discourse, serving two hedging functions. They soften predicates by suggesting near but incomplete occurrence. Hyland (1998b) describes them as subjuncts classified by Quirk et al. (1985) as downtoners. In

(3.13) You know, it *almost* became a competition. (NS-02-#15020),

almost signals near realization. Similarly,

(3.14) It's *almost* impractical to rely only on this method. (NS-07-#83636)

shows reduced categorical strength.

Approximative adverbs also hedge numerical expressions through tentative estimates. Hyland (1998a) notes that adverbs like *about*, *approximately*, and *nearly* express quantities without absolute accuracy.

(3.15) The experiment lasted *approximately* 90 minutes. (NS-04-#20987)

demonstrates softened precision.

(3.16) The sample size was *about* 150 people. (NNSs-03-#11975)

shows flexible quantification. Channell (1994) notes that scientific discourse requires this approach to reflect methodological constraints. These adverbs maintain credibility while supporting qualified reporting.

3.5 Conclusion: Classification Based on Form

This section has established the theoretical and analytical foundation for identifying and classifying hedges in spoken academic discourse, focusing specifically on adverbial forms.

It systematically outlined the grammatical, pragmatic, and semantic properties that define hedging, stressing the interplay between structure and communicative intent. Furthermore, it developed a form-based classification system dividing adverbial hedges into three major categories: modal adverb hedges, pragmatic-marker adverbial hedges, and quantificational hedges. These frameworks and taxonomies provide a clear and replicable method for analyzing how speakers, particularly Turkish and native English speakers, use hedging strategies to manage stance, credibility, and interpersonal relations in academic settings.

3.6 Choosing a Framework Based on Function

Prince et al. (1982) introduced one of the first widely recognized frameworks for analyzing hedging in spoken discourse, based on physician-to-physician communication during pediatric ward rounds. Building on Lakoff's (1972) theory of fuzziness, their model distinguishes between two dimensions: fuzziness within propositional content and within the speaker-content relationship. Propositional fuzziness is expressed through adaptors and rounders. Adaptors modify prototypical meanings for contextually non-ideal cases (e.g., *His feet were sort of blue*, where *sort of* approximates color), while rounders reduce numeric precision (e.g., *approximately* in *His weight was approximately 3.2 kilograms*). The second dimension involves speaker commitment, comprising plausibility shields (e.g., *I think*, signaling limited certainty) and attribution shields, which shift epistemic responsibility (e.g., *According to her estimates, the heart rate was back in two minutes*).

Prince et al.'s framework has shaped later models of hedging in professional discourse. Salager-Meyer (1994) adapts these categories for English medical texts, forming a reference point for this study's focus on adverbial hedges in spoken academic discourse. Hübler (1983, p. 11) offers a related model that distinguishes propositional hedging (understatements) from speaker-proposition hedging, where understatements alter content and the latter modulates speaker commitment. However, this binary division has not been widely adopted. Clemen (1997, p. 241) notes that understatements are typically treated as a subcategory of hedges, as both reduce assertiveness and shape speaker stance. The limited uptake of Hübler's distinction suggests hedging is better understood as a continuum of strategies for managing commitment and interaction.

Mitigation strategies are often linked to hedging due to their shared pragmatic functions. Fraser (1980, p. 341) defines mitigation as reducing the negative impact of speech acts on hearers, while later distinguishing it from hedging (1980, p. 344). However, these boundaries have increasingly blurred. Caffi (1999, p. 884) describes mitigation as weakening speaker commitment, functionally aligning it with hedging. This perspective positions mitigation as relevant to academic discourse, where speakers manage both propositional content and interpersonal dynamics. Mitigation strategies are categorized by their scope—affecting propositional meaning, illocutionary force, or speaker-hearer relations.

Caffi (1999) expands Prince et al.'s (1982) model with a three-level framework based on Italian medical discourse: bushes, hedges, and shields. Bushes reduce propositional assertiveness; hedges soften illocutionary force; shields distance speakers from statements by modifying their source. Shields overlap with Prince et al.'s attribution shields but also include syntactic strategies like passive constructions. This broader conceptualization accommodates diverse ways of managing epistemic responsibility in institutional discourse.

Hyland's (1996a) framework, developed for written academic texts, is also useful for spoken academic contexts. A key innovation is the inclusion of reader-oriented hedges, which Prince et al. (1982) and Caffi (1999) omit. This allows analysis of hedging beyond propositional content and speaker stance to include audience alignment. Hyland categorizes hedges as content-oriented and reader-oriented. Content-oriented hedges are further divided into accuracy-oriented (e.g., *The results are possibly due to...*, indicating factual caution) and writer-oriented (e.g., *The findings suggest...*, shielding the writer from critique) (Hyland 1996b, pp. 436–437). Accuracy-oriented hedges include attribute hedges (imprecision) and reliability hedges (confidence level). Reader-oriented hedges—adapted here as hearer-oriented—make statements more acceptable to the audience and serve interpersonal functions akin to Fretheim's (1981) alter-hedges, which promote engagement and reduce face-threats.

Despite critiques about overlapping categories and conceptual clarity (Diewald, 2006), Hyland's framework remains influential due to its comprehensive treatment of epistemic and interpersonal hedging (Hyland, 1998b). Limitations include the challenge of applying its

written-text categories—such as self-repair—to spontaneous spoken discourse (Metsä-Ketelä, 2006). Still, the framework is widely used in scientific discourse studies.

Table 3.5

Classification of Hedging Strategies Across Functional Domains

Functional Domain	Prince et al. (1982)	Hübler (1983)	Salager-Meyer (1994)	Hyland (1996, 1998)	Caffi (1999)	Fretheim (1981)	Present Study
Propositional Content	Adaptors, Rounders	Understatements	Approximators	Content-oriented Hedges (Attribute)	Bushes	—	Rounders, Adaptors, Understaters
Speaker Intention	—	—	—	—	Hedges	Ego-hedges	Plausibility Shields,
Speaker Commitment	Plausibility Shields	Hedges	Author's Personal Doubt	Writer-oriented, Reliability Hedges	Hedges	—	Speaker-oriented Hedges
Source of Proposition	Attribution Shields	—	Shields	—	Shields (incl. passive deletion)	—	Attribution Shields
Effect on Interlocutor	—	—	—	Reader-oriented Hedges	—	Alter-hedges	Hearer-oriented Hedges

(Adapted from Johansen, 2020)

The frameworks reviewed converge on five core functional domains of hedging: propositional content, speaker intention, speaker commitment, source attribution, and interlocutor effect. These domains offer a structured lens for comparing how key theorists classify hedging strategies in spoken and written discourse. Table 3.5 synthesizes labels from Prince et al. (1982), Hübler (1983), Salager-Meyer (1994), Hyland (1996, 1998), Caffi (1999), and Fretheim (1981), mapping them onto these domains. The table highlights

overlaps—such as shared categories like shields and approximators—and theoretical distinctions, including divergent views on speaker intention and interpersonal function. The final row presents the labels adopted in this study, selected for their relevance to spoken academic discourse and compatibility with the NSs and NNSs data in the corpus.

3.6.1 A comparative overview of functionally-oriented hedging frameworks

The literature review identifies several influential taxonomies for classifying hedging in academic discourse. Prince et al. (1982), based on medical interactions, categorized hedges into adaptors (e.g., *sort of*, adjusting lexical meaning), rounders (e.g., *approximately*, signaling numerical imprecision), and shields (e.g., *I think*, reducing speaker commitment). Hübler (1983) distinguished hedges, which express caution toward truth, from understatements, which reduce claim intensity. Salager-Meyer (1994) expanded these models in medical discourse, introducing approximators, doubt-expressing shields, and compound hedges combining multiple elements.

Studies extended hedging classification across semantic, structural, and lexical dimensions. Ransom (1991) differentiated expressions by obligation and certainty levels, while Crompton (1997) identified structural hedging through modal verbs and adverbials of assurance. Varttala (2001) categorized hedges by word class—adverbs, nouns, and adjectives. Fraser (2010) showed that expressions can function as hedges based on discourse role. Hyland (1996a, 1998a) offered a taxonomy distinguishing content-oriented hedges, which temper scientific claims, from reader-oriented hedges, which manage audience interaction. Caffi (1999) proposed a model: bushes reduce propositional transparency, hedges mitigate illocutionary force, and shields create speaker distance through passive constructions. These frameworks reflect hedging complexity across linguistic levels and functions.

Among these, Hyland's taxonomy has been widely adopted for academic genres. Although developed for written texts, its categories—content-oriented, writer-oriented, and reader-oriented hedges—have proven adaptable across discourse contexts (Hyland, 1996a, 1998a). Content-oriented hedges modulate propositional precision; writer-oriented hedges manage speaker responsibility; reader-oriented hedges facilitate audience interaction. This versatility has prompted its application to spoken discourse. Nikula (1997) adapted the framework for

English learners' spoken interactions, Vassileva (1997) applied it to multilingual academic presentations, and Zhang and Hyland (2018) used it to analyze teacher-student exchanges, demonstrating its relevance for spontaneous speech.

Hyland (1998) further distinguishes content-oriented hedges into accuracy-oriented (e.g., *The results are possibly due to...*, expressing caution) and writer-oriented (e.g., *The findings suggest...*, limiting author responsibility). Reader-oriented hedges (e.g., *perhaps, it seems, arguably*) invite interpretation and allow space for alternative viewpoints—a valuable feature in spoken discourse, where interaction is immediate. This interpersonal function initially made Hyland's taxonomy a promising tool for analyzing spoken academic discourse.

However, when applied to webinar data, the framework revealed limitations. Adverbial hedges often serve multiple communicative purposes. For example, *apparently* can simultaneously convey uncertainty and reduce speaker responsibility, making classification ambiguous. Context further complicates interpretation: *possibly* might express epistemic caution or function as a politeness marker, depending on situation. Likewise, *generally* may hedge claims while managing rapport. Some expressions, like *clearly*, are easily categorized as epistemic, while more abstract forms like *in a sense* resist fixed classification due to context-sensitive meanings.

These issues are especially evident in webinars, where unscripted discourse is shaped by real-time interaction. Speakers alternate between asserting expertise and inviting engagement, challenging rigid categorization. Hyland (1998a) acknowledges that hedging varies by discipline and culture—e.g., *arguably* is more typical in the humanities, *approximately* in the sciences. In interdisciplinary webinars, such variation makes fixed categories difficult to apply.

Given these challenges, I adopted Stine Hulleberg Johansen's (2020) more flexible form-function taxonomy for spoken academic discourse. Drawing on Prince et al. (1982), Hyland (1996, 1998), Salager-Meyer (1994), and Caffi (1999), Johansen's model accommodates the multifunctionality of hedging in informal academic speech. It proved effective for analyzing adverbial hedges in webinar discourse, especially in comparing NS and NNSs usage.

3.7 Johansen's Functional Framework

Johansen's (2020) classification of hedging builds upon the influential binary taxonomy introduced by Prince, Frader, and Bosk (1982), a model that continues to shape discourse analysis. Prince et al. distinguish between two primary types of hedges: *approximators*, which modify the propositional content, and *shields*, which reflect the speaker's epistemic stance toward that content. Johansen reinterprets this distinction in her tripartite model of spoken academic discourse. What Prince et al. label approximators, she refers to as hedging within the proposition, and what they identify as shields, she calls hedging between the speaker and the proposition. These two categories will henceforth be referred to as *Propositional Hedging* and *Epistemic Hedging*, respectively. This reconceptualization retains the original semantic-pragmatic distinction while adapting it to better capture the functional dynamics of spontaneous spoken interaction (Kaltenböck, 2010).

Propositional hedging, formerly referred to as approximators or hedging within the proposition, operates at the semantic level by modifying the truth conditions of an utterance (Prince et al., 1982). These expressions reduce precision or assertiveness within the content itself. In spoken academic discourse, they often take the form of adverbials that soften meaning by adjusting quantity, frequency, or degree. For instance, adverbs such as *roughly*, *almost*, *kind of*, and *sometimes* introduce imprecision or partiality (Quirk et al., 1985; Biber et al., 1999). Such markers allow speakers to generalize, estimate, or signal non-prototypicality, thereby increasing interpretive flexibility while preserving fluency.

Epistemic hedging, or hedging between the speaker and the proposition, functions at the pragmatic level. Rather than altering propositional content, epistemic hedges signal the speaker's level of certainty or commitment to the claim (Prince et al., 1982). Common adverbials in this category include *probably*, *maybe*, *clearly*, and *hopefully*, which convey varying degrees of confidence, subjectivity, or personal evaluation (Kaltenböck, 2010). While these expressions do not semantically modify the proposition, they influence its interpretation by framing it as tentative, evaluative, or open to negotiation.

A major limitation of earlier hedging frameworks—such as those proposed by Lakoff (1972), Prince et al. (1982), and Fraser (1975)—was their lack of attention to the audience's

interpretive role. These models focused either on semantic indeterminacy or the speaker's epistemic positioning, largely overlooking how hedging functions dialogically to involve the audience.

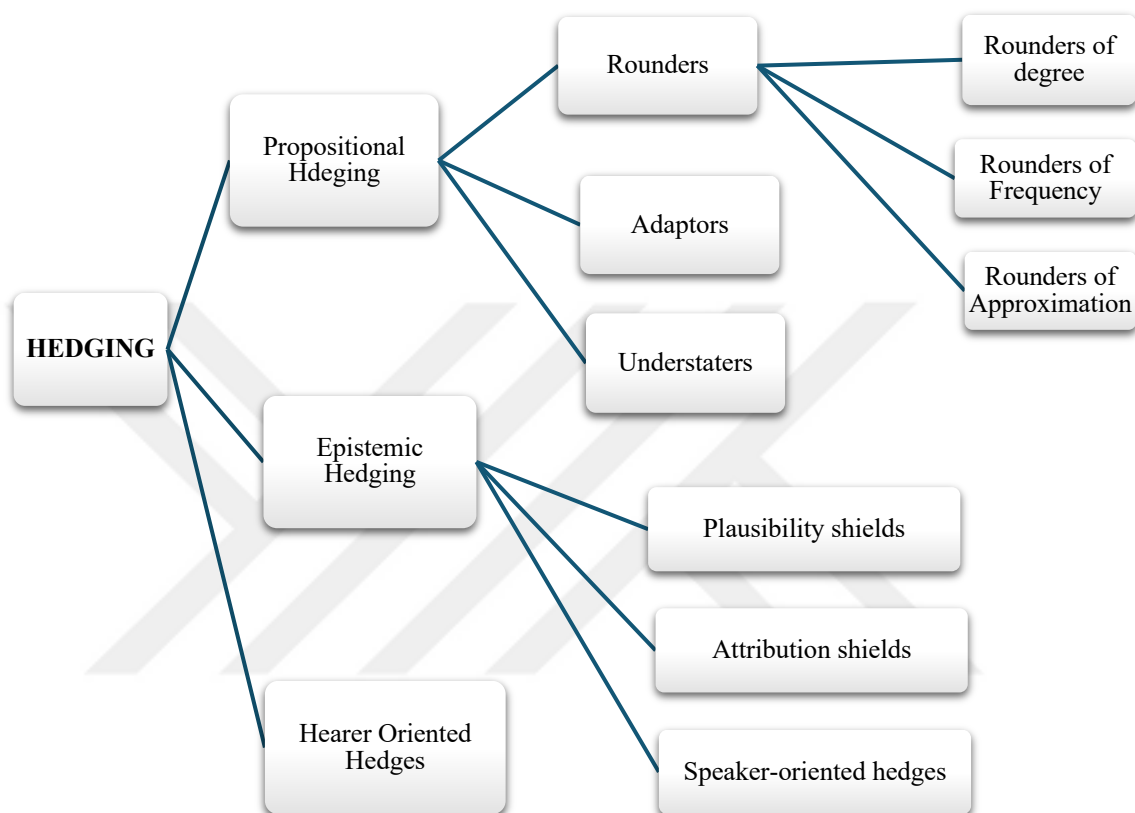
Hyland (1998a) was the first to address this gap by introducing reader-oriented hedges into his model. He argues that omitting the reader from the knowledge negotiation process results in what he calls an “unacceptable deviant persona” (Hyland, 1998, p. 178). According to Hyland, categorical assertions imply that no feedback is necessary, relegating the reader to a passive role. In contrast, reader-oriented hedges present claims as provisional, encouraging readers to engage in an active dialogic exchange. This recognition of the reader's co-constructive role represents a pivotal shift in hedging theory.

Johansen (2020) extends this insight to spoken academic interaction through the concept of hearer-oriented hedging, which she identifies as the third major functional category. This addition complements propositional hedging and epistemic hedging, forming a tripartite model of hedging functions. In spoken discourse, this third category is especially significant, as real-time interaction requires the continuous negotiation of meaning to sustain engagement and co-construct understanding.

Figure 3.2, which presents Johansen's adapted functional classification of hedging, provides a visual representation of this framework. The model distinguishes three core types: propositional hedging, epistemic hedging, and hearer-oriented hedging. Each of these categories includes further subtypes based on form and function, such as *rounders*, *adaptors*, and *shields*, along with their respective subdivisions. This framework serves as the structural foundation for the detailed analyses in the sections that follow, where each hedging type and subtype will be explored using corpus-based examples.

Figure 3.2

Functional Classification of Hedging in Spoken Academic Discourse



(adapted from Johansen, 2020 p.201).

3.7.1 Propositional hedging (Hedging within the Proposition)

The theoretical foundation for propositional hedging is closely linked to Zadeh's (1965) Fuzzy Sets Theory, which has been detailed earlier (See 2.2.4). In the context of hedging, Lakoff (1972) emphasized that such expressions function to "make things fuzzy" by introducing gradience within the proposition itself. This type of hedging affects the content of the statement rather than the relationship between the speaker and the proposition and is used to reduce categorical precision without altering the overall truth value of the claim. In this study, the notion of "*hedging within the proposition*," (epistemic hedging), following Johansen (2020), refers to the use of linguistic forms that introduce semantic uncertainty or

gradience into a statement. This aligns with Prince et al.'s (1982) category of approximators, which includes expressions that soften or qualify the truth conditions of a proposition without altering its overall claim. These forms, typically realized as lexical hedges, operate at the semantic level by signaling non-prototypicality or markedness in categorization. Expressions such as *approximately*, *partially*, *generally*, or *roughly* serve to narrow or blur categorical boundaries. According to Hyland (1998a: 71), these are accuracy-oriented hedges that preserve the speaker's commitment to a claim while adjusting its precision to reflect real-world complexity more accurately.

Lafuente Millán (2008: 69) points out that approximators are useful for referring to indeterminate quantities or vague data, enhancing descriptive flexibility. Similarly, Hinkel (2005) describe such expressions as semantically driven resources that enable controlled imprecision in discourse. The motivation behind this type of hedging is grounded in two key concerns: representing empirical variability and avoiding the risk of overgeneralization. In academic contexts—where knowledge is tentative and evolving—such hedging allows for precise yet cautious reporting. As noted by Rounds (1982) and Skelton (1988b), these strategies help maintain credibility and meet the standards of evidence-based communication.

Johansen (2020) identifies three subtypes of hedging within the proposition: adaptors, which adjust conceptual categorization (e.g., *partially*, *generally*); rounders, which approximate numerical or scalar values (e.g., *approximately*, *roughly*); and understaters, which reduce the assertiveness of a proposition. This three-part classification refines the earlier distinction made by Prince et al. (1982) between adaptors and rounders, providing a more detailed framework for analyzing how speakers manage precision within propositions.

3.7.1.1 Rounders

Rounders, as defined by Prince et al. (1982), are a subtype of approximators that hedge numerical or scalar expressions without altering the categorical identity of the referent. These expressions introduce controlled imprecision in values such as quantity, frequency, or degree by situating them within a contextually inferred range anchored around a rounded reference point. In the utterance

- (3.17) By the way, this percentage is not accurate, but you know, they use any percentage at all, like 70% of us are going to fail this year, and *about* 60% are gonna fail next year... (NNSs-10-#108979),

the speaker uses *about 60%* to convey an estimated value without changing the referent category of “*students*.” The hedge *about* softens the numerical precision, suggesting approximation while still presenting the statement as informationally relevant. Rounders function along a scalar continuum, typically involving quantifiable dimensions, and are cognitively simpler than adaptors, which involve category-based indeterminacy (Brown & Levinson, 1987; Lakoff, 1972).

The interpretation of Rounders depends heavily on discourse context. In informal or semi-formal settings, speakers tend to accept broader ranges of estimation, allowing for more flexible interpretations of hedged values. In the utterance

- (3.18) For that reason, based on my previous teaching experience for *about* 10 years, and as a teacher educator and trainer for about five years, I have some very humble suggestions on oral corrective feedback. (NNSs-11-#124062)

the speaker uses *about 10 years* and *about five years* to express approximate durations grounded in experience without committing to exact figures. These forms are typical of spoken discourse, where such estimations are pragmatically sufficient. Similarly, expressions like “*I was there around two hours, more like two and a bit*” suggest a range from roughly ninety minutes to just over two hours, depending on context and the speaker’s intent (Aijmer, 2002; Overstreet, 1999). In contrast, academic, scientific, or technical registers require greater precision. For example, a phrase like “*approximately 3.5 liters*” permits only a narrow deviation from the stated value, constrained by disciplinary conventions (Hyland, 1998; Rounds, 1982). As Channell (1994) notes, Rounders help speakers provide enough information to satisfy communicative needs without demanding exactitude. They are especially useful when exact values are unavailable or contextually irrelevant and also function to reduce speaker accountability in cases of uncertainty or imprecision (Myers, 1989; Salager-Meyer, 1994; Varttala, 2001).

Many Rounders originate from spatial prepositions such as *about*, *around*, and *toward*, which have undergone metaphorical extension to convey numerical or scalar approximation (Lakoff & Johnson, 1980; Sweetser, 1990). In the utterance

- (3.19) And this is how it works: A teacher provides a list of vocabulary words to the class—*around* four words is good (NS-08-#36698),

the preposition *around* is used to indicate an approximate quantity, transferring the spatial sense of proximity to a scalar interpretation. Such rounders function flexibly in discourse, appearing either as modifiers—as in “*about thirty quid*”—or within prepositional constructions such as “*around the middle of the day*” (Biber et al., 1999). Their versatility makes them particularly suited to spoken language, where estimations are often sufficient for communicative success. In English as a Lingua Franca contexts, these expressions may reflect pragmatic accommodation and interactional flexibility, as seen in constructions like “*maybe near five-ish or a bit after*” (Mauranen, 2004; House, 2003). By grounding scalar approximation in spatial metaphors, these forms allow speakers to convey imprecision while maintaining clarity and shared understanding.

To account for functional variation, this study proposes a tripartite classification: *rounders of approximation*, *rounders of frequency*, and *rounders of degree*. This extends Prince et al.’s (1982) original model by organizing rounders according to the type of scalar dimension they modify. *Rounders of approximation* refer to imprecise numerical values; *rounders of frequency* express habitual or repeated occurrences; and *rounders of degree* modulate the intensity of evaluative or descriptive content. This classification draws on scalarity as conceptualized in cognitive linguistics, where abstract domains such as time, quantity, and intensity are structured through spatial metaphors of proximity and direction (Lakoff & Johnson, 1980; Sweetser, 1990).

3.7.1.1.1 Rounders of approximation

Rounders of Approximation express imprecision in numerical or quantitative terms. These include adverbs such as *about*, *around*, *approximately*, *roughly*, *nearly*, and *almost*, which adjust the specificity of a scalar value while preserving the categorical identity of the referent.

These expressions are typically used when the speaker presents an estimated value rather than a precise measurement. In the utterance

- (3.20) The interview was a semi-structured one, and each interview lasted *approximately* 30 minutes. (NNSs-08-#85089),

the speaker uses *approximately* to indicate an estimated duration, providing useful information while signaling that the figure is not exact. Similarly, in

- (3.21) And this 5–17 is obviously a very broad range so it's *roughly* divided into three groups: ages from five to eight, nine to twelve, and thirteen and above. (NNSs-39-#43821),

roughly conveys an approximate segmentation of age groups without asserting strict numerical boundaries. These forms create a mental interval around a rounded or conceptually salient anchor value and are often influenced by the speaker's assumptions about the listener's expectations or tolerance for vagueness (Krifka, 2007). Prince et al. (1982) classify such expressions as propositional approximators, and their operation along measurable scalar continua makes them cognitively economical (e.g., Channell, 1994; Krifka, 2007). Rounders of Approximation are especially common in discourse contexts where exact values are unknown, irrelevant, or pragmatically excessive, such as informal reporting or the early presentation of data.

3.7.1.1.2 Rounders of frequency

Rounders of Frequency convey an imprecise sense of how often an event or action occurs. These include adverbs such as *often*, *sometimes*, *occasionally*, *frequently*, and *rarely*, which speakers use to describe habitual or repeated behaviors without specifying exact counts. In the utterance

- (3.22) When I take that negative thing out of my body, I *sometimes* knit, *sometimes* I cook, *sometimes* I just sit at the balcony, watch the city. (NNSs-03-#30408),

the repeated use of *sometimes* presents a range of common but unscheduled coping activities. Similarly, in

- (3.23) And one that we *often* forget—just ask questions, maybe just go to another teacher and say hey you know I'm not sure how to do this, what do you do? (NS-12-#78073),

often suggests that the behavior is typical, though not universal or predictable. These expressions allow for interpretive flexibility, which is particularly useful when the frequency of an event is variable or context-dependent. Salager-Meyer (1997) identifies frequency-based hedges as a key component of rhetorical strategy in both spoken and written discourse, helping to mitigate overgeneralization and reduce the speaker's epistemic commitment. In academic contexts, these Rounders appear in statements such as "*Participants occasionally skipped the final question,*" which allows the writer to report observed trends while avoiding categorical claims (Hyland, 1998; Salager-Meyer, 1995).

3.7.1.1.3 Rounders of degree

Rounders of Degree indicate partial intensity or limited extent within a proposition. These include adverbs such as *fairly*, *pretty*, *quite*, and *rather*, which reduce the assertiveness of a statement while maintaining its positive or negative orientation. In spoken discourse, such hedges help speakers soften their evaluations without negating their stance. For example, in the utterance

(3.24) I'm doing great, but I feel *pretty* busy. (NS-26-#217101),

the speaker uses *pretty* to express a noticeable but non-extreme level of busyness, thus allowing for a moderated assessment of their current state. Similarly, in

(3.25) It is actually a *fairly* difficult skill. (NS-44-#408784),

fairly functions to acknowledge the challenge without overstating it. These adverbs enable speakers to position themselves without sounding overly categorical or rigid. Caffi (1999) identifies these types of mitigators as central to discourse strategies that manage interpersonal sensitivity and epistemic caution. Rounders of Degree are especially common in evaluative contexts, where speakers aim to maintain politeness, express uncertainty, or signal limited commitment while preserving clarity.

3.7.1.2 Adaptors

Adaptors, as classified by Prince et al. (1982), are a subtype of propositional hedges that modify lexical-conceptual meaning rather than scalar values. Their primary function is to soften category membership by indicating that a referent only partially fits within a given

conceptual category. Unlike Rounders, which approximate quantities or measurements, Adaptors operate within a multidimensional semantic space, targeting category labels and conceptual boundaries. This allows speakers to signal that a term is semantically appropriate, but not fully accurate or prototypical. For instance, in the utterance

- (3.26) So, this is *essentially* a feedback loop, but without the automated part that, you know, makes it adjust in real-time. (NNSs-10-#108979),

the adaptor *essentially* signals that the referent fits the conceptual structure of a feedback loop, but with key deviations. In this way, adaptors allow speakers to maintain communicative precision in contexts where categories are flexible or partially defined. They function as placeholders for vague or incomplete conceptual references (Aijmer, 2002), and unlike rounders, which approximate scalar information (Channell, 1994), adaptors change the categorical meaning itself (Lakoff, 1987).

Adaptors require more complex cognitive processing than rounders, as their interpretation depends on contextual and extralinguistic cues (Aijmer, 2002). Rather than signaling precise fit, adaptors allow speakers to focus on the most salient features of a referent—such as its shape, function, or material—while acknowledging its departure from a prototypical label. This selective emphasis supports flexible categorization in real-time interaction. For instance,

- (3.27) The way this student writes is *virtually* English, but some parts still follow patterns from their first language. (NNSs-10-#108982).

In this example, the adaptor *virtually* helps the speaker frame the writing as mostly consistent with English norms while allowing space for deviation, which may not be visible in formal criteria but is clear in communicative context.

These hedges play an important role in maintaining fluency during spontaneous speech, particularly when speakers experience word-finding difficulties or encounter lexical gaps. In such moments, adaptors provide a semantically proximate placeholder that allows the speaker to convey the intended concept without pausing or breaking the flow of discourse. For example, in the statement,

- (3.28) It's *essentially* that framework we use for lesson planning, you know, the one with stages like engage and study—but I can't think of the name right now. (NNSs-10-#108986).

In this instance, the adaptor *essentially* enables the speaker to refer to a known structure without retrieving the specific term, preserving both communicative efficiency and listener comprehension.

While Adaptors and Rounders both reduce speaker commitment and support flexible interpretation, they differ in their domain of application. Adaptors adjust conceptual boundaries and appear more often with abstract or infrequently accessed terms, whereas Rounders are typically associated with numerals and measurable quantities. This distinction supports the case for a dual classification within approximative hedging: Rounders hedge measurement, and Adaptors hedge meaning.

3.7.1.3 Understaters

Understaters form a distinct category of propositional hedges that, unlike Rounders or Adaptors, do not engage with prototypicality (Prince et al., 1982). Their core function lies in downplaying the strength or salience of a proposition, often by softening the intensity with which information is delivered. This gives them a dual effect: they locally modify the semantic content of an utterance while simultaneously lowering its overall interpersonal force. Hübler (1983, p. 70) characterizes this as a “*detensifying effect*,” emphasizing the reduction in propositional weight. Markkanen and Schröder (1997, p. 7) similarly observe that Understaters are used to “underrepresent the state of affairs denoted by the proposition.” By softening claims, speakers can frame criticism, disagreement, or correction in a way that reduces the risk of face-threat, especially in socially or professionally sensitive contexts.

Unlike Rounders, which hedge scalar values such as quantity, frequency, or measurement (e.g., *around twenty participants*), understaters do not approximate numerical precision. Their function targets the propositional or interpersonal meaning of an utterance, not its measurable components. For example, in the sentence

- (3.29) That student *barely* used any linking words in the paragraph, so the flow was a bit hard to follow. (NNSs-10-#109087),

the hedge *barely* does not modify a specific count but reduces the perceived adequacy of the student’s writing. The statement remains evaluative rather than quantitative. This distinction

in semantic domain—scalar versus conceptual—is central to Prince et al.’s (1982) classification. Understaters reduce the force of a claim rather than its numerical specificity, and this difference is what clearly separates them from Rounders.

3.7.2 Epistemic hedging

Johansson’s (2007, p. 205) concept of hedging between the speaker and the proposition (epistemic hedging) corresponds closely to what Prince et al. (1980) term shields. Johansson describes this type of hedging as the speaker’s way of modulating their stance toward the truth of a claim, focusing on how much epistemic responsibility is assumed. This aligns with Prince et al.’s notion of shields as devices that project the proposition through another source or express varying degrees of speaker commitment. Expressions such as *I think*, *it seems*, or *according to* do not affect the factual content of the proposition but indicate the speaker’s positioning in relation to it. In both models, shields serve interpersonal and epistemic functions by allowing speakers to convey uncertainty, partial agreement, or strategic distancing without altering the proposition itself.

Shields, as detailed by Prince et al. (1980, pp.11–19), differ from approximators in that they do not modify the truth-conditions of the propositions they accompany. Their primary role is to mark the speaker’s epistemic stance rather than adjust the content of the claim. For example, “*A robin is a bird*” remains true whether or not it is prefaced with *I guess* or “*It seems that.*” In contrast, approximators such as *sort of* or *kind of* may shift a statement’s truth-value by altering category boundaries, as in “*A chicken is a sort of a bird.*” Figurative statements like “*Esther Williams is a fish*” illustrate how metaphorical uses complicate interpretation, particularly when literal markers like “*a regular fish*” are introduced. Shields function by creating a degree of epistemic distance, which may suggest doubt but, as Hyland (1998a, p. 73) notes, can also serve to soften tone, transfer responsibility, or situate claims within a broader discourse context.

3.7.2.1 Plausibility Shields

Plausibility shields are a type of hedging device that speakers use to present information as probable or possible rather than certain. They signal that a statement is based on inference,

estimation, or generalized reasoning, rather than empirical certainty or direct observation (Hyland, 1998; Prince, Frader, & Bosk, 1982). Unlike speaker-oriented hedges that express personal attitude or hearer-oriented hedges that manage politeness, plausibility shields reduce the strength of a proposition by marking it as tentative and distancing the speaker from full epistemic responsibility. This distancing is achieved through adverbial forms such as *probably*, *maybe*, *perhaps*, *possibly*, *potentially*, and *likely*, all of which allow speakers to manage their epistemic stance without asserting the truth of the proposition definitively (Simon-Vandenberg, 1996; Aijmer, 2002).

These shields operate primarily at the level of epistemic commitment, where their main function is to express uncertainty about the truth of a claim while still maintaining its relevance in discourse (Hyland, 1998). They often appear in spoken academic or dialogic contexts, where speakers propose interpretations, pose hypotheses, or offer explanations without overstating their confidence (Kärkkäinen, 2003). By presenting statements as plausible rather than factual, these markers open space for discussion, invite listener feedback, and maintain conversational flexibility. Their syntactic position—whether initial, medial, or final—also influences how the uncertainty is perceived, with initial placement often flagging tentativeness from the outset (Verstraete, 2004; Haselow, 2011). Thus, plausibility shields serve as a core strategy for managing knowledge claims and epistemic responsibility in both NSs and NNSs discourse (Biber et al., 1999; Redeker, 1990).

3.7.2.2 Attribution shields

Attribution shields are a type of epistemic hedge that allow speakers to reference information from external sources rather than presenting it as their own belief. They function to reduce the speaker's direct commitment to the truth of a proposition by attributing the claim to another entity or theoretical framework (Hyland, 1998; Prince, Frader, & Bosk, 1982). This distancing is accomplished through adverbs such as *allegedly*, *apparently*, *supposedly*, *theoretically*, *hypothetically*, and *naturally*, each of which signals that the speaker is not asserting the information from personal knowledge or authority. These expressions help manage the speaker's stance by presenting the content as reported, inferred, or generally accepted rather than endorsed (Hyland, 1996).

The pragmatic value of attribution shields lies in their ability to modulate speaker responsibility. By attributing claims to indirect sources or abstract frameworks, speakers maintain flexibility in their position and leave room for alternate interpretations. For example, *apparently* implies access to secondhand or indirect evidence, while *theoretically* indicates that a claim aligns with conceptual reasoning rather than practical experience (Hyland, 1998; Swales, 1990). This strategy is useful in discourse contexts where the speaker must present information without asserting it as entirely reliable or factual. Attribution shields thus serve both rhetorical and interpersonal functions by softening claims and deflecting potential criticism (Prince et al., 1982; Hyland, 1996).

3.7.2.3 Speaker-oriented hedges

Speaker-oriented hedges refer to lexical items, most often adverbs, that manage the speaker's degree of involvement in relation to a proposition without altering its truth-conditional content. These hedges express the speaker's stance, intention, or evaluation in a way that reduces assertiveness while preserving the propositional core (Hyland, 1998; Biber et al., 1999). Common speaker-oriented adverbs include *just*, *maybe*, *actually*, *basically*, *hopefully*, and *perhaps* (Prince et al., 1982; Aijmer, 2002; Beeching, 2016). Such forms function as stance markers that mitigate the interpersonal impact of the claim, often signaling that a statement is tentative, exploratory, or interpretive rather than definitive (Hinkel, 2005; Holmes, 1984). In spoken academic contexts, these hedges are especially relevant where speakers make generalizations, express evaluations, or propose tentative conclusions—contexts where the risk of overcommitment or disagreement is high (Hyland, 2005; Fraser, 2010).

In contrast to speaker-oriented hedges, plausibility shields—as introduced by Prince, Fraser, and Bosk (1982)—operate on the epistemic level by marking the degree of certainty with which a speaker presents a proposition. These include modal auxiliaries (*might*, *must*), evidential adverbs (*probably*, *presumably*), and clausal constructions (*I think*, *It seems that*) (Prince et al., 1982; Hyland, 1998; Varttala, 2001). Rather than distancing the speaker from the interpersonal implications of a statement, plausibility shields directly index epistemic commitment. They allow speakers to hedge the truth value of a proposition itself, functioning

as modal expressions within the framework of epistemic modality (Palmer, 2001; Lyons, 1977). While speaker-oriented hedges and plausibility shields can overlap in surface form—such as with *maybe* or *perhaps*—their pragmatic effect differs: plausibility shields indicate doubt or tentativeness about the state of affairs, whereas speaker-oriented hedges limit the speaker’s evaluative presence.

A third related category, attribution shields, shifts responsibility for a claim from the speaker to an external source, thereby reducing personal accountability. According to Prince et al. (1982), attribution shields include expressions like *according to*, *X claims that*, or *it is believed that*, and function to project the proposition through another voice. This aligns with later work on evidentiality (Chafe & Nichols, 1986; Cornillie, 2009), which emphasizes the importance of source marking in constructing epistemic stance. Unlike speaker-oriented hedges, attribution shields do not manage the speaker’s commitment by modulating tone or involvement but by redirecting authorship. In sum, while all three categories—speaker-oriented hedges, plausibility shields, and attribution shields—serve to mitigate speaker commitment, they differ in scope: the first adjusts interpersonal stance, the second modifies epistemic certainty, and the third transfers source responsibility (Hyland, 1998; Caffi, 1999; Simon-Vandenberg & Aijmer, 2007).

The adverb *maybe* can function as both a plausibility shield and a speaker-oriented hedge, but the two uses differ in pragmatic scope. As a plausibility shield, *maybe* modifies the epistemic force of the proposition, signaling that the speaker is uncertain about the truth-value of the statement (Prince et al., 1982); for example, “*Maybe the results are inaccurate*” expresses doubt about the claim itself. In contrast, when used as a speaker-oriented hedge, *maybe* reflects the speaker’s stance rather than the proposition’s truth, softening the delivery or reducing personal commitment without necessarily implying doubt. For instance, in “*Maybe we could try another method*,” the speaker uses *maybe* to manage interpersonal tone or leave room for negotiation, even if they believe in the idea (Hyland, 1998; Aijmer, 2002). Thus, while plausibility shields adjust the degree of certainty, speaker-oriented hedges adjust the speaker’s visibility and involvement in the statement.

3.7.3 Hearer-oriented hedges

Hearer-oriented hedges form a distinct category of interpersonal strategies used to manage the speaker–listener relationship in discourse. Unlike content-focused hedges, they do not alter the truth value of a proposition. Instead, they frame statements as negotiable to accommodate the listener’s perspective. Expressions such as *maybe*, *I think*, or *would you mind* reduce imposition, soften assertions, and encourage collaborative engagement. Hyland (1996) differentiates these forms from content-oriented hedges by emphasizing their role in shaping interaction and guiding audience interpretation. In spoken discourse, hearer-oriented hedges are essential for promoting mutual respect and dialogic openness. By presenting claims as flexible rather than fixed, speakers mitigate resistance and maintain social harmony in institutional or interactive settings.

These hedges are closely tied to politeness theory (Brown & Levinson, 1987), where they function as strategies for reducing face-threatening acts. When hedging criticisms or suggestions, speakers lower illocutionary force to preserve both their own and the listener’s face. Phrases such as *I might be wrong, but...* or *Perhaps we could consider...* reduce the likelihood of escalating disagreement. These expressions reflect epistemic humility and support collegial communication. As Riekkinen (2010) observes, hedging in academic critique often serves to manage social dynamics rather than signal doubt. The function, then, is less about uncertainty and more about maintaining rapport and avoiding direct confrontation.

In addition to managing conflict, hearer-oriented hedges invite shared responsibility and promote inclusiveness. Expressions like *you know*, *isn’t it?*, or *we could maybe...* draw the listener into the reasoning process. According to Hyland (1996), such hedges signal openness to feedback and foster a sense of shared discourse. They support both positive politeness (seeking solidarity) and negative politeness (mitigating imposition), reinforcing norms of respectful academic interaction. These devices allow speakers to express claims with authority while remaining approachable. In contexts such as classrooms, conferences, or academic discussions, they help sustain collegial, face-sensitive communication where disagreement must be handled constructively.

3.8 Conclusion: Johansen's Functional Framework

Johansen's (2020) framework offers a clear and functionally grounded model for analyzing hedging in spoken academic discourse. One of its key strengths lies in its foundation: it was developed specifically with spoken interaction in mind, making it more applicable to spontaneous, dialogic settings than earlier models based on written texts. This spoken-oriented design allows for greater sensitivity to features such as real-time negotiation of meaning, turn-taking, and discourse flow.

Another advantage of Johansen's framework is its inclusion of hearer-oriented hedging as a distinct category. This addition fills an important gap left by previous taxonomies, such as those by Prince et al. (1982) and Hyland (1998), which largely focused on speaker stance and propositional fuzziness. By recognizing the role of the hearer in shaping how hedges function—particularly in maintaining politeness, inviting engagement, and managing interpersonal dynamics—Johansen's model reflects a more complete view of communication in academic contexts.

Furthermore, the tripartite division into hedging within the proposition, between the speaker and the proposition, and toward the hearer provides a functional structure that supports detailed categorization without becoming overly rigid. This flexibility is especially useful in analyzing multifunctional adverbial hedges, which often operate simultaneously at semantic, epistemic, and interactional levels.

Overall, Johansen's framework is a practical and context-appropriate tool for the present study, as it aligns with the discourse characteristics of academic speech and supports the analysis of hedging across both NSs and NNSs groups.

4 METHODOLOGY

4.1 Research Aims and Questions

This study examines how adverbial hedging strategies are used in spoken academic discourse, with a contrastive focus on Turkish non-native English speakers and native English speakers.

4.1.1 Research questions

RQ1: How do the range and frequency of adverbial hedging devices used by Turkish speakers of English compare to those used by native English speakers in spoken academic discourse?

RQ2: Do the pragmatic functions of adverbial hedges used by Turkish speakers of English differ from those used by native English speakers in spoken academic discourse? If so, how?

4.2 Methodological Framework

This study is grounded in corpus pragmatics, a methodological approach that integrates the quantitative analysis of corpus linguistics with the contextual sensitivity of pragmatics. By combining these perspectives, the framework supports a refined investigation of adverbial hedging in spoken academic discourse, addressing both its frequency and its communicative functions. The following subsections outline how this framework is applied in the study.

4.2.1 Corpus pragmatics framework

This study is grounded in the methodological field of corpus pragmatics, a hybrid approach that integrates the pattern-based analysis of corpus linguistics with the context-sensitive focus of pragmatics (Romero-Trillo, 2017). While corpus linguistics identifies recurring lexical and grammatical features across large datasets (Huang, 2017), pragmatics interprets these patterns in relation to speaker intention, discourse context, and communicative function (Rühlemann & Aijmer, 2015). This integrated model is particularly well suited for investigating hedging, which involves both formal linguistic features and interactional goals such as epistemic stance, interpersonal mitigation, and discourse management.

Rather than relying solely on surface-level frequency data, this framework facilitates an analysis of how adverbials like *probably*, *just*, or *perhaps* function contextually to signal

uncertainty, politeness, or strategic vagueness. Recent advances in corpus tools—such as Sketch Engine, pragmatic annotation systems, and speech-oriented transcription software—further enhance the precision and depth of analysis by enabling researchers to identify, annotate, and interpret hedging strategies in authentic spoken academic interactions (Weisser, 2018; Taavitsainen & Jucker, 2015; Simpson et al., 2002; Love et al., 2017).

4.2.2 Corpus research orientation

To guide the interpretation of corpus data, this study draws on three well-established methodological orientations: corpus-informed, corpus-based, and corpus-driven. These differ in how they position the relationship between theory and data, offering flexible pathways for either validating prior claims or generating novel insights (Johansson, 2011; Tognini-Bonelli, 2001). Their distinctions are summarized in Table 4.1, which outlines key purposes, examples, and methodological direction.

Table 4.1

Classification of Corpus Study Types

Type of Study	Explanation	Example	Approach
Corpus-Informed	Uses corpus data to illustrate or support existing theories; not central to analysis.	Retrieving maybe and possibly to confirm known hedging patterns.	Top-Down
Corpus-Based	Tests or refines theoretical assumptions; theory guides analysis.	Measuring hedge use in NNSs vs NSs to evaluate epistemic caution.	Top-Down
Corpus-Driven	Fully inductive; categories and patterns emerge from the data itself	Finding that seemingly is frequent among NNSs, while perhaps is favored by NSs.	Bottom-Up

4.2.2.1 Corpus-informed approach

This approach uses the corpus as a supplementary resource to illustrate or refine pre-existing theories. Analytical focus remains theory-led, and corpus examples are used primarily to

confirm known discourse patterns. In this study, adverbs like *maybe* and *possibly* are examined to demonstrate established hedging forms in academic speech.

4.2.2.2 Corpus-based approach

Here, the corpus plays a central role in testing theoretical assumptions. Research begins with a hypothesis—such as the idea that NNSs hedge less frequently or less diversely than NSs—and evaluates it through frequency counts and inferential statistics. This enables the empirical examination of epistemic caution across speaker groups.

4.2.2.3 Corpus-driven approach

This fully inductive model treats the corpus as the starting point for discovery. No theory is imposed in advance; instead, categories and patterns are derived from observed language use. This orientation is especially useful for identifying underexplored adverbials—like *seemingly* or *probably*—that may recur in contexts such as Q&A sessions but are not well represented in the literature.

4.2.3 Dual Analytical Framework

Building on the corpus research orientations outlined in Section 4.2.2, this study adopts a dual-path analytical framework that combines both form-to-function and function-to-form methodologies. This integrative design allows for a comprehensive examination of hedging in spoken academic discourse, addressing both its surface-level distribution and its deeper communicative functions. Specifically, it enables analysis of the lexical forms used by NSs and NNSs (RQ1), as well as the pragmatic functions these forms perform (RQ2).

Research Question 1 (RQ1) follows a form-to-function approach, starting with a predefined set of adverbial hedges identified in prior studies (e.g., *just*, *probably*, *perhaps*). Frequency lists are generated using corpus tools to determine how often each adverb occurs in the spoken data. Concordance analysis is then used to verify whether each occurrence functions as a hedge. Non-hedging uses are excluded, and the results are statistically compared (using log-likelihood and Mann-Whitney U tests) to assess how the frequency and range of hedges differ between NSs and NNSs groups.

Research Question 2 adopts a function-to-form approach, beginning with a theoretical classification of hedging functions (e.g., *adaptors*, *shields*, *rounders*). Discourse segments corresponding to each functional category are identified across the corpus. The analysis then determines which linguistic forms are used to perform these functions—regardless of whether they were anticipated in the initial lexical inventory. Finally, group comparisons are conducted to explore how NSs and NNSs differ in their functional use of hedging, particularly in relation to politeness, stance-taking, and interpersonal alignment. Collectively, these approaches offer both vertical analysis (tracing individual lexical forms) and horizontal analysis (examining function across interactional contexts), providing a richer understanding of hedging behavior in academic speech (Aijmer & Rühlemann, 2015). To clarify the procedural structure of both analyses, Table 4.2 outlines each step in the form-to-function and function-to-form pathways.

Table 4.2.

Dual Analytical Framework for Exploring Hedging Forms and Functions

	Form-to-Function (RQ1)	Function-to-Form (RQ2)
Research Question	RQ1: How do the range and frequency of adverbial hedging devices used by NNSs compare to those used by NSs in spoken academic discourse?	RQ2: Do the pragmatic functions of adverbial hedges used by NNSs differ from those used by NSs in spoken academic discourse?
Step 1	Select corpus (spoken academic webinars). Generate frequency lists based on prior studies.	Define functional categories (e.g., shields, adaptors, rounders) based on pragmatic theory.
Step 2	Filter results to isolate adverbs that may function as hedges.	Locate discourse segments corresponding to functional hedging categories.
Step 3	Use concordance to verify hedging function; remove irrelevant tokens.	Identify linguistic forms realizing each hedging function in context.
Step 4	Apply statistical tests (log-likelihood, t-test, Mann-Whitney U) to compare frequency and range.	Compare distribution of hedging functions across NSs and NNSs with inferential statistics.
Step 5	Report patterns in lexical hedge usage by group.	Report functional use and distribution of hedging strategies by group.

4.3 Corpus Design and Structure

This section describes the design, composition, rationale, and statistical justification of the corpus compiled for this study. The corpus was constructed specifically to support a contrastive analysis of adverbial hedging strategies used by NNSs and NSs in the context of spoken academic discourse. All data were drawn from ELT webinars, which offer a professional yet naturally occurring site for analyzing hedging behavior in speech.

4.3.1 Composition and sources

The full corpus comprises 86 ELT webinars, with 42 sessions conducted by Turkish non-native English-speaking professionals and 44 sessions delivered by native English-speaking ELT experts. All sessions were publicly available and conducted entirely in English, with no webinars including mixed speaker groups. The two sub-corpora were compiled from distinct but comparable sources. The NSs corpus were obtained from the *American English at State* platform, a U.S. Department of State initiative that hosts academic webinars by ELT professionals with backgrounds in teacher education and higher education training. These sessions were selected for their consistent academic tone and alignment with professional ELT practices.

The NNSs corpus were collected from publicly accessible YouTube channels, specifically featuring Turkish ELT academics who hold doctoral degrees and currently teach in university-level ELT departments in Turkey. Their use of English for professional presentation reflects both fluency and familiarity with academic norms in spoken contexts. To ensure thematic consistency, webinar topics were carefully aligned across the two groups, and no session contained both NSs and NNSs, ensuring clear boundaries for contrastive analysis.

4.3.2 Corpus selection rationale

The choice to use webinars as the primary data source was motivated by their hybrid communicative nature, which blends the planned structure of academic presentations with the spontaneous interaction of live speech. This format allows for the investigation of hedging in an authentic, professional context, reflecting both scripted and impromptu

elements. Unlike written texts or heavily scripted lectures, webinars capture a naturalistic yet purposeful register of academic English, suitable for identifying hedging as a discourse strategy.

In addition, thematic matching between the two sub-corpora was prioritized. Both NSs and NNSs sessions focused on core ELT themes such as grammar instruction, vocabulary development, reading fluency, learner motivation, and the integration of technology in teaching. Controlling for content in this way allows the analysis to attribute differences in hedging behavior to speaker group rather than topic variation. Speaker selection was also carefully controlled to ensure comparability in academic qualification, teaching experience, and communicative setting.

4.3.3 Corpus size and statistical justification

To validate the corpus design from a statistical standpoint, an a priori power analysis was conducted using G*Power 3.1.3 (Faul et al., 2007). Following the recommendations of Larsen-Hall (2015), parameters were set at an alpha level of 0.05, a statistical power of 0.80, and a moderate effect size of $d = 0.5$ (Cohen's d). Based on these settings, the minimum required sample size for reliable group comparison was 72 webinars—36 per speaker group.

The final corpus exceeds this threshold, including 86 webinars in total: 42 from Turkish NNSs and 44 from NSs. The overall word count of the corpus is 776,844 words, nearly equally distributed between the two groups. Specifically, the NNSs sub-corpus comprises 389,755 words, while the NSs sub-corpus consists of 387,089 words. This near parity in data volume strengthens the empirical basis for both frequency-based and function-oriented analyses of adverbial hedging.

Moreover, while prior research (e.g., Hyland & Milton, 1997; Friginal et al., 2017) has suggested that NNSs tend to use fewer and less varied hedging forms, few studies have tested this in spoken academic genres using corpus-based methods. The current study addresses this gap by offering a robust, statistically justified dataset for comparative analysis.

4.3.4 Corpus overview

An overview of the entire corpus is presented in Table 4.3, which summarizes key characteristics such as the number of sessions, total word counts, duration, participant counts, and source platforms for both NNSs and NSs groups.

Table 4.3

Summary of Corpus Composition for NNSs and NSs Groups

	NNSs		NS		TOTAL
Duration	53:33:06		43:19:20		96:52:26
Word Count	389,755 words		387,089 words		776,844 words
Sessions	42		44		86
Participants	162	Turkish ELT experts	116	Native English-speaking ELT experts	278 ELT experts
Source	Publicly available ELT webinars on YouTube (2018–2022)				

A more detailed view of the Turkish NNSs sub-corpus is provided in Table 4.4. This table lists all 42 webinars with their transcript ID, duration, word count, and the number of speakers. The dataset features both solo and group presentations, enhancing the diversity and representativeness of discourse styles.

Table 4.4*Webinar Transcript Details for Turkish ELT Experts (NNSs)*

	Transcript ID	Duration	Word Count:	Number of Speakers
1.	NNSs-01	01:16:53	9878	2
2.	NNSs-02	01:16:18	8598	5
3.	NNSs-03	01:01:11	7049	3
4.	NNSs-04	01:06:47	6326	5
5.	NNSs-05	01:16:23	9515	5
6.	NNSs-06	01:38:36	12492	4
7.	NNSs-07	01:49:39	14921	4
8.	NNSs-08	00:54:54	6311	2
9.	NNSs-09	01:32:36	9742	8
10.	NNSs-10	01:19:38	10730	3
11.	NNSs-11	01:20:36	8768	5
12.	NNSs-12	01:22:02	8607	3
13.	NNSs-13	00:54:31	5773	5
14.	NNSs-14	01:13:49	8074	5
15.	NNSs-15	01:00:47	7265	2
16.	NNSs-16	01:14:46	8776	5
17.	NNSs-17	01:41:58	12303	6
18.	NNSs-18	01:24:48	10972	3
19.	NNSs-19	01:30:29	10333	3
20.	NNSs-20	01:20:59	10367	4
21.	NNSs-21	01:18:09	9748	3
22.	NNSs-22	01:16:05	8789	3

23.	NNSs-23	01:17:35	10348	4
24.	NNSs-24	01:17:39	10107	8
25.	NNSs-25	01:18:31	9851	4
26.	NNSs-26	01:05:00	8435	3
27.	NNSs-27	01:20:38	10666	5
28.	NNSs-28	01:20:04	8454	2
29.	NNSs-29	01:07:43	8771	2
30.	NNSs-30	01:32:35	13554	3
31.	NNSs-31	01:04:51	7062	2
32.	NNSs-32	01:00:17	8417	4
33.	NNSs-33	01:07:06	8817	5
34.	NNSs-34	00:56:00	5696	3
35.	NNSs-35	01:06:24	8956	5
36.	NNSs-36	01:04:09	8058	2
37.	NNSs-37	01:01:24	6916	4
38.	NNSs-38	01:02:11	6463	2
39.	NNSs-39	01:51:50	10375	3
40.	NNSs-40	01:05:08	8864	4
41.	NNSs-41	01:27:08	13004	2
42.	NNSs-42	01:34:59	11604	7
TOTAL		53:33:06	389755	162

Similarly, Table 4.5 outlines the structure of the NSs sub-corpus, which includes 44 webinars led by native English-speaking ELT professionals. These sessions also vary in speaker format and are thematically aligned with the NNSs corpus, making them suitable for direct comparison of hedging behavior across groups.

Table 4.5.*Webinar Transcript Details for Native ELT Experts (NS)*

	Transcript ID	Duration	Word Count:	Number of Speakers
1.	NS-01	01:00:52	8831	3
2.	NS-02	00:55:32	7930	2
3.	NS-03	00:59:20	9848	3
4.	NS-04	01:02:27	9514	3
5.	NS-05	00:53:38	8474	2
6.	NS-06	01:00:13	8891	3
7.	NS-07	01:00:07	7768	2
8.	NS-08	01:02:26	8604	2
9.	NS-09	00:51:19	7622	2
10.	NS-10	01:01:08	9259	3
11.	NS-11	01:02:43	10151	2
12.	NS-12	01:01:07	10986	2
13.	NS-13	00:59:33	9224	2
14.	NS-14	00:54:59	7493	3
15.	NS-15	01:02:57	7943	3
16.	NS-16	00:58:31	8132	2
17.	NS-17	00:59:31	9099	3
18.	NS-18	00:55:33	7683	2
19.	NS-19	01:02:31	8925	4
20.	NS-20	01:00:01	9614	2
21.	NS-21	00:54:37	7894	3
22.	NS-22	00:56:59	8459	3

23.	NS-23	00:59:56	8470	2
24.	NS-24	00:58:54	9588	3
25.	NS-25	00:58:19	8179	2
26.	NS-26	01:00:44	9508	3
27.	NS-27	01:00:52	9573	3
28.	NS-28	00:58:34	8320	3
29.	NS-29	01:00:04	9208	3
30.	NS-30	00:54:49	8581	3
31.	NS-31	00:59:57	9205	3
32.	NS-32	01:02:30	8838	3
33.	NS-33	01:03:00	9893	3
34.	NS-34	00:58:01	8354	2
35.	NS-35	01:00:57	8805	3
36.	NS-36	00:59:37	8058	2
37.	NS-37	01:01:37	10085	2
38.	NS-38	01:01:25	9339	3
39.	NS-39	01:00:08	9799	2
40.	NS-40	00:57:10	7987	3
41.	NS-41	01:01:01	8599	3
42.	NS-42	01:00:30	9088	3
43.	NS-43	00:50:55	7075	3
44.	NS-44	00:54:16	8193	3
TOTAL		43:19:20	387089	116

4.4 Data Preparation Procedures

This section details the procedures used to prepare and organize the webinar corpus for systematic analysis. The data preparation involved three main stages: (1) transcription cleaning, (2) retrieval of hedging adverbs based on prior research, and (3) tagging and concordancing of each hedge using corpus tools. These steps ensured data accuracy and consistency for both the quantitative and qualitative components of the study.

4.4.1 Transcription and cleaning

The first stage involved manually revising the automated transcripts generated from the webinar recordings. Transcripts were downloaded in Word format from YouTube, where auto-captions often included issues such as missing punctuation, inaccurate transcriptions, and unclear speaker demarcation. To ensure transcription fidelity, each file was reviewed line-by-line while listening to the original audio.

Corrections included the insertion of appropriate punctuation, grammatical revisions for clarity, and the removal of non-essential fillers (e.g., *uh*, *um*, repetitions, and self-repairs) without altering speaker intent. Each speaker was assigned an anonymized identifier to protect privacy and maintain consistency throughout the corpus. These revisions ensured that the cleaned transcripts were accurate, coherent, and suitable for corpus-based analysis.

4.4.2 Hedge retrieval

In the second stage, a comprehensive inventory of adverbial hedges was compiled to serve as the lexical foundation for both form- and function-based analyses. A total of 95 candidate adverbs were drawn from influential studies on spoken and written discourse, including Kaltenböck et al. (2010), Riekkinen (2009), Salager-Meyer (1994), and Neary-Sundquist (2013). Core items included *probably*, *perhaps*, and *maybe*, which are frequently associated with epistemic softening and speaker uncertainty.

To broaden the lexical scope, additional adverbs were sourced from studies on written academic English (e.g., Beeching, 2016; Channell, 1994; Hinkel, 1997; Hyland; Varttala). These contributed less-studied but relevant adverbs such as *arguably*, *generally*, and *ultimately*, which—despite their written origins—often occur in professional spoken settings

such as academic webinars. This blended sourcing ensured that the inventory captured both prototypical spoken hedges and crossover items from written discourse.

4.4.3 Tagging and concordancing

Following the compilation stage, the 96 adverbial hedge candidates were analyzed using *Sketch Engine* (<https://app.sketchengine.eu/>). The concordance function was used to retrieve each token within its surrounding discourse context. Upon review, 27 adverbs did not appear in any transcript, resulting in a refined list of 69 attested items. The full inventory is shown in Table 4.6.

Table 4.6

Lexical Inventory of Adverbial Hedges in Spoken Academic Discourse

Adverbs of Degree
barely, hardly, merely, partly, quite, somewhat, briefly, heavily, moderately, poorly, rather, sufficiently, broadly, largely, most, practically, relatively, virtually, closely, little, mostly, predominantly, shortly, widely, enough, loosely, only, pretty, simply, sparsely, fairly, mainly, partially, primarily, slightly, chiefly, scarcely, mildly, comparatively lightly weakly
Adverbs of Frequency
commonly, generally, often, rarely, sometimes, usually, frequently, normally, oftentimes, seldom, typically, unusually, regularly, ordinarily, occasionally
Approximative Adverbs
About, almost, approximately, around, nearly, roughly, figuratively
Modal Adverbs
allegedly, essentially, likely, perhaps, potentially, supposedly, apparently, hypothetically, maybe, possibly, probably, theoretically, seemingly, unlikely, accordingly, reportedly, presumably, reasonably, preferably, arguably, ultimately, tentatively, feasibly, eventually
Pragmatic Markers
actually, basically, hopefully, just, naturally, unfortunately, surprisingly, technically

(Kaltenböck et al., 2010; Riekkinen, 2009; Salager-Meyer, 1994; Neary-Sundquist, 2013; Beeching, 2016; Channell, 1994; Hinkel, 1997; Hyland; Varittala)

Each occurrence was exported to Microsoft Excel and annotated with metadata, including transcript ID, frequency, speaker group (NS/NNSs), and a contextual snippet. Excel's sorting tools enabled classification by grammatical class and pragmatic function, producing a structured dataset aligned with the study's research questions.

The final lexical inventory was grouped into five grammatical-pragmatic categories: adverbs of degree, frequency, approximation, modality, and pragmatic stance. Items not found in the corpus were retained in the list to ensure methodological transparency. This categorized inventory serves as the lexical basis for all subsequent frequency-based and context-sensitive analyses presented in the study.

4.5 Data Analysis Framework

This section outlines the procedures used to analyze adverbial hedging in spoken academic discourse. The framework combines corpus-based methods with functional analysis to examine both the frequency and communicative roles of hedging by NSs and NNSs.

The analysis addresses two research questions. Research Question 1 (RQ1) involves a quantitative investigation of hedge use across speaker groups using a form-to-function approach. Adverbials are classified based on grammatical form, semantic content, and pragmatic function. Corpus tools such as Sketch Engine are used to extract concordance lines and compute frequency, enabling comparison of lexical range and distribution between NSs and NNSs. Research Question 2 (RQ2) focuses on pragmatic function. Building on the lexical categories from RQ1, it examines how hedging devices operate in context, drawing on established models to classify hedges based on interactional roles such as uncertainty, mitigation, and politeness. Together, these two phases provide a comprehensive account of hedging as both a lexical and pragmatic feature of academic speech.

4.5.1 Quantitative Analysis of Hedge Distribution (RQ1)

RQ1 investigates how the range and frequency of adverbial hedges differ between NSs and NNSs in academic discourse. The analysis applies a form-to-function classification, grouping adverbs according to grammatical structure and discourse function.

Hedges fall into three major categories:

- Modal Adverbial Hedges (e.g., *probably, possibly, perhaps*): convey epistemic uncertainty or possibility.
- Pragmatic Markers (e.g., *just, actually, hopefully*): shape stance and interpersonal tone.
- Quantificational Approximators: introduce vagueness in quantity, intensity, or frequency.

Quantificational approximators include:

- Indefinite Frequency Adverbs (e.g., *sometimes, generally*): signal recurring but unspecific patterns.
- Indefinite Degree Adverbs (e.g., *somewhat, slightly*): soften intensity or extent.
- Approximative Adverbs (e.g., *about, nearly, roughly*): hedge numerical or scalar precision.

Sketch Engine was used to extract frequency and concordance data for each adverb, providing a data-driven comparison of hedge use between speaker groups. This phase offers empirical insight into lexical variation and distributional tendencies in NNSs and NSs speech.

4.5.2 Functional and pragmatic analysis of hedge usage (RQ2)

Research Question 2 explores whether the pragmatic functions of adverbial hedges differ between NNSs and NSs speakers in spoken academic discourse. This function-to-form analysis focuses on how hedges serve communicative purposes such as expressing uncertainty, moderating claims, or managing interpersonal relationships. The classification draws on established models by Prince et al. (1982), Hyland (1998), Salager-Meyer (1994), and Johansen (2020). These frameworks enable a systematic comparison of hedge functions across speaker groups.

4.5.2.1 Functional frameworks and theoretical models

Hedges are classified according to the target of their pragmatic effect: the proposition, the speaker-proposition relationship, or the speaker-hearer relationship.

- Within the Proposition (Propositional): These hedges reduce propositional precision or assertiveness.
 - *Rounders*: convey approximation or range.

- *Adaptors*: indicate partial category membership.
 - *Understaters*: downplay intensity or severity.
- Between Proposition and Speaker (Epistemic): These express the speaker's level of epistemic commitment.
 - *Plausibility Shields*: signal probability or doubt.
 - *Attribution Shields*: shift responsibility to external sources.
 - *Speaker-Oriented Hedges*: frame statements as personal opinion.
- Between Speaker and Hearer: These manage interpersonal stance.
 - *Hearer-Oriented Hedges*: mitigate directness and promote alignment.

This functional typology complements the form-based categorization from RQ1. It allows the analysis to move beyond lexical identification and investigate how hedges support discourse goals such as epistemic caution, face management, and interactional clarity across NSs and NNSs groups.

4.5.3 Validity and reliability

This section outlines the procedures used to ensure the validity and reliability of the corpus-based analysis, with particular attention to the classification of adverbial hedges. A multi-stage methodology was applied, including coder training, collaborative practice, systematic tagging, and inter-rater agreement checks. These steps ensured consistency in both the quantitative analysis (RQ1) and the pragmatic analysis (RQ2).

4.5.3.1 Co-Rater training and procedure

To strengthen the validity of the coding process, a secondary coder (co-rater)—a native speaker of American English with a Master's degree in Linguistics—was recruited for their expertise in semantics and pragmatics. Prior to annotation, we engaged in a dedicated training phase and collaborative calibration sessions to ensure a shared understanding of the coding framework.

A customized coding manual was developed for the training. It provided theoretical definitions of hedging, outlined pragmatic and grammatical distinctions, and included both

literature-based and corpus-derived examples. Training emphasized the following key distinctions:

1. **Scalarity vs. Polarity:** Scalar adverbs (e.g., *somewhat*, *usually*) express gradable meanings and often function as hedges. In contrast, polar adverbs (e.g., *always*, *never*) represent absolutes and rarely hedge.
2. **Subjectivity vs. Objectivity:** Subjective adverbs (e.g., *hopefully*, *probably*) reflect personal stance and typically serve hedging functions, whereas objective adverbs denote externally verifiable facts.
3. **Strategic vs. Non-strategic Use:** Strategic uses are intentional mitigations or softeners of claims. Non-strategic uses relate to procedural or descriptive information without interpersonal function.

These distinctions were reinforced through interactive training exercises, in which both researchers jointly annotated a practice set of 50 tokens. During this phase, we discussed disagreements, clarified ambiguous cases, and refined category boundaries. This collaborative training ensured that the co-rater could apply the coding system with high confidence and consistency during independent annotation.

4.5.3.2 Tagging strategy and examples

Following training, we independently annotated 1,250 tokens using a three-part coding scheme:

- (+) = clear hedging function (e.g., softening, uncertainty)
- (−) = non-hedging function (e.g., emphasis, sequencing, polarity)
- (0) = ambiguous or context-dependent function

All adverbs were reviewed in their full concordance context using Sketch Engine. This context-sensitive approach allowed us to identify subtle pragmatic functions beyond grammatical form. Table 4.7 presents sample annotations for each tag type.

Table 4.7*Tagging Categories for Adverbial Hedges and Examples*

Tag	Function	Description	Example from Corpus
(+)	Hedge	Signals uncertainty or softens a claim	“It was <i>probably</i> about five to seven sentences about a weird dream.” (NS-34-#309958)
(+)	Hedge	Indicates typicality or habituality	“She <i>usually</i> handles customer inquiries professionally.” (NNSs-35-#10414)
(-)	Non-hedge	Conveys fixed or definite meaning	“We do not urge people to use it all the time, <i>only</i> when it's relevant.” (NNSs-02-#19210)
(0)	Ambiguous	Function unclear or mixed	“It might <i>technically</i> help, but I’m not sure.” (NS-42-#192860)

This process ensured that every instance of hedge usage was reviewed with contextual sensitivity, facilitating both quantitative consistency and qualitative insight. Cases tagged as (0) were flagged for joint review and discussion in cases where coder agreement was initially low.

4.5.3.3 Function-Based Tagging for RQ2

For the qualitative analysis under RQ2, the co-rater applied a dual coding system to evaluate the discourse function of each adverb:

- Functional categories (Johansen, 2020):
 - (P-R) Rounders
 - (P-A) Adaptors
 - (P-U) Understaters
 - (S-PS) Plausibility Shields
 - (S-AS) Attribution Shields
 - (S-SO) Speaker-Oriented Hedges
 - (H) Hearer-Oriented Hedges
- Functionality scores:
 - (+) Clear hedging function

- (−) Non-hedging use
- (0) Ambiguous or context-dependent

This analysis covered 62 transcripts (9,488 tokens), representing 82.66% of the dataset. Predictable hedges (e.g., *approximately*) were excluded to focus on functionally ambiguous and context-sensitive forms. The tagging was conducted independently, then jointly reviewed to maintain inter-rater alignment throughout the process.

4.5.3.4 Inter-Rater reliability (Kappa Statistics)

Cohen’s Kappa (κ) was used to evaluate the consistency of the tagging process and the reliability of the coding system between raters. This measure accounts for agreement beyond chance and is appropriate for categorical data, such as the study’s three-way tagging scheme: (+) for hedging, (−) for non-hedging, and (0) for ambiguous cases.

The co-rating involved 62 out of 136 files, covering 9,488 tokens (82.66% of the total dataset of 11,478 tokens). Files were selected based on the multifunctionality of the lexical items they contained to ensure a diverse and representative sample across both NSs and NNSs groups. Clearly identifiable hedges, such as *approximately*, were excluded to focus on context-sensitive and ambiguous cases, directing the co-rater's attention toward functionally complex tokens and thereby strengthening the overall reliability of the hedge classification.

Both raters independently annotated the 9,488 tokens. The resulting annotations were compared using a confusion matrix, which identified the distribution of agreement and disagreement across the three tagging categories. Two metrics were calculated:

- Observed agreement (P_o): the proportion of tokens assigned the same tag by both raters.
- Expected agreement (P_e): the agreement likely to occur by chance, derived from the marginal totals.
- Cohen’s Kappa was then calculated using the standard formula:

$$\kappa = \frac{p_0 - p_e}{1 - p_e},$$

The resulting κ value of 0.79 falls within the range defined as substantial agreement, according to the interpretive scale proposed by Landis and Koch (1977):

- 0.00–0.20: Slight agreement
- 0.21–0.40: Fair agreement
- 0.41–0.60: Moderate agreement
- 0.61–0.80: Substantial agreement
- 0.81–1.00: Almost perfect agreement

This result indicates that the tagging scheme and coding procedures were applied with a high degree of consistency between raters. Most discrepancies occurred within the ambiguous (0) category, where hedging functions were either unclear or highly context-dependent. These instances were jointly reviewed and resolved through collaborative discussion, ensuring a unified interpretation. Overall, the Kappa statistic offers strong empirical support for the validity and reliability of the classification framework used in this study.

4.5.4 Statistical comparison and validity (Applied to RQ1 and RQ2)

This section outlines the statistical procedures used to validate cross-group comparisons of adverbial hedge usage. The analysis supports both Research Question 1, which examines the range and frequency of hedging devices, and Research Question 2, which investigates their functional differences. Three main statistical approaches were used: log-likelihood testing, inferential statistical analysis, and dispersion metrics.

4.5.4.1 Log-Likelihood Test

To assess whether differences in hedge frequency between the NSs and NNSs corpora were statistically significant, the study applied the log-likelihood (LL) test. This test compares observed adverb frequencies across corpora while adjusting for overall corpus size. LL values were calculated using the UCREL online log-likelihood calculator developed by Lancaster University (Rayson, 2021). Following the criteria established by Rayson et al. (2004), LL values greater than 3.84 were interpreted as significant at $p < 0.05$, indicating a 95% likelihood that observed differences were not due to chance. As a standard method in corpus

linguistics (Gablasova et al., 2015), the LL test provided a robust measure for evaluating distributional variation between speaker groups.

4.5.4.2 Inferential Statistics

To complement the log-likelihood analysis, inferential statistical tests were used to compare central tendencies in hedge usage across speaker groups. The Kolmogorov-Smirnov Test was first applied to assess the normality of frequency distributions. When data followed a normal distribution, a t-test for two independent means was used to compare average hedge frequencies between NSs and NNSs speakers. For non-normally distributed data, the Mann-Whitney U test served as a robust non-parametric alternative. These methods align with established guidelines for corpus-based statistical analysis (Sheskin, 2004), and ensure that the choice of test matched the underlying data characteristics. The combined use of parametric and non-parametric tests enhanced the internal validity of group-level comparisons.

4.5.4.3 Dispersion Metrics

In addition to overall frequencies, hedge distribution was examined at the individual speaker level using dispersion measures. Boxplots generated in *R* illustrated variation in both total hedge tokens and unique types. This addressed speaker-level variability in line with recommendations by Biber et al. (1998).

To quantify consistency in hedge usage, the coefficient of variation (CV) was calculated by dividing the standard deviation by the mean frequency of each adverb. This metric is particularly suited for ratio data that includes zero values and provides insight into the stability or skewness of lexical usage (Gries, 2006). It also highlights whether hedge use was evenly distributed or concentrated among specific speakers.

Combined with log-likelihood and inferential testing, dispersion analysis provided a detailed view of hedging patterns, capturing both group-level tendencies and individual variability in NSs and NNSs speech.

4.5.5 Summary of Analytical Framework

This study used a multi-component analytical framework to investigate adverbial hedging in spoken academic discourse by NSs and NNSs. The methodology combined corpus-based analysis with functional classification and statistical testing to ensure both breadth and depth of analysis.

Corpus tools such as *Sketch Engine* were used to extract and quantify hedging expressions across the dataset. A form-to-function classification model grouped adverbs by grammatical form and pragmatic role, enabling interpretation beyond raw frequency. Statistical analysis included log-likelihood tests to identify significant frequency differences, inferential statistics (e.g., t-tests, Mann-Whitney U) for group comparisons, and dispersion metrics to assess variation across individual speakers.

To ensure coding reliability, the study implemented co-rater training, a structured tagging protocol, and inter-rater reliability testing using Cohen's Kappa, which confirmed substantial agreement.

5 FINDINGS

This chapter presents the results of the study in two parts, each corresponding to one of the research questions. The first part (RQ1) examines adverbial hedges based on their grammatical form. It reports the types identified in the corpus, their overall frequency, and how they are distributed across native and non-native speaker groups. The second part (RQ2) investigates the same data set from a functional perspective. It describes how hedges operate pragmatically in spoken academic discourse and compares the frequency and distribution of hedges across different functional categories. Together, these findings provide a detailed account of the forms and functions of adverbial hedging in the two speaker groups.

5.1 Findings for Research Question 1

This study aimed to examine the range and frequency of adverbial hedging used by non-NNSs and NSs in spoken academic discourse (RQ1). To address this, a comparative analysis of two corpora was conducted, focusing on the types, distribution, and frequency of adverbial hedges in each group's speech. The goal was to determine not only whether hedging occurred more frequently in one group, but also whether the two groups showed preferences for different adverbial forms.

5.1.1 Identification and categorization of adverbial hedges

Identifying hedging functions among the adverbial forms required detailed manual analysis due to the context-sensitive nature of many adverbs. As described in the Methodology section, each adverb was closely examined to determine whether it served a hedging function. Adverbs such as *maybe* and *seemingly*, or those that introduce vagueness or soften assertions, such as *perhaps*, were included. In contrast, adverbs expressing categorical certainty, like *always* and *never*, were excluded. Scalar expressions such as *somewhat* were retained based on their capacity to signal gradience, while polar, absolute forms were omitted, following criteria related to scalarity, subjectivity, and pragmatic intent.

To analyze their formal characteristics, the identified hedging adverbs were classified into three main categories: Modal Adverbs, Pragmatic Markers, and Quantitative Adverbs. Quantitative Adverbs were further subdivided into three semantic types: Adverbs of

Indefinite Degree (e.g., *somewhat*, *slightly*), Adverbs of Indefinite Frequency (e.g., *sometimes*, *rarely*), and Approximative Adverbs (e.g., *about*, *nearly*). This classification supported a systematic comparison of hedging strategies across the NSs and NNSs corpora.

With the classification complete, the analysis now turns to the statistical distribution of these adverbs, revealing key patterns and central tendencies in their usage across both groups.

5.1.2 Statistical distribution and variability of hedge usage

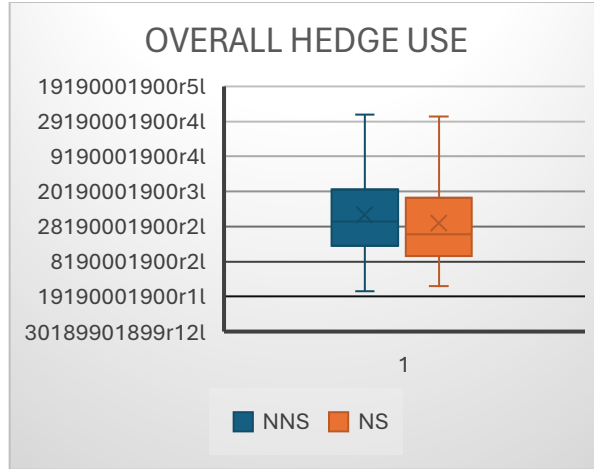
The initial analysis revealed that the NNSs corpus, which contained 389,775 words, included 5,925 potential adverbial hedges. The NSs corpus, comprising 387,089 words, contained 5,553 such instances. These figures indicate that both groups used adverbial hedging with comparable overall frequency. A manual evaluation was then conducted on all 11,478 adverbs (5,925 from the NNSs corpus and 5,553 from the NSs corpus). This analysis confirmed 2,801 adverbial hedges in the NNSs corpus and 2,723 in the NSs corpus.

Figure 5.1 presents a box plot that illustrates the range and variability of hedge usage in the two groups. The interquartile range (IQR) for each corpus reflects the distribution of hedge use within the central 50 percent of the data. The horizontal lines inside the boxes indicate median values, and the whiskers show the full range of observed values. The occurrence of outliers in both groups suggests that individual variation was present. Such variation may result from differences in speaking style or specific contextual conditions in academic discourse (Gries, 2006).

The interquartile range (IQR) of hedging adverb use in the NNSs corpus indicates slightly greater variability compared to the NSs corpus. This difference suggests that averages and frequency counts alone may not adequately represent the distinctions in hedge usage. Measures of dispersion offer a more accurate view of variability within and across speaker groups and should therefore be considered in the analysis.

Figure 5.1

Range and Variability of Adverbial Hedge Usage Among NSs and NNSs



To determine whether the data met the assumptions of normality, skewness, kurtosis, and the Kolmogorov–Smirnov (K–S) test were applied. Table 5.1 presents the results, which show that both datasets approximate a normal distribution. The NNSs group showed low skewness (0.36) and kurtosis (0.16), while the NSs group exhibited moderate skewness (0.96) and slightly higher kurtosis (0.38). The K–S test statistics ($D = 0.089$ for NNSs; $D = 0.135$ for NSs) and corresponding p-values (0.866 and 0.367) exceeded the 0.05 threshold, confirming that neither distribution deviates significantly from normality. These results support the appropriateness of parametric statistical tests for comparing hedge usage between the two groups.

Table 5.1

The Kolmogorov-Smirnov Test of Normality

	Skewness	Kurtosis	K-S (D)	p-value	Normality
NNSs	0.36	0.16	0.089	0.866	YES
NS	0.96	0.38	0.135	0.367	YES

5.1.3 Lexical classification and distribution of adverbial hedges

A total of 96 adverbial hedge types were compiled for analysis, based on the current corpus and prior studies (Biber et al., 1999; Hinkel, 2005; Varttala, 2001; Quirk et al., 1985). These adverbs were categorized into five functional groups commonly identified in the literature: Adverbs of Degree, Adverbs of Frequency, Approximative Adverbs, Modal Adverbs, and Pragmatic Markers (PMs). Adverbs marked with an asterisk (*) do not appear in the present corpus but are included due to their theoretical or empirical relevance in earlier research. Table 5.2 presents the complete lexical inventory.

Table 5.2

Lexical Inventory of Hedges in Spoken Academic Discourse

Adverbs of Degree
barely, hardly, merely, partly, quite, somewhat, briefly, heavily, moderately, poorly, rather, sufficiently, broadly, largely, most, practically, relatively, virtually, closely, little, mostly, predominantly, shortly, widely, enough, loosely, only, pretty, simply, sparsely*, fairly, mainly, partially, primarily, slightly, chiefly*, scarcely*, mildly*, comparatively*, lightly*, weakly*
Adverbs of Frequency
commonly, generally, often, rarely, sometimes, usually, frequently, normally, oftentimes, seldom, typically, unusually*, regularly*, ordinarily*, occasionally*
Approximative Adverbs
About, almost, approximately, around, nearly, roughly, figuratively*
Modal Adverbs
allegedly, essentially, likely, perhaps, potentially, supposedly, apparently, hypothetically, maybe, possibly, probably, theoretically, seemingly*, unlikely*, accordingly*, reportedly*, presumably*, reasonably*, preferably*, arguably*, ultimately*, tentatively*, feasibly*, eventually*
Pragmatic Markers
actually, basically, hopefully, just, naturally, unfortunately*, surprisingly*, technically*

*Adverbs not found in the present corpus data but included based on prior research or theoretical relevance.

(Kaltenböck et al., 2010; Riekkinen, 2009; Salager-Meyer, 1994; Neary-Sundquist, 2013; Beeching, 2016; Channell, 1994; Hinkel, 1997; Hyland; Varttala)

Following the categorization, a comparative analysis was carried out to examine the distribution of hedge types across the NSs and NNSs corpora. The aim was to assess both the lexical diversity within each group and the degree of overlap or exclusivity in their hedge use. Results are presented in Table 5.3.

Out of the 96 hedge types identified, NNSs used 65 (67.71%), and NSs used 57 (59.38%). Both groups shared 53 hedge types, which accounted for 81.54% of the NNSs set and 92.98% of the NSs set. Twelve types were unique to NNSs, while four appeared only in the NSs. A log-likelihood (G^2) test showed no statistically significant difference between the groups in terms of hedge type variety ($G^2 = 0.52$, $p > 0.05$). These findings indicate that both groups demonstrated comparable lexical diversity in their use of hedging adverbs, with minor differences in type exclusivity.

Table 5.3

Range and Overlap of Hedging Lexical Items in NNSs and NSs Corpora

Category	NNSs		NS		LL	
	(n=96)	%	(n=96)	%	G^2	p
Hedge types used	65	67.71	57	59.38	0.52	ns
Shared types (out of total used)	53	81.54	53	92.98	–	–
Unique to group	12	18.46	4	7.02	–	–
Hedge types not used (by either group)	27	–	27	–	–	–

ns: not significant $p > .05$

Note. Percentages for shared and unique types are based on the number of hedge types used by each group. LL = Log-likelihood statistic; ns = not significant ($p > .05$).

5.2 Quantificational Analysis (RQ1)

This section presents the total frequency of adverbial hedges categorized by form and compares their usage across the two speaker groups. It addresses the second part of Research

Question 1 by examining the frequency with which NNSs and NSs use adverbial hedges in spoken academic discourse.

5.2.1 Testing the Assumption of Normality (RQ1)

To determine whether parametric statistical procedures were appropriate for comparing hedge usage between speaker groups, the Kolmogorov–Smirnov (K–S) test for normality was applied. Table 5.4 reports the test statistics, p-values, and normality assessments for the three hedge categories: adverbs of quantity, modal adverbs, and pragmatic markers (PMs), for both NNSs and NSs.

In all categories, the p-values exceeded the 0.05 threshold. This outcome indicates no statistically significant deviation from a normal distribution. For the NNSs group, the p-values were 0.70 for adverbs of quantity and 0.62 for modal adverbs. The NSs group showed similar results, with p-values of 0.78 and 0.089 for the same categories. These low K–S D-values and high p-values confirm that the distributions meet the assumption of normality. Therefore, the corpora meets the criteria for parametric testing in the analysis of Research Question 1.

Table 5.4

The Kolmogorov-Smirnov Test of Normality (RQ1)

	NNS					NS				
	Skewness	Kurtosis	K-S test (D)	p-value	Normality	Skewness	Kurtosis	K-S test (D)	p-value	Normality
Modal Adv.	0.81	0.17	0.11	0.62	YES	1.68	3.40	0.18	0.089	YES
PMs	0.92	0.69	0.13	0.38	YES	0.85	0.24	0.18	0.096	YES
Adv. of Quantity	0.39	0.42	0.10	0.70	YES	1.09	2.61	0.09	0.778	YES

5.2.2 Variation in Hedge Use Across Groups (RQ1)

To examine how hedge usage varied between speaker groups, the coefficient of variation (CV) was calculated. Table 5.5 presents the standard deviation, mean, median, and CV values for each hedge category in both the NNSs and NSs corpora.

The results indicate that modal adverbs show nearly identical variability in both groups, with CV values of 61.89% for NNSs and 61.90% for NSs. This similarity suggests a consistent distribution pattern. For pragmatic markers, the CV is higher in the NSs group (68.78%) than in the NNSs group (61.41%), which points to greater variation among NSs. The most notable contrast appears in the adverbs of quantity. NNSs exhibit a CV of 68.78%, while NSs show a lower CV of 41.45%. This finding suggests that NNSs used adverbs of quantity with greater inconsistency. Overall, the CV results demonstrate that measures of dispersion offer more detailed insight into hedge usage patterns than frequency counts alone.

Table 5.5

Coefficient of Variation in Hedging Usage (RQ1)

Hedging strategies	NNS				NS			
	STD	Mean	Median	CV	STD	Mean	Median	CV
Modal Adv.	10,31	16,67	14.5	61.89%	17,36	28,05	23.5	61.90%
Pragmatic Markers	12,62	20,55	17	61.41%	7,07	10,27	7	68.78%
Adv. of Quantity	10.43	29.48	28	68.78%	9.77	23.57	24	41.45%.

5.3 Overall frequency and distribution of adverbial hedges

To provide a clearer picture of usage patterns, the analysis classified adverbial hedges into three functional types: modal adverbs, pragmatic markers, and adverbs of quantity. This categorization reveals which forms were most frequent overall and which types were

preferred by NSs and NNSs. Table 5.6 summarizes the frequency, proportional distribution, and statistical comparisons between groups.

The first category, modal adverbs, was more frequent in the NSs corpus. NSs produced 1,234 instances, which made up 45.32% of their hedges, while NNSs used 700, or 25% of their total. This difference was statistically significant ($G^2 = 164.84$, $p < 0.0001$). In contrast, pragmatic markers appeared more frequently in the NNSs corpus. NNSs produced 863 tokens (30.81%), compared to 453 in the NSs corpus (16.64%). This difference was also statistically significant ($G^2 = 127.07$, $p < 0.0001$). The third category, adverbs of quantity, showed a similar pattern. NNSs produced 1,238 instances (44.20%) and NSs used 1,037 (38.08%). Although the gap was smaller, the difference remained statistically significant ($G^2 = 16.42$, $p < 0.0001$). Total adverbial hedge use was comparable across groups. NNSs produced 2,801 hedges (71.86 per 10,000 words), while NSs produced 2,723 (70.35 per 10,000 words). This overall difference was not statistically significant ($G^2 = 0.63$, $p > 0.05$).

Table 5.6

Distribution of Adverbial Hedge Types

	NNS			NS			LL	
Type of Adv.	NNS	per 10000	%	NS	per 10000	%	G2	p-value
Modal Adv.	700	17.96	25	1234	31.88	45.32	164.84	$p < 0.0001$
PMs	863	22.15	30.81	453	11.71	16.64	127.07	$p < 0.0001$
Adv. of Quantity	1238	31.76	44.20	1037	26.79	38.08	16.42	$p < 0.0001$
Total Hedge Use	2801	71.86	0.71	2723	70.35	0.70	0.63	ns

ns: Not significant $p > .05$

While both groups used adverbial hedges at similar overall rates, the results indicate clear differences in their preference for hedge types. NSs preferred modal adverbs, whereas NNSs relied more on PMs and adverbs of quantity.

5.3.1 Modal adverb hedges

Twelve modal adverbs were identified across the corpus. NNSs used all 12, while NSs used 9. These adverbs were grouped into three subcategories: adverbs of personal doubt, reportive adverbs, and evaluative adverbs. Table 5.7 presents the frequency, normalized rates per 10,000 words, percentage within the category, and statistical comparisons for each group.

Adverbs of personal doubt accounted for the majority of modal adverb usage in both corpora. NNSs produced 677 instances, which amounts to 96.71 percent of their total modal adverbs. NSs produced 1,227 instances, which accounted for 99.43 percent of their total. The difference between groups was not statistically significant ($G^2 = 0.34$, $p > 0.05$). Reportive adverbs occurred only in the NNSs corpus. NNSs used 12 instances, or 1.71 percent of their modal adverbs. No instances were recorded in the NSs corpus. This difference was statistically significant ($G^2 = 24.39$, $p < 0.0001$). Evaluative adverbs were infrequent in both groups. NNSs used 11 instances (1.57%), while NSs produced 7 instances (0.57%). This difference reached statistical significance ($G^2 = 4.59$, $p < 0.05$).

Table 5.7

Distribution of Modal Adverb Hedge Subcategories

	NNS			NS			LL	
Modal Adv.	NNS	per 10000	% of total in category	NS	per 10000	% of total in category	G2	p-value
Personal Doubt	677	17.38	96.71	1227	31.77	99.43	0.34	ns
Reportive Adv.	12	0.31	1.71	0	0	0	24.39	$p < 0.0001$
Evaluative Adv.	11	0.28	1.57	7	0.18	0.57	4.59	$p < 0.05$
Modal Adv.	700	17.96	24.99	1234	31.88	45.32	164.84	$p < 0.0001$
Total Hedge Use	2801	71.86	0.71	2723	70.35	0.70	0.63	ns

ns: Not significant $p > .05$

The total number of modal adverb hedges was 700 for NNSs and 1,234 for NSs. This overall difference was statistically significant ($G^2 = 164.84$, $p < 0.0001$).

5.3.1.1 Adverbs of personal doubt

Within the category of adverbs of personal doubt, 6 forms were identified: *likely*, *maybe*, *perhaps*, *possibly*, *potentially*, and *probably*. Among these, *maybe* was the most frequently used item in both corpora, with 516 tokens in the NNSs corpus and 1,037 in the NSs corpus.

Table 5.8

Distribution of Adverbs of Personal Doubt

	NNS			NS			LL	
Personal Doubt	NNS	per 10000	% of total in category	NS	per 10000	% of total in category	G2	p-value
likely	2	0.05	0.3	5	0.13	0.41	0.15	ns
maybe	516	13.24	76.22	1037	26.79	84.51	3.72	$p < 0.05$
perhaps	22	0.56	3.24	67	1.73	5.43	4.83	$p < 0.05$
possibly	5	0.13	0.7	10	0.26	0.81	0.03	ns
potentially	4	0.10	0.57	3	0.08	0.24	1.35	ns
probably	128	3.28	18.91	105	2.71	8.56	36.25	$p < 0.0001$
Personal Doubt	677	17.38	96.71	1227	31.77	99.43	0.34	ns
Modal Adv.	700	17.96	24.99	1234	31.88	45.32	164.84	$p < 0.0001$
Total Hedge Use	2801	71.86	0.71	2723	70.35	0.70	0.63	ns

ns: Not significant $p > .05$

This was followed by *probably*, which appeared 128 times in the NNSs corpus and 105 times in the NSs corpus. Both adverbs showed statistically significant differences in frequency between groups (*maybe*: $G^2 = 3.72$, $p < .05$; *probably*: $G^2 = 36.25$, $p < .0001$). *Perhaps* also demonstrated a significant difference, with 22 occurrences among NNSs and 67 among NSs ($G^2 = 4.83$, $p < .05$).

In contrast, the remaining 3 adverbs—*likely* (2 NNSs, 5 NSs), *possibly* (5 NNSs, 10 NSs), and *potentially* (4 NNSs, 3 NSs)—were used infrequently and did not result in statistically significant differences. Overall, this subcategory accounted for 677 tokens in the NNSs corpus and 1,227 tokens in the NSs corpus, this total corresponds to 96.71% and 99.43% of modal adverb usage within each group, respectively. Despite individual differences in specific adverbs, the category as a whole did not show a statistically significant difference between groups ($G^2 = 0.34$, $p > .05$). The findings are presented in Table 5.8.

Adverbs of personal doubt were frequently used in both corpora to reduce speaker certainty and frame statements as tentative. These forms appeared across explanatory, inferential, and evaluative contexts. The following examples illustrate their functions with attention to discourse role, syntactic position, and variation across groups.

- (5.1) <s> If a student has shown that they've mastered a learning target, you really don't need to have them continue to practice those skills. </s><s> That's when you can start to have behavior problems, *possibly* because those students are bored. </s> (NS-30-#260360)

Here, *possibly* introduces a tentative causal explanation. The speaker suggests a plausible reason without asserting it as definitive.

- (5.2) <s> A: By the way, X Hocam, XX Hocam says he was your classmate. </s>
 <s> B: Yes, of course. </s>
 <s> A: So *most probably*, he has all the gossip about you when you were a student at-- University. </s> (NNSs-07-#83169)

In this example, *most probably* appears at the start of the clause, framing the entire statement as an inference. This initial placement signals uncertainty from the outset.

- (5.3) <s> Learning, according to the P21 Summit on 21st-century learning, has three components. </s> <s> One is cognitive, the other one is intrapersonal, and the third one is interpersonal. </s> <s> I think, *perhaps*, this reflection and evaluating yourself, etc., all those things are very important before you come to the cognitive area. </s> (NNSs-31-#352186)

Here, *perhaps* is embedded within a personal stance, adding an extra layer of tentativeness. This pattern was more frequent in the NNSs corpus.

5.3.1.2 Evaluative adverbs

Evaluative adverbs—including *essentially*, *hypothetically*, and *theoretically*—were used relatively infrequently by both speaker groups. As shown in Table 5.9, the NNSs corpus contained 11 tokens in total, while the NSs corpus contained 7. Despite the low frequency, the overall difference between groups was statistically significant ($G^2 = 4.59$, $p < .05$).

Table 5.9

Distribution of Evaluative Adverb Hedges

	NNS			NS			LL	
Evaluative Adverbs	NNS	per 10000	% of total in category	NS	per 10000	% of total in category	G2	p-value
essentially	7	0.18	63.64	4	0.10	57.14	0.03	ns
hypothetically	1	0.03	9.09	1	0.03	14.29	0.10	ns
theoretically	3	0.08	27.27	2	0.05	28.57	0.00	ns
Total Evaluative	11	0.28	1.57	7	0.18	0.57	4.59	$p < 0.05$
Total Modal A	700	17.96	24.99	1234	31.88	45.32	164.84	$p < 0.0001$
Total Hedge Use	2801	71.86	0.71	2723	70.35	0.70	0.63	ns

ns: Not significant $p > .05$

Among the individual adverbs, *essentially* was the most frequently used in both corpora, with 7 occurrences in the NNSs corpus and 4 in the NSs corpus. *Theoretically* appeared 3 times in the NNSs corpus and twice in the NSs corpus, while *hypothetically* occurred once in each. However, none of the individual items yielded statistically significant group differences. The significance of the category as a whole likely reflects the slight numerical advantage in NNSs usage combined with the small sample size.

Evaluative adverbs such as *theoretically*, *essentially*, and *hypothetically* weakened the force of claims by framing them as generalizations, summaries, or hypothetical scenarios. These

adverbs marked statements as conditional or interpretive rather than absolute. The following examples illustrate their use in context.

- (5.4) <s> *Theoretically*, if we just keep giving them input that's rich and repeated enough—like, in different topics, different modes, different tasks—they should start picking up the patterns over time. </s><s> But in practice, it really depends on how engaged they are and whether they're actually paying attention to the forms or just the meaning. </s> (NS-11-#278922)

In this example, *theoretically* introduces a conditional claim based on abstract principles. It frames the idea as consistent with theory rather than as a guaranteed outcome, creating distance between the speaker and the assertion.

- (5.5) <s> So *essentially*, this format follows a task-based approach. </s><s> You've got your pre-task to activate prior knowledge.. </s> (NNSs-19-#244108)

Here, *essentially* precedes a general summary of a teaching model. It marks the statement as a simplification of a more complex process and reduces the strength of the claim by presenting it as a broad outline.

- (5.6) <s> *Hypothetically*, yeah, you could squeeze all three steps into one forty-minute session—presentation, practice, and production. </s><s> But that would only work if the students already had some background knowledge. </s><s> (NS-24-#293870)

In this case, *hypothetically* introduces a speculative scenario. It signals that the idea is not offered as a recommendation or an account of actual practice but as a conditional possibility.

5.3.1.3 Reportive adverbs

Reportive adverbs—such as *allegedly*, *apparently*, and *supposedly*—appeared exclusively in the NNSs corpus. As shown in Table 5.10, there were 12 tokens in total, with *allegedly* made up 7 instances, *apparently* for 4, and *supposedly* for 1. None of these forms were used by NSs.

Although individual frequencies were low, the absence of reportive adverbs in the NSs corpus led to a statistically significant difference between groups ($G^2 = 24.39$, $p < .0001$). These results suggest that NNSs were more likely to use reportive adverbs as hedging devices in spoken academic discourse, albeit infrequently.

Table 5.10*Distribution of Reportive Adverb Hedges*

	NNS			NS			LL	
Reportive Adv.	NNS	per 10000	% of total in category	NS	per 10000	% of total in category	G2	p-value
allegedly	7	0.18	58.33	0	0.00	0	0.00	ns
apparently	4	0.10	33.33	0	0.00	0	0.00	ns
supposedly	1	0.03	8.33	0	0.00	0	0.00	ns
Reportive Adv.	12	0.31	1.71	0	0	0	24.39	p < 0.0001
Total Modal Adv.	700	17.96	24.99	1234	31.88	45.32	164.84	p < 0.0001
Total. Hedge Use	2801	71.86	0.71	2723	70.35	0.70	0.63	ns

ns: Not significant $p > .05$

Reportive adverbs such as *allegedly*, *apparently*, and *supposedly* introduced information from external sources or implied doubt about its reliability. By distancing the speaker from full commitment, these adverbs framed the statements as second-hand or uncertain. The following examples illustrate their use.

- (5.7) <s> They updated the attendance policy, *allegedly* to give us more flexibility, but honestly, it just added more steps to the process. </s><s> Now we have to log every single absence in two different systems, and it's actually slowing us down. </s>< (NS-23-#281098)

In this example, *allegedly* introduces a purpose clause and attributes the stated rationale to an external source rather than to the speaker.

- (5.8) <s> She missed the presentation, *apparently* because she had a medical report, but I haven't seen any documentation yet. </s><s> I asked her to email it by Friday, so we'll see. </s>< (NNSs-15-#258177)

Here, *apparently* precedes a causal clause and presents the reason as unconfirmed or based on indirect information.

- (5.9) <s> We should limit the lecture time, *supposedly* to keep students more engaged, but I'm not sure it works with larger classes. </s> <s> Sometimes you just need more than twenty minutes to explain the concept clearly, especially if it's something technical. </s> <s> And then you end up rushing through the activities. </s> (NNSs-21-#246933)

In this case, *supposedly* introduces a purpose clause and frames the rationale as reported or assumed, rather than as the speaker's own claim.

In each example, the adverb appears in clause-initial position and marks the proposition as externally sourced or uncertain. This strategy allowed speakers to report information without fully endorsing it, thereby maintaining clarity while moderating their level of commitment in spoken academic discourse.

5.3.2 Pragmatic marker hedges

The analysis revealed that a total of 863 PM hedges were found in the NNSs corpus, occurring at a rate of 22.15 per 10,000 words and constituted 30.81% of all hedges in this group. The NSs corpus included 453 instances, which is equals to 11.71 per 10,000 words and 16.64% of hedging. The overall difference in frequency between groups was statistically significant ($G^2 = 118.57, p < 0.0001$). Findings are presented in Table 11.

Table 5.11

Distribution of PM Hedge Types

	NNS			NS			LL	
PM Hedges	NNS	per 10000	% of total in category	NS	per 10000	% of total in category	G2	p-value
PPM Hedges	429	11.01	49.71	257	6.64	56.73	2.77	ns
IPM Hedges	434	12.42	50.29	196	5.06	43.27	3.11	ns
Total PMs	863	22.15	30.81	453	11.71	16.64	118.57	p < 0.0001
Total Hedge Use	2801	71.86	0.71	2723	70.35	0.70	0.63	ns

ns: Not significant $p > .05$

PM hedges were further categorized into propositional and interpersonal types. Propositional hedges totaled 429 in the NNSs corpus and 257 in the NSs corpus, with normalized rates of 11.01 and 6.64 per 10,000 words, respectively. This difference did not reach statistical significance ($G^2 = 2.77$, $p > 0.05$). Interpersonal hedges, which emphasize speaker intention and relational goals, appeared 434 times in the NNSs corpus and 196 times in the NSs corpus, which is equals to 12.42 and 5.06 per 10,000 words. The group difference in this category also did not achieve statistical significance ($G^2 = 3.11$, $p > 0.05$).

Although subcategory differences were not statistically significant, the total use of PM hedges differed significantly between groups, with NNSs using these devices more frequently overall.

5.3.2.1 Propositional pragmatic marker hedges

Within the PPM category, six adverbs were identified: *actually*, *basically*, *hopefully*, *just*, *naturally*, and *personally*. Among these, *just* was by far the most frequently used in both corpora, occurring 313 times in the NNSs corpus and 202 times in the NSs corpus. This accounted for 72.96% of all PPM hedges used by NNSs and 78.60% by NSs. However, this difference was not statistically significant ($G^2 = 0.68$, $p > 0.05$).

In contrast, *actually* showed a more uneven distribution. It occurred 46 times in the NNSs corpus but only 7 times in the NSs corpus, a difference that reached statistical significance ($G^2 = 15.56$, $p < 0.0001$). A reverse pattern was observed with *hopefully*, which was used more frequently by NSs (20 tokens) than by NNSs (10 tokens). This difference was also statistically significant ($G^2 = 10.47$, $p < 0.01$). The remaining adverbs—*basically*, *naturally*, and *personally*—were used less frequently. *Basically* occurred 47 times in the NNSs corpus and 21 times in the NSs corpus; *naturally* appeared 2 times in NNSs corpus and once in NSs corpus; and *personally* was used 11 times by NNSs and 6 times by NSs. None of these differences were statistically significant. Findings are presetend in Table 5.12.

Table 5.12*Distribution of PPM Hedges*

	NNS			NS			LL	
PPM Hedges	NNS	per 10000	% of total in category	NS	per 10000	% of total in category	G2	p-value
actually	46	1.18	10.72	7	0.18	2.72	15.56	p < 0.0001
basically	47	1.21	10.96	21	0.54	8.17	1.29	ns
hopefully	10	0.26	2.33	20	0.52	7.78	10.47	p < 0.01
just	313	8.03	72.96	202	5.22	78.60	0.68	ns
naturally	2	0.05	0.47	1	0.03	0.39	0.02	ns
personally	11	0.28	2.56	6	0.16	2.33	0.03	ns
Total PPM	429	11.01	49.71	257	6.64	56.73	2.77	ns
PMs	863	22.15	30.81	453	11.71	16.64	118.57	p < 0.0001
Total Hedge Use	2801	71.86	0.71	2723	70.35	0.70	0.63	ns

ns: Not significant $p > .05$

Overall, the total number of PPM hedges was higher in the NNSs corpus (429 tokens) than in the NSs corpus (257 tokens). Nevertheless, when the category was considered as a whole, the group difference did not reach statistical significance ($G^2 = 2.77$, $p > 0.05$).

PPM hedges played a central role in spoken academic discourse by shaping how speakers expressed certainty, stance, and generality. While a range of adverbs performed this function, their use often centered around three core purposes: softening revised or contrasting claims, marking tentative or desired outcomes, and limiting scope through generalization or subjectivity. The following examples illustrate these key functions.

First, speakers often used PPM hedges to revise or soften prior assumptions. In these cases, adverbs such as *actually* introduced updated judgments while reducing the force of contrast.

- (5.10) <s> I was expecting them to struggle with the vocab part, but they *actually* kind of surprised me — they picked it up pretty fast once we got into the task. </s><s> So I guess that part doesn't need as much time as I thought. </s> (NS-17-#284301)

Here, *actually* reframes the speaker's earlier expectation without creating a confrontational tone. It signals a change in perception while maintaining a conversational and reflective stance. A second common function involved hedging predictions or interpretations. Adverbs like *hopefully* and *maybe* allowed speakers to introduce uncertain or desired outcomes without full commitment.

- (5.11) <s> We started using reflection journals last week, and *hopefully* that's going to help them engage more with what they're learning. </s><s> I mean, that's the idea, but we'll see how it plays out. </s> (NS-21-#293012)

In this example, *hopefully* conveys optimism about a potential result, while acknowledging that the outcome remains uncertain. This allows the speaker to express intent without asserting control over future events.

Finally, PPM hedges were used to limit the scope of a claim by signaling either simplification or personal perspective. Adverbs such as *basically* and *personally* helped frame statements as approximations or subjective views.

- (5.12) <s> They pick their own topics, but *basically* what we're doing is guiding them through a fixed structure—brainstorming, outlining, peer feedback, all that. </s><s> So the process stays the same even if the topic changes. </s> (NNSs-20-#259441)

Here, *basically* reduces the complexity of the explanation and presents it as a general summary. This softens the claim and makes it more accessible to the listener.

5.3.2.2 Interpersonal pragmatic marker hedges

Analysis of the interpersonal pragmatic marker (IPM) category focused on four stance-related adverbs: *actually*, *basically*, *hopefully*, and *just*. As in the propositional category, *just* was the most frequently used form, occurring 295 times in the NNSs corpus and 137 times in the NSs corpus. It accounted for 67.97% and 69.90% of each group's total IPM usage, respectively. This similarity in proportional distribution did not yield a statistically significant difference ($G^2 = 0.07$, $p > 0.05$).

In contrast, *actually* exhibited a pronounced difference between groups, with 93 instances in NNSs speech and only 17 in NSs speech. This disparity was statistically significant ($G^2 = 14.30$, $p < 0.001$), indicating a clear preference for this form among NNSs speakers.

Hopefully showed the reverse pattern, with 38 instances in the NSs corpus and 30 in the NNSs corpus. Although the absolute difference was relatively small, it was statistically significant ($G^2 = 17.77$, $p < 0.0001$), suggesting a greater tendency among NSs speakers to use this marker in interpersonal contexts. *Basically* was used infrequently by both groups—16 times by NNSs speakers and 4 times by NSs speakers—and this variation did not reach statistical significance ($G^2 = 1.25$, $p > 0.05$).

Overall, NNSs speakers produced 434 IPM hedges, compared to 196 by NSs speakers. However, the aggregate difference across groups was not statistically significant ($G^2 = 3.11$, $p > 0.05$), as summarized in Table 5.13.

Table 5.13

Distribution of IPM Hedges

	NNS			NS			LL	
IPM Hedges	NNS	per 10000	% of total in category	NS	per 10000	% of total in category	G2	p-value
actually	93	2.39	21.43	17	0.44	8.67	14.30	$p < 0.001$
basically	16	0.41	3.69	4	0.10	2.04	1.25	ns
hopefully	30	0.77	6.91	38	0.98	19.39	17.77	$p < 0.0001$
just	295	7.58	67.97	137	3.54	69.90	0.07	ns
Total IPMs	434	12.42	50.29	196	5.06	43.27	3.11	ns
Total PMs	863	22.15	30.81	453	11.71	16.64	118.57	$p < 0.0001$
Total Hedge Use	2801	71.86	0.71	2723	70.35	0.70	0.63	ns

ns: Not significant $p > .05$

In sum, although *just* dominated usage in both groups and categories, NNSs speakers used *actually* significantly more often, while NSs speakers preferred *hopefully* in interpersonal contexts. These patterns highlight subtle but meaningful distinctions in how each group negotiates interpersonal stance through hedging.

IPM hedges such as *actually*, *basically*, *hopefully*, and *just* were frequently used to maintain rapport with the hearer in spoken academic discourse. These forms typically appeared in turn- or clause-initial positions and allowed speakers to manage interactional sensitivity by softening suggestions, easing the delivery of corrections, or framing uncertainty in a collaborative tone.

One key function was to mitigate disagreement or redirect proposals without creating friction. For instance, a NSs responded to a plan by saying:

- (5.13) <s> A: So we're still doing the full group activity first, right? </s>
<s> B: Yeah, we could... but *actually* we might want to simplify it a bit so it doesn't overwhelm them on the first day. </s><s> Maybe just a warm-up in pairs instead? </s> (NS-22-#283191)

Here, *actually* introduces a revision to the prior idea while framing it as a reflective consideration. This softens the contrast and helps preserve mutual respect and openness in the exchange. A second function involved offering support or correction without appearing critical. A NNSs reassured a colleague who expressed doubt about their explanation:

- (5.14) <s> A: I'm not sure I'm explaining the activity clearly enough... </s>
<s> B: You're fine—*basically* you're just walking them through the steps, not giving a whole lecture or anything. </s><s> Just keep it simple and let them try it. </s> (NNSs-18-#262144)

In this case, *basically* reduces the complexity of the explanation. This hedging device helps the speaker affirm the hearer's contribution while gently adjusting their perception of the task, reinforcing a cooperative tone. A third function was to express hope or tentative interpretation without pressuring the listener. In a reflection on student behavior, another NNSs said:

- (5.15). <s> A: Did you notice he actually volunteered today? </s>
<s> B: Yeah, I did—he's been more active this week, so *hopefully* that means he's starting

to feel more confident in the group. </s><s> That peer feedback task seems to be helping.
</s> (NNSs-21-#271444)

Here, *hopefully* introduces an optimistic reading of the situation while allowing room for alternative views. The hedge marks the speaker's stance as modest and non-imposing, encouraging shared interpretation rather than assertion.

5.3.3 Quantificational hedges

In the present corpus, adverbs of quantity—serving as quantificational hedges—constituted the largest proportion of all adverbial hedges, which represents 44.20% of hedges used by NNSs and 38.08% of those used by NSs. This difference was statistically significant ($G^2 = 12.56$, $p < 0.001$) and indicates a greater reliance on quantificational hedging among NNSs.

To provide a clearer picture of how quantificational hedges were distributed across speaker groups, this section compares the relative frequency of each subcategory. Frequency adverbs emerged as the most commonly used type, which accounts for 50.00% of quantificational hedges in the NNSs corpus and 46.87% in the NSs corpus. Although this category showed the highest proportional use in both corpora, the difference between groups did not reach statistical significance ($G^2 = 1.14$, $p > 0.05$).

Adverbs of degree followed closely, it constituted 41.68% of quantificational hedges for NNSs and 45.32% for NSs. Despite the difference in distribution, statistical testing indicated no significant variation between the groups ($G^2 = 1.72$, $p > 0.05$). Approximative adverbs occurred least frequently, with proportions of 8.32% for NNSs and 7.81% for NSs. The gap between groups was minimal and not statistically significant ($G^2 = 0.18$, $p > 0.05$). The breakdown of these findings is presented in Table 5.14.

Collectively, these results indicate a broadly similar distribution of quantificational hedge types across both groups. However, as noted earlier (see 5.2.2), adverbs of quantity were the only subcategory to display a statistically significant difference ($G^2 = 12.56$, $p < 0.001$), which suggests greater reliance on this form by NNSs.

Table 5.14*Distribution of Quantificational Hedge Types*

	NNS			NS			LL	
Quantificational Hedges	NNS	per 10000	% of total in category	NS	per 10000	% of total in category	G2	p-value
Frequency Adv.	619	15.88	50.00	486	12.56	46.87	1.14	ns
Adv. of Degree	516	13.23	41.68	470	12.04	45.32	1.72	ns
Approximative Adv.	103	2.64	8.32	81	2.09	7.81	0.18	ns
Adv. of Quantity	1238	31.76	44.20	1037	26.79	38.08	12.56	p < 0.001
Total Hedge Use	2801	71.86	0.71	2723	70.35	0.70	0.63	ns

ns: Not significant $p > .05$

5.3.3.1 Adverbs of frequency hedges

Adverbs of indefinite frequency were grouped into three subcategories: adverbs of high frequency (e.g., *often*, *frequently*), usual occurrence adverbs (e.g., *usually*, *normally*), and adverbs of low frequency (e.g., *rarely*, *seldom*). These categories were used to distinguish the varying degrees of regularity implied by different adverbs.

Adverbs of high frequency were the most prevalent in both groups, indicating a shared tendency among speakers to reference actions or events that occur frequently. NNSs used 397 tokens of high-frequency adverbs, which corresponds to 10.19 instances per 10,000 words, making up 64.14% of their total frequency adverb use.

In comparison, NSs produced 341 such tokens, occurring at a rate of 8.81 per 10,000 words and represented 70.16% of their overall use of frequency adverbs. This observed difference in usage between NNSs and NSs was not statistically significant ($G^2 = 1.48$, $p > 0.05$), indicating comparable distributions across the two groups in terms of high-frequency adverb use. These results are summarized in Table 5.15.

Table 5.15*Distribution of Adverbs of Indefinite Frequency*

	NNS			NS			LL	
Adv. of indefinite frequency	NNS	per 10000	% of total in category	NS	per 10000	% of total in category	G2	p-value
High Frequency Adv.	397	10.19	64.14	341	8.81	70.16	1.48	ns
Usual Occurrence Adv.	217	5.57	35.06	142	3.67	29.22	2.88	ns
Low Frequency	5	0.13	0.81	3	0.08	0.62	0.14	ns
Total Frequency Adv.	619	15.88	50.00	486	12.56	46.87	1.14	ns
Adv. of Quantity	1238	31.76	44.20	1037	26.79	38.08	12.56	p < 0.001
Total Hedge Use	2801	71.86	0.71	2723	70.35	0.70	0.63	ns

ns: Not significant $p > .05$

Adverbs of usual occurrence were the second most common category within the set of indefinite frequency adverbs. NNSs used these adverbs 217 times, which is equals to a rate of 5.57 per 10,000 words and comprising 35.06% of their total frequency adverb usage. In contrast, NSs produced 142 tokens in this category, occurring at a frequency of 3.67 per 10,000 words and making up 29.22% of their total. Although the numbers suggest a somewhat greater reliance on usual occurrence adverbs by NNSs, this difference did not reach statistical significance ($G^2 = 2.88$, $p > 0.05$). Adverbs of low frequency were used only marginally by both groups. NNSs used them just 5 times (0.13 per 10,000 words), while NSs used 3 tokens (0.08 per 10,000 words). As with the previous categories, this minor difference was not statistically significant ($G^2 = 0.14$, $p > 0.05$).

Collectively, the total use of adverbs of indefinite frequency amounted to 619 tokens for NNSs and 486 for NSs, which corresponds to 50.00% and 46.87% of each group's quantificational hedges, respectively. Despite the slightly higher normalized frequency and proportional use observed in the NNSs corpus, the overall difference in frequency adverb usage between the two groups was not statistically significant ($G^2 = 1.14$, $p > 0.05$).

The next sections present each of the three subcategories—high frequency, usual occurrence, and low frequency—in detail, with lexical distribution and examples illustrating their hedging function in context.

5.3.3.1.1 Adverbs of High Frequency

The first subcategory, adverbs of high frequency, includes *frequently*, *often*, *oftentimes*, and *sometimes*, all of which convey varying degrees of repeated occurrence. As shown in Table 5.16, NSs used all 4 adverbs, while NNSs used only 3—*oftentimes* did not appear in the NNSs corpus. The table displays the lexical distribution of these items across speaker groups, including raw counts, normalized frequencies, proportional use, and statistical comparisons.

Table 5.16

Distribution of Adverbs of High Frequency

	NNS			NS			LL	
High frequency	NNS	per 10000	% of total in category	NS	per 10000	% of total in category	G2	p-value
frequently	17	0.44	4.28	16	0.41	4.69	0.07	ns
often	22	0.56	5.54	114	2.94	33.43	82.93	p < 0.0001
oftentimes	0	0.00	0.00	16	0.41	4.69	24.71	p < 0.0001
sometimes	358	9.19	90.18	195	5.04	57.18	27.17	p < 0.0001
High Frequency Adv.	397	10.19	64.14	341	8.81	70.16	1.48	ns
Total Frequency Adv.	619	15.88	50.00	486	12.56	46.87	1.14	ns
Adv. of Quantity	1238	31.76	44.20	1037	26.79	38.08	12.56	p < 0.001
Total Hedge Use	2801	71.86	0.71	2723	70.35	0.70	0.63	ns

ns: Not significant $p > .05$

Among the 4 adverbs of high frequency examined, *sometimes* emerged as the most frequently used by both groups. It accounted for 90.18% of the adverbs of high frequency in the NNSs corpus (n = 358; 9.19 per 10,000 words) and 57.18% in the NSs corpus (n = 195; 5.04 per 10,000 words), a statistically significant difference in favor of NNSs ($G^2 = 27.17$, $p < 0.0001$). In contrast, *often* was used substantially more by NSs (n = 114; 2.94 per 10,000) than by NNSs (n = 22; 0.56 per 10,000), and this group difference was also statistically significant ($G^2 = 82.93$, $p < 0.0001$).

The adverb *oftentimes* was used exclusively by NSs (n = 16; 0.41 per 10,000) and did not appear in the NNSs corpus at all, resulting in another statistically significant difference ($G^2 = 24.71$, $p < 0.0001$). By contrast, *frequently* was the most evenly distributed item across groups, with 17 instances from NNSs (0.44 per 10,000) and 16 from NSs (0.41 per 10,000), and showed no significant difference in usage ($G^2 = 0.07$, $p > 0.05$).

Collectively, these 4 adverbs totaled 397 occurrences in the NNSs corpus and 341 in the NSs corpus, corresponding to normalized rates of 10.19 and 8.81 per 10,000 words, respectively. Despite significant difference at the item level, the overall difference for the high-frequency adverb category did not reach statistical significance ($G^2 = 1.48$, $p > 0.05$). This pattern suggests that while both groups made extensive use of *sometimes*, NSs relied on a broader lexical range—they particularly preferred *often* and *oftentimes*.

Adverbs of high frequency—such as *often*, *sometimes*, and *frequently*—were used to report recurring behaviors while limiting the generality of claims. These forms softened assertions and allowed speakers to preserve interpersonal rapport, particularly in contexts involving critique, evaluation, or explanation. For instance, one NNSs described a common learner error by stating,

- (5.16) <s> So yeah, they *often* get the second and third conditionals mixed up, even if we've, like, gone through the difference with examples and that. </s><s> I mean, they can explain it when we ask directly, but in context they just kind of switch randomly. </s> (NNSs-16-#255904)

The use of *often* signaled a repeated issue without implying that it occurs universally. This hedging allowed the speaker to present the problem without overstating its frequency. In another example, a NNSs evaluated the effectiveness of role-play activities:

- (5.17) <s> Yeah, so, the role-plays are good in general, but *sometimes* they don't really work, you know? </s><s> Like, when the students feel like it's too forced or scripted, they just kind of go through the motions. </s>< NNSs-15-#246722)

Here, *sometimes* marked the observation as occasional and context-dependent, which reduced the critical force of the statement. The adverb also left room for alternative interpretations and acknowledged variation in task outcomes. Similarly, a NSs observed group behavior by stating,

- (5.18) <s> A: Do they actually work together well in those groups, though? </s>
 <s> B: Yeah, *frequently* they do—especially when there's something concrete to finish. </s>
 <s> But if it's too open-ended, you know, they start drifting. </s>
 <s> A: Yeah, that's what I've seen too. Maybe we can build in clearer roles next time. </s>
 (NS-18-#288614)

By using *frequently*, the speaker characterized the behavior as typical but not consistent, which helped maintain a balanced tone and avoid overgeneralization.

5.3.3.1.2 Adverbs of Usual Occurrence

Adverbs such as *commonly*, *generally*, *normally*, *typically*, and *usually* were used to express expected or habitual frequency in spoken academic discourse. All 5 appeared in both NSs and NNSs corpus, though their relative frequencies and proportions varied significantly across groups. Table 5.17 presents the distribution, including raw counts, normalized frequencies, subcategory percentages, and statistical comparisons.

Among the 5 adverbs of usual occurrence—*commonly*, *generally*, *normally*, *typically*, and *usually*—distinct distributional patterns emerged across the two speaker groups. The most frequently used item overall was *usually*, which appeared 117 times in the NNSs corpus (3.00 per 10,000 words), which represented over half (53.92%) of NNSs usage in this category. In comparison, NSs used *usually* 103 times (2.66 per 10,000 words), comprising 72.54% of their category use. This difference was statistically significant ($G^2 = 4.77$, $p < 0.05$).

Turning to *generally*, NNSs used it far more frequently ($n = 58$; 1.49 per 10,000) than NSs ($n = 8$; 0.21 per 10,000), resulting in a highly significant group difference ($G^2 = 24.49$, $p < 0.0001$). A similar, though less pronounced, trend was observed for *normally*, with 30

occurrences among NNSs and 9 among NSs. This variation also reached statistical significance ($G^2 = 4.76$, $p < 0.05$).

Table 5.17

Distribution of Adverbs of Usual Occurrence

	NNS			NS			LL	
Adv. of Usual Occurrence	NNS	per 10000	% of total in category	NS	per 10000	% of total in category	G2	p-value
commonly	6	0.15	2.76	12	0.31	8.45	5.39	$p < 0.05$
generally	58	1.49	26.73	8	0.21	5.63	24.49	$p < 0.0001$
normally	30	0.77	13.82	9	0.23	6.34	4.76	$p < 0.05$
typically	6	0.15	2.76	10	0.26	7.04	3.42	ns
usually	117	3.00	53.92	103	2.66	72.54	4.77	$p < 0.05$
Usual Occurrence Adv.	217	5.57	35.06	142	3.67	29.22	2.88	ns
Frequency Adv.	619	15.88	50.00	486	12.56	46.87	1.14	ns
Adv. of Quantity	1238	31.76	44.20	1037	26.79	38.08	12.56	$p < 0.001$
Total Hedge Use	2801	71.86	0.71	2723	70.35	0.70	0.63	ns

ns: Not significant $p > .05$

By contrast, *commonly* showed the reverse pattern: it was used twice as often by NSs ($n = 12$; 0.31 per 10,000) as by NNSs ($n = 6$; 0.15 per 10,000), and this difference was statistically significant ($G^2 = 5.39$, $p < 0.05$). Lastly, *typically* occurred infrequently in both corpora—6 times among NNSs and 10 times among NSs—resulting in no significant group difference ($G^2 = 3.42$, $p > 0.05$).

In total, NNSs produced 217 adverbs of usual occurrence, while NSs produced 142. Despite significant differences for several individual items, the overall subcategory difference between groups was not statistically significant ($G^2 = 2.88$, $p > 0.05$).

The examples below the adverb introduces a pattern or routine while reducing the force of generalization by allowing speakers to report habits without asserting absolutes. For instance, a NNSs discussing lesson structure stated:

- (5.19) <s> So, *generally* I start this kind of lesson with something quite visual—like a short clip or a set of images—just to kind of set the context before we go into the language. </s><s> It's not a fixed rule or anything, but it tends to help. </s> (NNSs-22-#296712)

Here, *generally* appears at the beginning of the utterance and softens the regularity of the action, presenting it as a tendency rather than a rule. In another case, a NSs described a change in their instructional routine:

- (5.20) <s> *Normally* I'd give them a little prep time before asking them to do the task out loud, especially if it's speaking-focused. </s><s> But in this case, we went straight into it, just to see how they'd handle it cold. </s><s> It actually worked better than I expected. </s> (NS-21-#288234)

The adverb *normally* hedges the speaker's practice by identifying it as typical, not mandatory, which allows room for variation. A final example from a NNSs addressed timing constraints:

- (5.21) <s> We *usually* cover this section over two sessions, but if time is tight, you can just focus on the key points and skip the extension. </s><s> Like, it's not ideal, but it still works. </s> (NNSs-18-#278640)

In this instance, *usually* indicates a common approach while acknowledging exceptions. The adverb precedes the statement and moderates its generality by signaling that the practice is habitual rather than fixed.

5.3.3.1.3 Adverbs of Low Frequency

Rarely and *seldom* implied infrequent or exceptional events. Both appeared in NNSs speech, while only *rarely* was found in the NSs corpus. Table 5.18 presents their distribution, including raw frequencies, normalized rates, and group comparisons.

Table 5.18*Distribution of Adverbs of Low Frequency*

	NNS			NS			LL	
Adv. of Low Frequency	NNS	per 10000	% of total in category	NS	per 10000	% of total in category	G2	p-value
rarely	3	0.08	60.00	3	0.08	100.00	0.39	ns
seldom	2	0.05	40.00	0	0.00	0.00	1.88	ns
Low Frequency	5	0.13	0.81	3	0.08	0.62	0.14	ns
Frequency Adv.	619	15.88	50.00	486	12.56	46.87	1.14	ns
Adv. of Quantity	1238	31.76	44.20	1037	26.79	38.08	12.56	p < 0.001
Total Hedge Use	2801	71.86	0.71	2723	70.35	0.70	0.63	ns

ns: Not significant $p > .05$

Among the 2 adverbs in this subcategory, *rarely* was the only item used by both groups. It occurred 3 times in the NNSs corpus and 3 times in the NSs corpus, resulting in identical normalized frequencies of 0.08 per 10,000 words. This symmetrical distribution resulted in no statistically significant difference between groups ($G^2 = 0.39$, $p > 0.05$). In contrast, *seldom* appeared only in the NNSs corpus, with 2 instances (0.05 per 10,000 words), constituted 40.00% of low-frequency adverb use in that group. Its absence from the NSs corpus did not lead to a statistically significant group difference ($G^2 = 1.88$, $p > 0.05$). Overall, despite this uneven lexical distribution, the total number of adverbs of low-frequency remained limited in both corpora, and the subcategory did not show a significant group-level distinction ($G^2 = 0.14$, $p > 0.05$).

The following examples illustrate how adverbs of low-frequency were used to hedge claims about learner behavior. In the first case, a NNSs used *rarely* to temper a generalization:

- (5.22) <s> So yeah, with this kind of task, they *rarely* ask questions upfront—like, they usually just go straight into it and then come back later if something's unclear. </s> (NNSs-19-#265890)

Here, *rarely* precedes a behavioral claim and functions as a hedging device that reduces the certainty and universality of the observation. A second example features *seldom*, also used by a NNSs:

(5.23) <s>In my experience, they *seldom* make the same mistake twice if there's immediate feedback—especially when it's peer-based.</s> (NNSs-17-#275198)

In this case, *seldom* limits the scope of the claim and presents it as an exception rather than a consistent rule, thereby softening the speaker's degree of commitment to the statement.

5.3.3.2 Adverbs of degree hedges

Adverbs of indefinite degree hedge the intensity of a proposition without specifying an exact amount. Four subcategories were analyzed: diminishers, compromisers, moderators, and minimizers. Table 5.19 presents their frequency, normalized rates, proportions within the category, and statistical comparisons across NSs and NNSs groups.

Table 5.19

Distribution of Adverbs of Indefinite Degree

	NNS			NS			LL	
Degree	NNS	per 10000	% of total in category	NS	per 10000	% of total in category	G2	p-value
Diminishers	238	5.46	46.12	321	7.98	68.30	21.34	p<0.0001
Compromisers	157	4.03	30.43	115	2.97	24.47	3.18	ns
Moderators	119	3.05	23.06	32	0.83	6.81	45.56	p<0.0001
Minimizers	2	0.05	0.39	2	0.05	0.43	0.01	ns
Adv of Degree	516	13.23	41.68	470	12.04	45.32	1.72	ns
Adv of Quantity	1238	31.76	44.20	1037	26.79	38.08	12.56	p<0.001
Total Hedge Use	2801	71.86	0.71	2723	70.35	0.70	0.63	ns

ns: Not significant $p>.05$

Diminishers were the most frequently used type. NSs produced 321 instances (7.98 per 10,000), while NNSs produced 238 (5.46 per 10,000). This difference was statistically significant ($G^2 = 21.34$, $p < 0.0001$), indicating greater reliance on these forms by NSs. Compromisers, which signal partial agreement or qualified commitment, were more frequent in the NNSs corpus ($n = 157$; 4.03 per 10,000) than in the NSs corpus ($n = 115$; 2.97 per 10,000), though this difference was not statistically significant ($G^2 = 3.18$, $p > 0.05$). Moderators appeared significantly more often in NNSs speech ($n = 119$; 3.05 per 10,000) compared to NSs ($n = 32$; 0.83 per 10,000), with a highly significant difference ($G^2 = 45.56$, $p < 0.0001$). Minimizers were rare, with only two instances in each group, resulting in no statistical difference ($G^2 = 0.01$, $p > 0.05$).

In total, NNSs produced 516 adverbs of indefinite degree and NSs produced 470. Despite variation in subcategory use, the overall difference across the category was not statistically significant ($G^2 = 1.72$, $p > 0.05$). The following subsections examine each subcategory in detail, focusing on lexical distribution and hedging function in context.

5.3.3.2.1 *Diminishers of Degree*

Diminishers serve to reduce the intensity, certainty, or categorical force of a proposition, softening the speaker's stance. Fourteen such adverbs were identified across the corpora, including *merely*, *only*, *briefly*, and *little*, all 14 diminishers appeared in the NNSs corpus, while only 10 were attested in NSs speech, suggesting a broader lexical range among NNSs speakers for this subcategory.

As presented in Table 5.20, among these diminishes, *little* emerged as the most frequently used diminisher overall, with NSs speakers producing 273 instances compared to 110 from NNSs speakers. This difference was statistically significant ($G^2 = 31.41$, $p < 0.0001$), indicating a stronger tendency among NSs speakers to use this term for softening propositional content. Conversely, *briefly* was used more often by NNSs speakers (33 vs. 9), a difference that also reached significance ($G^2 = 22.70$, $p < 0.0001$), highlighting a potential preference for temporal softening among NNSs users.

Table 5.20*Distribution of Diminishers*

	NNS			NS			LL	
Diminishers	NNS	per 10000	% of total in category	NS	per 10000	% of total in category	G2	p-value
merely	5	0.13	2.10	0	0.00	0.00	8.54	p < 0.01
only	18	0.46	7.56	11	0.28	3.43	4.45	p < 0.05
simply	2	0.05	0.84	1	0.03	0.31	0.71	ns
briefly	33	0.85	13.87	9	0.23	2.80	22.70	< 0.0001
little	110	2.82	46.22	273	7.05	85.05	31.41	< 0.0001
moderately	2	0.05	0.84	0	0.00	0.00	3.42	ns
partly	2	0.05	0.84	0	0.00	0.00	3.42	ns
poorly	1	0.03	0.42	0	0.00	0.00	1.71	ns
shortly	4	0.10	1.68	2	0.05	0.62	1.41	ns
slightly	2	0.05	0.84	11	0.28	3.43	4.46	p < 0.05
partially	18	0.46	7.56	3	0.05	0.93	16.84	p < 0.0001
virtually	9	0.23	3.78	1	0.03	0.31	9.98	p < 0.01
practically	15	0.39	6.30	3	0.05	0.93	12.72	p < 0.001
somewhat	17	2.64	7.14	7	0.23	2.18	7.82	p < 0.01
Diminishers	238	5.46	46.12	321	7.98	68.30	21.34	p < 0.0001
Adv. of Degree	516	13.23	41.68	470	12.04	45.32	1.72	ns
Adv. of Quantity	1238	31.76	44.20	1037	26.79	38.08	12.56	p < 0.001
Total Hedge Use	2801	71.86	0.71	2723	70.35	0.70	0.63	ns

ns: Not significant $p > .05$

Additional contrasts revealed further asymmetries. The adverb *merely* appeared exclusively in the NNSs corpus ($G^2 = 8.54$, $p < 0.01$), while both *only* and *partially* were used

significantly more often by NNSs speakers ($G^2 = 4.45$ and 16.84 , respectively). Similarly, *virtually* and *practically* preferred NNSs usage and both differences were statistically significant ($G^2 = 9.98$, $p < 0.01$; $G^2 = 12.72$, $p < 0.001$), suggesting a tendency among NNSs speakers to invoke hypothetical or near-boundary conditions more frequently than their NSs counterparts.

In contrast, NSs speakers showed a marked preference for certain diminishers not commonly used by NNSs. For instance, *slightly* appeared 11 times in NSs data versus only 2 times in NNSs speech ($G^2 = 4.46$, $p < 0.05$). Likewise, *somewhat* was more frequent in NSs usage (17 vs. 7), with the difference again statistically significant ($G^2 = 7.82$, $p < 0.01$).

Other diminishers—such as *moderately*, *partly*, *poorly*, *shortly*, and *simply*—were infrequent in both corpora and did not produce statistically significant differences.

In terms of overall frequency, NSs speakers produced 321 diminisher tokens, compared to 238 from NNSs speakers. Although the raw difference may appear moderate, it reached statistical significance ($G^2 = 21.34$, $p < 0.0001$), pointing to differing pragmatic strategies between groups in how they mitigate or qualify assertive statements.

The hedging function of diminishers becomes especially evident in academic and instructional contexts. The examples below illustrate how both NSs and NNSs apply such adverbs to manage their epistemic stance and maintain conversational balance. In collaborative settings, diminishers often serve to downscale the speaker's agency or involvement, especially in peer interaction or feedback.

(5.24) <s>A: Did they manage the writing part okay?</s>

<s> B: Yeah, I think so. I mean, I just pushed them a *little*, gave a bit of encouragement, and they got going after that. </s> <s> They just needed a nudge. </s> (NS-19-#268411)

Here, *a little* moderates the speaker's involvement, casting their support as minimal and avoiding any implication of authority or control. In instructional contexts, these adverbs frequently reduce the perceived weight or intensity of instructional acts, especially when explaining decisions.

- (5.25) <s> So I, , I did go over the format again, but *briefly*—just real quick at the start, maybe a minute or so. </s> <s> I didn't want to, like, go into a full explanation again 'cause we'd already done that last week. </s> <s> It was more like, "Hey, remember how we open the paragraph?"—that kind of thing. </s> (NS-20-#286201)

Here, *briefly* limits the temporal and cognitive load of the review. The speaker signals that the explanation was concise and low-impact, thereby avoiding overemphasis and maintaining an efficient, non-repetitive teaching stance. When offering evaluations, diminishers can effectively limit the scope of the speaker's judgment, offering a more measured and refined perspective:

- (5.26) <s> The presentation was *partly* successful—it conveyed the key points, but the delivery lacked clarity and confidence. </s> <s> They clearly made an effort, but the outcome wasn't strong overall. </s> (NNSs-22-#270517)

In this case, *partly* limits the success to specific aspects of the task. It prevents an absolute evaluation and signals that the judgment applies only in part, which introduces caution while preserving fairness.

5.3.3.2.2 *Compromisers of degree*

Compromiser adverbs temper the strength of a proposition without fully minimizing it. They indicate partial intensity or sufficiency, thereby functioning as hedges that allow speakers to express a qualified stance. This analysis focused on seven such adverbs: *enough*, *fairly*, *pretty*, *quite*, *rather*, *relatively*, and *sufficiently*.

As shown in Table 5.21, both speaker groups used six of the seven items. *Fairly* appeared exclusively in the NSs corpus, while *sufficiently* was attested only in the NNSs data. In total, NNSs speakers produced 157 compromiser tokens (4.03 per 10,000 words), whereas NSs speakers used 115 (2.97 per 10,000 words). This overall difference was not statistically significant ($G^2 = 3.18$, $p > 0.05$), suggesting generally similar usage across groups at the aggregate level.

However, item-level analysis reveals more refined patterns. *Quite* was the most frequently used compromiser overall, particularly in NNSs speech, with 94 occurrences compared to 38

in the NSs corpus ($G^2 = 10.28$, $p < 0.01$). It alone accounted for nearly 60% of all NNSs compromiser usage.

Table 5.21

Distribution of Compromisers

	NNS			NS			LL	
Compromisers	NNS	per 10000	% of total in category	NS	per 10000	% of total in category	G2	p-value
enough	24	0.62	15.29	10	0.26	8.70	2.40	ns
fairly	0	0.00	0.00	13	0.34	11.30	22.38	$p < 0.0001$
pretty	20	0.51	12.74	48	1.24	41.74	22.24	$p < 0.0001$
quite	94	2.41	59.87	38	0.98	33.04	10.28	$p < 0.01$
rather	4	0.10	2.55	2	0.05	1.74	0.20	ns
relatively	14	0.36	8.92	4	0.10	3.48	3.21	ns
sufficiently	1	0.03	0.64	0	0.00	0.00	1.10	ns
Compromisers	157	4.03	30.43	115	2.97	24.47	3.18	ns
Adv. of Degree	516	13.23	41.68	470	12.04	45.32	1.72	ns
Adv of Quantity	1238	31.76	44.20	1037	26.79	38.08	12.56	$p < 0.001$
Total Hedge Use	2801	71.86	0.71	2723	70.35	0.70	0.63	ns

ns: Not significant $p > .05$

In contrast, the adverbs *pretty* and *fairly* were significantly more frequent in NSs speech. *Pretty* appeared 48 times in the NSs corpus but only 20 times in NNSs speech ($G^2 = 22.24$, $p < 0.0001$), while *fairly* was found 13 times in the NSs corpus and was entirely absent from the NNSs data ($G^2 = 22.38$, $p < 0.0001$). These results suggest that NSs speakers are more inclined to use these particular compromisers to soften assertions.

Enough was more common among NNSs speakers (24 vs. 10), though the difference did not reach statistical significance ($G^2 = 2.40$, ns). The remaining items—*rather*, *relatively*, and *sufficiently*—occurred infrequently across both corpora and did not produce meaningful group-level variation.

In sum, while overall frequencies of compromisers did not significantly differ between NSs and NNSs groups, certain lexical preferences were clearly group-specific. NNSs speakers preferred *quite* and *enough*, whereas NSs speakers showed a stronger tendency to use *pretty* and *fairly*. These distinctions point to subtle but important differences in how each group modulates the force of their statements.

The following examples illustrate how compromiser adverbs such as *fairly*, *pretty*, and *quite* functioned as hedges in spoken academic discourse. These adverbs typically moderated evaluative or descriptive statements by softening intensity, implying partial certainty, or allowing for contextual variation. In evaluative statements, compromisers often allowed speakers to express general approval while avoiding overstatement:

- (5.27) <s> Or maybe you could share a screen, and you can have "true" and "false" on the sides, and people will annotate or stamp what they think they heard, true or false. </s><s> So, these activities went *pretty* smoothly right now, right? </s><s> But in the real classroom, we know that problems can arise. </s> (NS-08-#34106)

In this case, *pretty* qualifies the success of the activity. It conveys positive feedback while leaving room for exceptions, softening the assertion and acknowledging potential challenges. In descriptive statements, compromisers helped to signal partial certainty, especially where conditions could vary

- (5.28) <s> They would develop a procedure for building the prototype and as you can see, we've done it using everyday objects that can be found in the classroom usually *fairly* easily and then they would work together to build the prototype, really becoming engineers themselves to have something that they might be able to use. </s> (NS-40-#374356)

Here, *fairly* acknowledges that the materials are generally accessible but not universally so. The hedge accounts for variability in availability and tempers the statement's confidence.

Compromisers also allowed speakers to express cautious predictions or likelihood judgments without full commitment:

- (5.29) <s>So, I think at those kind of levels, where these students are working on proficiency, at least maybe sounding more natural, they will be *quite* useful. </s><s> For lower levels, definitely not. </s> (NNSs-33-#377763)

In this example, *quite* communicates moderate confidence in the materials' usefulness. The speaker signals endorsement while keeping the evaluation conditional and context-sensitive.

5.3.3.2.3 Moderators of degree

Moderators of degree are adverbs that temper the strength of a proposition by expressing partial generalizations or broad tendencies. These items often hedge categorical claims, enabling the speaker to introduce nuance or probabilistic framing. The analysis identified eleven such adverbs in the corpus: *broadly*, *closely*, *heavily*, *largely*, *loosely*, *mainly*, *most*, *mostly*, *predominantly*, *primarily*, and *widely*.

As summarized in Table 5.22, NNSs speakers used 10 of the 11 moderator adverbs, while NSs speakers used 9. Overall, NNSs produced 119 tokens (3.05 per 10,000 words), in contrast to 32 tokens (0.83 per 10,000) by NSs speakers—a statistically significant difference ($G^2 = 45.56$, $p < 0.0001$), indicating a strong preference for this hedge type among NNSs participants.

Among individual items, the most frequently used moderators in both corpora were *mostly*, *mainly*, and *most*. NNSs speakers used each of these at notably higher rates than their NSs counterparts. For example, *mostly* appeared 42 times in NNSs speech (1.08 per 10,000) versus 8 times in NSs speech (0.21 per 10,000). Similarly, *mainly* occurred 28 times in NNSs speech compared to just 3 times in NSs speech. However, despite these large numerical gaps, neither contrast reached statistical significance (*mostly*: $G^2 = 0.86$, $p > 0.05$; *mainly*: $G^2 = 2.93$, $p > 0.05$), likely due to variation in dispersion and sample size.

In contrast, *primarily* showed a significant group-level difference favoring NSs speakers. It appeared 4 times in NSs speech and only once in the NNSs corpus, a disparity that was statistically significant ($G^2 = 7.88$, $p < 0.001$). This suggests that NSs speakers may

selectively favor certain formal or academic-sounding moderators when expressing generalization or emphasis.

Table 5.22

Distribution of Moderators

	NNS			NS			LL	
Moderators	NNS	per 10000	% of total in category	NS	per 10000	% of total in category	G2	<i>p</i> -value
broadly	0	0.00	0.00	1	0.03	3.12	3.10	ns
closely	5	0.13	4.20	3	0.08	9.38	1.11	ns
heavily	2	0.05	1.68	1	0.03	3.12	0.24	ns
largely	2	0.05	1.68	2	0.05	6.25	1.61	ns
loosely	1	0.03	0.84	0	0.00	0.00	0.48	ns
mainly	28	0.72	23.53	3	0.08	9.38	2.93	ns
most	27	0.69	22.69	7	0.18	21.88	0.01	ns
mostly	42	1.08	35.29	8	0.21	25.00	0.86	ns
predominantly	6	0.15	5.04	0	0.00	0.00	2.86	ns
primarily	1	0.03	0.84	4	0.10	12.50	7.88	$p < 0.001$
widely	5	0.13	4.20	3	9.38	2.61	1.11	ns
Moderators	119	3.05	23.06	32	0.83	6.81	45.56	$p < 0.0001$
Adv of Degree	516	13.23	41.68	470	12.04	45.32	1.72	ns
Adv of Quantity	1238	31.76	44.20	1037	26.79	38.08	12.56	$p < 0.001$
Total Hedge Use	2801	71.86	0.71	2723	70.35	0.70	0.63	ns

ns: Not significant $p > .05$

Other adverbs in this category—including *largely*, *heavily*, *closely*, *widely*, and *predominantly*—were used infrequently across both corpora and did not yield statistically significant variation. For instance, *broadly* appeared only once (in the NSs corpus), while *loosely* was recorded just once in NNSs data.

Although individual adverb comparisons did not always reveal significant differences, the category-level contrast was substantial: NNSs speakers clearly used moderators more frequently overall. This finding points to a broader pattern in which NNSs speakers rely more heavily on lexical hedging devices that qualify generalizations or broad claims.

Moderators such as *mainly*, *mostly*, *primarily*, and *most probably* were used to qualify claims, narrow topical scope, highlight general patterns, and signal degrees of likelihood—thus helping to manage the epistemic strength of assertions. In some cases, moderators focused attention on a primary theme or topic

- (5.30) <s> Some studies that I've already documented and presented in various conference presentations and publications and Enrich Projects, so I put it in red so meaning that I will be *mainly* focusing on that topic. </s><s> Okay, as we know, English is a global language, and it's a passport to the world today. </s> (NNSs-40-#54484)

Here, *mainly* delineates the central topic while acknowledging that additional topics may be addressed. In other instances, moderators indicated a general trend while allowing for exceptions:

- (5.31) <s> And we also revealed that the words of feeling like love, want, and feel were *mostly* associated with women and girls. </s> (NNSs-09-#95017)

In this example, *mostly* signals a dominant pattern but avoids implying a strict or exclusive association. Moderators also helped to express likelihood without asserting full certainty:

- (5.32) <s> So *most probably*, they have developed lots of negative habits during their previous education or during their previous experience. </s> (NNSs-10-#112854)

Here, *most probably* conveys a high degree of confidence while still maintaining some level of epistemic caution. Notably, this form appeared frequently in the NNSs corpus but was not found in NSs corpus.

5.3.3.2.4 Minimizers of degree

Minimizers of degree—*hardly* and *barely*—constitute the smallest subcategory within degree adverbs. These forms downscale propositions to their weakest plausible extent. As shown in Table 5.23, both items were extremely rare across groups. NNSs produced two instances of *hardly* (0.05 per 10,000), while NSs used *hardly* and *barely* once each (0.03 per 10,000), resulting in identical normalized frequencies (0.05 per 10,000) for both groups.

Table 5.23

Distribution of Minimizers

	NNS			NS			LL	
Minimizers	NNS	per 10000	% of total in category	NS	per 10000	% of total in category	G2	<i>p</i> -value
barely	0	0.00	0	1	0.03	50	1.39	ns
hardly	2	0.05	100	1	0.03	50	0.34	ns
Minimizers	2	0.05	0.39	2	0.05	0.43	0.01	ns
Adv of Degree	516	13.23	41.68	470	12.04	45.32	1.72	ns
Adv of Quantity	1238	31.76	44.20	1037	26.79	38.08	12.56	$p < 0.001$
Total Hedge Use	2801	71.86	0.71	2723	70.35	0.70	0.63	ns

ns: Not significant $p > .05$

Despite this minor variation in lexical preference—NNSs preferred *hardly*, NSs distributed usage across both items—no significant group-level difference emerged ($G^2 = 0.01$, $p > 0.05$). These results indicate that minimizers played a negligible role in hedging for both NSs and NNSs. Their infrequent use contrasts sharply with other subcategories, suggesting limited pragmatic reliance on minimizers in spoken academic contexts.

Minimizers function as hedges by reducing the intensity or frequency of claims without rejecting them outright. In academic speech, they served three key functions: downscaling

certainty, marking low frequency, and preserving rhetorical caution. One function involved minimizing the extent or sufficiency of an action or outcome.

- (5.33) <s> Just *barely* finished that, we're moving on from the second step, and I'd like you to take this same group of eight words. </s> (NS-22-#177904)

Here, *barely* suggests that the task was completed with minimal margin, downplaying both the sufficiency of the result and the speaker's control over the timing. A second function was indicating an extremely low degree of engagement or awareness.

- (5.34) <s> But despite this enormous role in its enormous role in our lives, we *hardly* pay any attention to it.</s> (NNSs-15-#155747)

In this case, *hardly* emphasizes the limited attention typically given to language, framing the speaker's assessment as modest rather than absolute. A third function involved marking infrequency without asserting complete absence.

- (5.35) <s> Yesterday some presenters mentioned that rightly teachers *hardly* ever consult the curriculum documents whereas they tend to consider course books as the main... guidelines. </s> (NNSs-37-#30357)

In this case, *hardly ever* reports a practice as rare but not nonexistent. The hedge allows the speaker to generalize about teacher behavior while avoiding overstatement or categorical claims.

5.3.3.3 Approximative adverbs

Approximative adverbs signal numerical inexactness or estimation, distinguishing them from hedges of general frequency or degree. This group includes six items: *about*, *almost*, *approximately*, *around*, *nearly*, and *roughly*. As shown in Table 5.24, all six were used by both NSs and NNSs. NNSs produced 103 tokens (2.64 per 10,000 words), while NSs produced 81 (2.09 per 10,000). Although individual lexical items showed significant differences, overall usage did not ($G^2 = 0.18$, $p > 0.05$).

Among the six, *almost* was the most frequent, appearing 54 times in the NNSs corpus (1.38 per 10,000) and 31 times in the NSs corpus (0.80 per 10,000). This difference was not statistically significant ($G^2 = 2.00$, $p > 0.05$). By contrast, *about* was more common among

NSs (n = 40; 1.03 per 10,000) than NNSs (n = 27; 0.69 per 10,000), producing a significant difference ($G^2 = 6.63, p < 0.01$).

Similarly, *nearly* appeared more frequently in NNSs corpus (n = 9; 0.23 per 10,000) compared to NSs (n = 1; 0.03 per 10,000), with a significant contrast ($G^2 = 5.58, p < 0.05$). *Approximately* was used only once by NNSs but five times by NSs, also reaching significance ($G^2 = 3.96, p < 0.05$). The remaining adverbs—*around* (NNSs: 8, NSs: 2) and *roughly* (NNSs: 4, NSs: 2)—were infrequent and did not show statistically meaningful differences ($G^2 = 2.56$ and 0.29, respectively, both $p > 0.05$).

Table 5.24

Distribution of Approximative Adverb Hedges

	NNS			NS			LL	
Approximative Adv	NNS	per 10000	% of total in category	NS	per 10000	% of total in category	G2	p-value
about	27	0.69	26.21	40	1.03	49.38	6.63	p < 0.01
almost	54	1.38	52.43	31	0.80	38.27	2.00	ns
approximately	1	0.03	0.97	5	0.13	6.17	3.96	p < 0.05
around	8	0.21	7.77	2	0.05	2.47	2.56	ns
nearly	9	0.23	8.74	1	0.03	1.23	5.58	p < 0.05
roughly	4	0.10	3.88	2	0.05	2.47	0.29	ns
Approximative Adv	103	2.64	8.32	81	2.09	7.81	0.18	ns
Adv of Quantity	1238	31.76	44.20	1037	26.79	38.08	12.56	p < 0.001
Total Hedge Use	2801	71.86	0.71	2723	70.35	0.70	0.63	ns

ns: Not significant $p > .05$

The following examples demonstrate how approximators functioned as hedging devices in academic speech.

The corpora revealed several functions of approximators, including expressing numerical approximation, mitigating categorical claims, and softening comparative or evaluative statements. One function involved marking numerical estimation to avoid implying precision:

- (5.36) <s> A: So, is it possible to tell us yourself a little bit? </s>
<s> B: Okay, I'm an English teacher and I have been teaching for *about* 24 years. </s>
<s> A: Wow! </s>
<s> B: Yeah, I'm getting old. </s> (NNSs-36-#18198)

Here, *about* modifies “24 years,” signaling an approximate duration. This allows the speaker to convey experience without claiming exact accuracy. Another function was qualifying absolute or categorical statements:

- (5.37) <s> A: And yeah, I hope I'm answering your question. </s>
<s> B: Yes. </s>
<s> A: I guess it's *almost* impossible to put a clear-cut line between these concepts. </s>
<s> They are somehow, overlap at some point. </s> (NNSs-01-#11446)

In this case, *almost* reduces the strength of the claim “*impossible*.” The speaker highlights conceptual complexity while allowing space for nuance. A further function involved softening scalar or comparative evaluations:

- (5.38) <s> Let them write it out and take a photo and send it to you. </s> <s> That doesn't take *nearly* as much data, right? </s> <s> Or for someone who's not very good with technology, right? </s> (NS-13-#92264)

Here, *nearly* qualifies the comparative “*as much data*” diminishing the intensity of the contrast and reducing the evaluative force of the claim.

5.4 Findings for Research Question 2

Research Question 2: Do the pragmatic functions of adverbial hedges used by Turkish speakers of English differ from those used by native speakers of English in spoken academic discourse? If so, how?

Research Question 2 investigated whether the pragmatic functions of adverbial hedges used by Turkish speakers of English differ from those used by NSs in spoken academic discourse, and if so, in what ways. The analysis focused on three main hedging functions: propositional hedging, which marks uncertainty within the proposition; epistemic hedging, which indicates the speaker's relationship to the truth value of the proposition; and hearer-oriented hedging, which addresses the listener and manages the interactional dimension of speech.

For comparability, frequency data were normalized per 10,000 words. The log-likelihood (G^2) test was used to determine statistical significance. While overall hedge frequency did not differ significantly between the two groups, distinct patterns emerged in the distribution of hedge functions.

NNSs produced a higher proportion of propositional hedges. NSs, on the other hand, used hearer-oriented hedges more frequently. Both groups used epistemic hedges at similar rates. These observations reflect differences in how each group distributed hedges across the three functional categories. The following sections provide a detailed examination of each function and its use by the two speaker groups.

5.4.1 From form-based to functional categorization

To examine pragmatic variation more effectively, the study shifted from a form-based to a functional approach. While Research Question 1 categorized adverbial hedges by surface form (e.g., modal adverbs, PMs, quantitative adverbs), this method revealed lexical patterns but did not account for discourse-level functions. The functional framework instead focused on how hedges modulate stance, express uncertainty, or manage interaction, offering a more context-sensitive analysis rooted in corpus pragmatics. All hedges were manually re-tagged according to their pragmatic function, using criteria such as scalarity, subjectivity, and evidentiality.

5.4.2 Analytical procedures

To address Research Question 2, each hedge instance was categorized according to one of seven pragmatic subtypes: *rounders*, *adaptors*, *understaters*, *plausibility shields*, *attribution shields*, *speaker-oriented hedges*, and *hearer-oriented hedges*. This function-based classification enabled the analysis to move beyond surface forms and examine the strategic deployment of hedges within interactional contexts. It also provided a framework for comparing how different speaker groups use hedges to express stance, mitigate claims, and manage interpersonal alignment.

5.4.2.1 Statistical tests for group differences

To compare the distribution of hedge functions across speaker groups, the Log-Likelihood (LL) test was used, with corpus size differences statistically controlled. This test, also used in the analysis for Research Question 1, was instrumental in detecting significant variation in hedge function usage between NSs and NNSs speakers. Focusing on pragmatic function rather than lexical form allowed for a more refined understanding of how hedges are used to navigate academic discourse, including the negotiation of evidentiality, certainty, and audience sensitivity.

5.4.2.1.1 Testing the assumption of normality

Before applying parametric statistical tests, the Kolmogorov–Smirnov (K-S) Test of Normality was conducted to determine whether the distribution of hedge function data met the assumptions required for further analysis. As presented in Table 5.25, all p-values exceeded the conventional alpha threshold of 0.05, indicating no significant deviations from normality in either corpus. This confirmed that the data were suitable for Independent Samples T-Tests, which were subsequently used to complement and validate the LL test results.

Table 5.25*The Kolmogorov-Smirnov Test of Normality (RQ2)*

	NNS					NS				
	Skewness	Kurtosis	K-S test (D)	p-value	Normality	Skewness	Kurtosis	K-S test (D)	p-value	Normality
Propositional	0.30	0.13	0.08	0.95	YES	1.08	2.37	0.10	0.74	YES
Epitemis	0.78	1.15	0.08	0.91	YES	0.57	0.39	0.12	0.47	YES
Hearer-oriented	0.47	0.33	0.08	0.91	YES	1.41	1.58	0.20	0.06	YES

5.4.2.1.2 Variation in hedge use across groups

To examine how consistently each group used different hedge functions, the Coefficient of Variation (CV) was calculated for each hedge category. CV measures relative variability by expressing the standard deviation as a percentage of the mean. This allowed for a standardized comparison of dispersion across groups.

Table 5.26*Coefficient of Variation in Hedging Usage (RQ2)*

	NNS				NS			
Hedging strategies	STD	Mean	Median	CV	STD	Mean	Median	CV
Propositional	10.59	30.02	28.5	35.27%	9.87	24.34	24.5	40.56%
Epistemic	8.41	16.24	15	51.79%	7.93	16.14	16	49.15%
Hearer-oriented	9.93	20.45	19	48.56%	14.05	21.45	16	65.47%

As seen in Table 5.26, NNSs speakers demonstrated the least variability in their use of propositional hedges (CV = 35.27%), while NSs speakers showed slightly higher variation

(CV = 40.56%) for the same category. Both groups exhibited high variability in the use of epistemic hedges (NNSs: 51.79%, NSs: 49.15%), suggesting less consistency in how hedges were applied to mark uncertainty or speaker commitment. Notably, hearer-oriented hedges showed the most pronounced group-level disparity in variability: NSs speakers displayed the highest inconsistency (CV = 65.47%), compared to a more moderate level in NNSs speech (CV = 48.56%). These findings suggest that while both groups vary in how they apply hedge types, NSs speakers exhibit a broader stylistic range, particularly in interactionally oriented hedging strategies.

5.5 Distribution of Hedges by Pragmatic Function

The analysis identified 2,801 hedging instances in the NNSs corpus and 2,723 in the NSs corpus, which is equals to normalized frequencies of 71.86 and 70.35 per 10,000 words, respectively. As shown in Table 5.27, the overall difference in hedge usage between the two groups was not statistically significant ($G^2 = 0.63, p > 0.05$).

Table 5.27

Distribution of Hedges Based on Pragmatic Function

	NNS			NS			LL	
Types of hedging strategies	NNS	per 10000	% of total in category	NS	per 10000	% of total in category	G2	p-value
Propositional	1261	32.35	45.02	1070	27.45	39.29	10.74	p < 0.01
Epistemic	681	17.47	24.32	710	18.34	26.07	1.70	ns
Hearer Oriented	859	22.04	30.67	944	24.38	34.67	6.77	p < 0.01
Total Hedge Use	2801	71.86	0.71	2723	70.35	0.70	0.63	ns

ns: not significant $p > 0.05$

When hedge use was examined by pragmatic function, clear distinctions emerged. Propositional hedges were more frequent among NNSs, who used 1,261 instances (32.35 per

10,000 words), and equaled 45.02% of their total hedge usage. NSs produced 1,070 propositional hedges (27.45 per 10,000), comprising 39.29% of their total. This difference was statistically significant ($G^2 = 10.74, p < 0.01$).

In the category of epistemic hedges—those expressing speaker stance or commitment—the results were more closely aligned. NSs used 710 instances (18.34 per 10,000), while NNSs used 681 (17.47 per 10,000), a number that makes up 26.07% and 24.32% of their total hedges, respectively. This difference was not statistically significant ($G^2 = 1.70, p > 0.05$).

A different pattern emerged for hearer-oriented hedges, where NSs showed higher usage. NSs produced 944 instances (24.38 per 10,000), a figure that constitutes 34.67% of their hedges. NNSs used 859 (22.04 per 10,000), and constituted 30.67% of their total frequency. This difference was statistically significant ($G^2 = 6.77, p < 0.01$).

In summary, while overall hedge frequency did not differ significantly between NNSs and NSs, functional distribution varied. Statistically significant differences were found in propositional and hearer-oriented hedges, whereas epistemic hedging showed no meaningful difference.

5.5.1 Propositional hedges (Hedging within the proposition)

Propositional hedges are defined as approximators that modify the content of a statement by introducing imprecision or reducing assertiveness. This category includes rounders, adaptors, and understaters.

This category emerged as the most frequently used functional type across both groups. In the NNSs corpus, 1,261 propositional hedges were identified. Among these, rounders were the most common, with 941 instances (24.14 per 10,000 words), comprising 74.62% of propositional hedge use. In comparison, NSs produced 691 rounders (17.85 per 10,000), and formed 64.58% of their category total. This difference was statistically significant ($G^2 = 8.38, p < 0.01$).

Table 5.28*Distribution of Propositional Hedge Subtypes*

	NNS			NS			LL	
Hedging strategies	NNS	per 10000	% of total in category	NS	per 10000	% of total in category	G2	p-value
Rounders	941	24.14	74.62	691	17.85	64.58	8.38	$p < 0.01$
Adaptors	103	2.64	8.17	50	1.29	4.67	11.07	$p < 0.001$
Understaters	217	5.57	17.21	329	8.5	30.75	45.21	$p < 0.0001$
Propositional	1261	32.35	45.02	1070	27.45	39.29	10.74	$p < 0.01$
Total Hedge Use	2801	71.86	0.71	2723	70.35	0.70	0.63	ns

ns: not significant $p > 0.05$

Further variation appeared in the use of adaptors. NNSs used 103 instances (2.64 per 10,000; 8.17% of their propositional hedges), whereas NSs produced 50 instances (1.29 per 10,000; 4.67%). This difference also reached statistical significance ($G^2 = 11.07$, $p < 0.001$).

In contrast, understaters were more common in NSs discourse. NSs used 329 instances (8.5 per 10,000), which accounts for 30.75% of their propositional hedges. NNSs used 217 (5.57 per 10,000; 17.21%). This difference was statistically significant as well ($G^2 = 45.21$, $p < 0.0001$). The detailed distribution of these subtypes by group is presented in Table 5.28.

5.5.1.1 Rounders

A total of 34 adverbs were identified in the corpus as functioning as rounders of approximation, degree, or frequency. Of these, NNSs used 30, while NSs used 29. Rounders represented the most prominent subtype of propositional hedges across both corpora.

As presented in Table 29, of the 1,261 propositional hedges used by NNSs, 941 were classified as rounders, and formed 24.14 occurrences per 10,000 words and 74.62% of the total in this category. Within the NSs corpus, 691 rounders were recorded, which is equals to

17.85 per 10,000 words and 64.58% of all propositional hedges. The overall difference in rounder usage between the two groups was statistically significant ($G^2 = 8.38, p < 0.01$).

Rounders were further divided into three subtypes: Rounders of Approximation, degree, and frequency. Rounders of approximation were used more often in the NSs corpus, with 73 instances, equating to 1.89 per 10,000 words and 6.37% of their rounders. In comparison, NNSs produced 56 approximation rounders, resulting in 1.44 per 10,000 words and 6.27% of their category. This difference was statistically significant ($G^2 = 10.56, p < 0.01$).

The second subtype, degree rounders, appeared more frequently in the NNSs corpus. A total of 277 instances were recorded, equal to 7.11 per 10,000 words and 29.44% of rounder use. NSs produced 145 degree rounders, which represented 3.75 per 10,000 words and 20.98% of their rounders. The difference between groups was statistically significant ($G^2 = 11.25, p < 0.001$).

Table 5.29

Distribution of Rounder Subtypes

	NNS			NS			LL	
Rounder Type	NNS	per 10000	% of total in category	NS	per 10000	% of total in category	G2	p-value
Approximation	56	1.44	5.95	73	1.89	10.56	10.56	p < 0.01
Degree	277	7.11	29.44	145	3.75	20.98	11.25	p < 0.001
Frequency	608	15.60	64.61	473	12.22	68.45	0.88	ns
Rounders	941	24.14	74.62	691	17.85	64.58	8.38	p < 0.01
Propoistional H.	1261	32.35	45.02	1070	27.45	39.29	10.74	p < 0.01
Total Hedge Use	2801	71.86	0.71	2723	70.35	0.70	0.63	ns

ns: not significant p > 0.05

The final subtype, frequency rounders, was used in relatively similar proportions. NNSs recorded 608 instances, which amounted to 15.60 per 10,000 words and 64.61% of their rounders. NSs used 473 frequency rounders, a figure that equals 12.22 per 10,000 words and 68.45% of their total. No statistically significant difference was found in this category ($G^2 = 0.88, p > 0.05$). Together, the results revealed that while both speaker groups made extensive use of rounders, the internal distribution across subtypes varied.

5.5.2.1.1 Rounders of approximation

6 adverbs were identified in the corpus as functioning specifically as rounders of approximation: *about*, *approximately*, *around*, *roughly*, *maybe*, and *perhaps*. While NSs used all 6 adverbs, NNSs used only 5. Notably, *perhaps* did not appear in the NNSs corpus as a rounder of approximation, as shown in Table 5.30.

Although the total frequency of this subtype was relatively low for both groups, several lexical items occurred with significantly different frequencies between NSs and NNSs. The adverb *maybe* appeared more frequently in the NSs corpus, with 28 instances (0.72 per 10,000 words), compared to 16 instances (0.41 per 10,000 words) in the NNSs corpus. This difference was statistically significant ($G^2 = 8.07, p < 0.01$). A similar pattern was observed with *about*, which occurred 35 times in the NSs corpus (0.90 per 10,000 words) and 27 times in the NNSs corpus (0.69 per 10,000 words), yielding a statistically significant difference ($G^2 = 4.98, p < 0.05$). The adverb *approximately* followed this trend, with 5 occurrences among NSs (0.13 per 10,000 words) and only one among NNSs (0.03 per 10,000 words) ($G^2 = 4.29, p < 0.05$).

However, no significant group differences were found for the remaining items in this category. The adverbs *around* and *roughly* were used at comparable rates by both groups. The adverb *perhaps* appeared only once in the NSs corpus and did not occur at all in the NNSs corpus; however, this difference was not statistically significant. In summary, while both speaker groups used a restricted set of approximation rounders, NSs exhibited significantly greater use of *maybe*, *about*, and *approximately*.

Table 5.30*Distribution of Rounders of Approximation*

	NNS			NS			LL	
Rounders of Approximation	NNS	per 10000	% of total in category	NS	per 10000	% of total in category	G2	p-value
about	27	0.69	2.87	35	0.90	5.07	4.98	p < 0.05
approximately	1	0.03	0.11	5	0.13	0.72	4.29	p < 0.05
around	8	0.21	0.85	2	0.05	0.29	2.24	ns
roughly	4	0.10	0.43	2	0.05	0.29	0.20	ns
maybe	16	0.41	1.70	28	0.72	4.05	8.07	p < 0.01
perhaps	0	0	0	1	0.03	0.14	1.72	ns
Approximation	56	1.44	5.95	73	1.89	10.56	10.56	p < 0.01
Rounders	941	24.14	74.62	691	17.85	64.58	8.38	p < 0.01
Propositional H.	1261	32.35	45.02	1070	27.45	39.29	10.74	p < 0.01
Total Hedge Use	2801	71.86	0.71	2723	70.35	0.70	0.63	ns

ns: not significant $p > 0.05$

Approximation rounders occurred frequently in spoken discourse, serving to express rough numerical estimates or general time frames. These forms enabled speakers to refer to quantities or durations without implying exact precision, which proved especially useful in interactive or informal settings where flexibility was valued. Speakers often used them when referring to the expected duration of an activity or the number of people involved.

(5.39) <s> Now, because we have little time, you only have *about* a minute or so to do this. </s>
(NS-23-#53626)

In this example, *about* conveys an estimate while avoiding the impression of excessive precision. Such expressions appeared in the speech of both NSs and NNSs, though NSs used them somewhat more frequently. In addition to *about* and *approximately*, the corpus revealed

a secondary set of words that served a similar purpose: *maybe* and *perhaps*. While commonly classified as modal adverbs signaling epistemic uncertainty, they also functioned as approximation rounders in certain contexts. Speakers used them to provide imprecise estimates of numerical or descriptive information, adapting modal expressions to meet the demands of real-time interaction.

(5.40) <s> I mean, each journal has its own editorial board, yeah? </s> <s> Consisting of *maybe* 15 or 20 editorial board members. </s> <s> As we all know, in each volume, editors publish their editorials. </s> (NNSs-13-#138593)

Here, *maybe* approximates a quantity, signaling that the number is not exact.

(5.41) <s> Here is your set of word bricks, and I'm wondering, I'm going to give you a very short amount of time, *maybe* 30 seconds, but take a look at these word bricks and tell me what is the longest grammatically correct sentence you can make. </s> (NS-25-#211095)

In this case, *maybe* softens a time estimate and frames it as flexible.

5.5.2.1.2 Rounders of degree

A total of 20 adverbs were identified as functioning as rounders of degree. These included: *broadly*, *enough*, *largely*, *loosely*, *mainly*, *moderately*, *most*, *mostly*, *partly*, *predominantly*, *primarily*, *widely*, *heavily*, *fairly*, *pretty*, *quite*, *rather*, *relatively*, *simply*, and *sufficiently*. As shown in Table 5.31, NNSs speakers used 18 of these items, excluding *fairly* and *broadly*, while NSs speakers used 15, with *loosely*, *moderately*, *partly*, *predominantly*, and *sufficiently* absent from their data.

Several adverbs showed clear differences between groups. Among NNSs speakers, *mainly* stood out, appearing 28 times (0.72 per 10,000 words) compared to just 3 instances (0.08 per 10,000 words) in the NSs corpus—a statistically significant difference ($G^2 = 16.28$, $p < 0.0001$). *Mostly* followed a similar pattern, with 42 tokens in NNSs speech (1.08 per 10,000) versus only 8 in the NSs corpus (0.21 per 10,000) ($G^2 = 16.04$, $p < 0.0001$). The adverb *most* was also more frequent among NNSs speakers, with 27 instances compared to 7 for NSs speakers ($G^2 = 7.19$, $p < 0.01$). A full breakdown of individual item frequencies presented in Table 5.31.

Table 5.31*Distribution of Rounders of Degree*

	NNS			NS			LL	
Rounders of Deg	NNS	per 10000	% of total in category	NS	per 10000	% of total in category	G2	p-value
broadly	0	0.00	0	1	0.03	0.14	1.72	ns
enough	24	0.62	2.55	10	0.26	1.45	2.42	ns
largely	2	0.05	0.21	2	0.05	0.29	0.09	ns
loosely	1	0.03	0.11	0	0.00	0	1.10	ns
mainly	28	0.72	2.98	3	0.08	0.34	16.28	p < 0.0001
moderately	2	0.05	0.21	0	0.00	0	2.20	ns
most	27	0.69	2.87	7	0.18	1.01	7.19	p < 0.01
mostly	42	1.08	4.46	8	0.21	1.16	16.04	p < 0.0001
partly	2	0.05	0.21	0	0.00	0	2.20	ns
predominantly	6	0.15	0.64	0	0.00	0	6.61	p < 0.05
primarily	1	0.03	0.11	4	0.10	0.58	2.97	ns
widely	5	0.13	0.52	3	0.08	0.43	0.08	ns
heavily	2	0.05	0.21	1	0.03	0.14	0.10	ns
fairly	0	0.00	0	13	0.34	1.88	22.34	p < 0.0001
pretty	20	0.51	2.13	48	1.24	6.95	22.14	p < 0.0001
quite	94	2.41	9.99	38	0.98	5.50	10.37	p < 0.01
rather	4	0.10	0.43	2	0.05	0.29	0.20	ns
relatively	14	0.36	1.47	4	0.10	0.58	3.22	ns
simply	2	0.05	0.21	1	0.03	0.14	0.33	ns
sufficiently	1	0.03	0.11	0	0.00	0	1.10	ns
Degree	277	7.11	29.44	145	3.75	20.98	11.25	p < 0.001

Rounders	941	24,14	74.62	691	17.85	64.58	8.38	p < 0.01
Propositional H.	1261	32.35	45.02	1070	27.45	39.29	10.74	p < 0.01
Total Hedge Use	2801	71.86	0.71	2723	70.35	0.70	0.63	ns

ns: not significant $p > 0.05$

In contrast, *fairly* and *pretty* were used much more frequently by NSs speakers. *Fairly* was completely absent from the NNSs corpus but appeared 13 times in the NSs corpus (0.34 per 10,000), a significant group-level difference ($G^2 = 22.34$, $p < 0.0001$). *Pretty* showed a similarly significant gap, with 48 instances among NSs speakers (1.24 per 10,000 words), compared to just 20 (0.51 per 10,000) in the NNSs corpus ($G^2 = 22.14$, $p < 0.0001$).

The adverb *quite* displayed a reversed pattern, favoring NNSs use. It appeared 94 times (2.41 per 10,000 words) in the NNSs corpus, compared to 38 times (0.98 per 10,000) in the NSs data. This difference was statistically significant ($G^2 = 10.37$, $p < 0.01$). Another significant difference was observed for *predominantly*, which was used exclusively by NNSs speakers (6 instances), resulting in a smaller but still significant group difference ($G^2 = 6.61$, $p < 0.05$).

Other degree rounders, including *enough*, *largely*, *loosely*, *rather*, *relatively*, *simply*, and *sufficiently*, showed no statistically significant group-level differences. These items occurred infrequently and were more evenly distributed between the corpora.

Overall, degree rounders were used more frequently by NNSs speakers, who produced 277 instances (7.11 per 10,000 words), compared to 145 instances (3.75 per 10,000) in NSs speech. This difference was statistically significant ($G^2 = 11.25$, $p < 0.001$), reinforcing the broader pattern that NNSs speakers preferred degree-based hedging more than their NSs counterparts.

Corpus examples show that speakers used degree rounders to qualify propositions when precise values were unknown, irrelevant, or deliberately withheld. These adverbs adjusted the perceived strength or extent of a statement without undermining its clarity. In doing so, they allowed speakers to present information with reduced precision while preserving communicative effectiveness. One common function was hedging generalized claims.

- (5.42) <s>And as a result of our examination, we revealed that verbal verbs are *mostly* associated with women, like speak, talk, and there are material verbs like invent and spent, and they are mostly co-occurring with men in the TV and movie subtitles.</s> (NNSs-09-#94944),

Here, *mostly* qualifies frequency distributions based on corpus findings. The adverb indicates that the pattern is dominant but not absolute, softening the generalization without dismissing it. A second function was expressing approximate frequency or intensity when precision was unnecessary or unavailable.

- (5.43) <s>So as you can see, the use of explicit terms 'Hayır, No,' embellished in bigger font marks and bigger font size and bold typeface, and all caps with an exclamation mark is *pretty* common here.</s> (NNSs-20-#222182),

In this example, *pretty* modifies *common* to suggest that the observation holds in many cases, though not universally. The adverb conveys the speaker's judgment without implying exact measurement. A third function involved providing imprecise gradation for scalar concepts.

- (5.44) <s>Well there's, I have several ideas here and I'm going to go through them *rather* quickly because I think time is flying.</s> (NS-24-#201468).

- (5.45) <s>I agree with a lot of what you're saying.</s><s> And throughout my career, I've worked with several different communities of practice, and some of your answers are *quite* similar to what we can describe as a community of practice.</s> (NS-09-#41141).

In these examples, *rather* and *quite* qualify scalar expressions such as speed and similarity. The speakers chose not to specify degrees exactly, using these modifiers to indicate a general sense of extent instead.

5.5.2.1.3 Rounders of frequency

Eight adverbs were identified in the corpus as functioning as frequency rounders: commonly, frequently, generally, normally, often, oftentimes, sometimes, and usually. As detailed in Table 5.32, all eight adverbs were attested in the NSs corpus, whereas the NNSs corpus contained seven; the adverb oftentimes was entirely absent from NNSs usage. Analysis of their distribution revealed several statistically significant differences between the two groups.

Among NNSs, *generally* emerged as particularly frequent, with 58 occurrences (1.49 per 10,000 words), compared to only 8 instances (0.21 per 10,000 words) in the NSs corpus. This difference was statistically significant ($G^2 = 28.87$, $p < 0.0001$). A similar trend was observed for *normally*, which occurred 30 times (0.77 per 10,000 words) in the NNSs corpus and 9 times (0.23 per 10,000 words) in the NSs corpus, also yielding a statistically significant result ($G^2 = 6.37$, $p < 0.05$).

Table 5.32

Distribution of Frequency Rounders

	NNS			NS			LL	
Frequency Rounders	NNS	per 10000	% of total in category	NS	per 10000	% of total in category	G2	p-value
commonly	6	0.15	0.64	12	0.31	1.74	4.32	$p < 0.05$
frequently	17	0.44	1.81	16	0.41	2.32	0.51	ns
generally	58	1.49	6.16	8	0.21	1.16	28.87	$p < 0.0001$
normally	30	0.77	3.19	9	0.23	1.30	6.37	$p < 0.05$
often	22	0.56	2.34	114	2.94	16.50	99.79	$p < 0.0001$
oftentimes	0	0.00	0	16	0.41	2.32	27.50	$p < 0.0001$
sometimes	358	9.19	38.04	195	5.04	28.22	11.56	$p < 0.001$
usually	117	3.00	12.43	103	2.66	14.91	1.79	ns
Frequency R.	608	15.60	64.61	473	12.22	68.45	0.88	ns
Rounders	941	24.14	74.62	691	17.85	64.58	8.38	$p < 0.01$
Propositional H.	1261	32.35	45.02	1070	27.45	39.29	10.74	$p < 0.01$
Total Hedge Use	2801	71.86	0.71	2723	70.35	0.70	0.63	ns

ns: not significant $p > 0.05$

In contrast, the adverb *often* was used considerably more by NSs, with 114 tokens (2.94 per 10,000 words), as opposed to 22 tokens (0.56 per 10,000 words) in the NNSs corpus. This difference was highly significant ($G^2 = 99.79$, $p < 0.0001$). *Oftentimes* followed the same pattern, occurring exclusively in the NSs corpus (16 tokens), with no instances recorded among NNSs ($G^2 = 27.50$, $p < 0.0001$). While *sometimes* was frequently used by both groups, it appeared more often in the NNSs corpus (358 tokens; 9.19 per 10,000 words) than in the NSs corpus (195 tokens; 5.04 per 10,000 words), a difference that also reached statistical significance ($G^2 = 11.56$, $p < 0.001$).

No statistically significant differences were observed for *commonly*, *frequently*, or *usually*, which were used at comparable rates across the two corpora, indicating more uniformity in the use of these specific items.

NNSs used frequency rounders such as *sometimes*, *generally*, and *normally* more often than their NSs counterparts. This pattern reflects a greater tendency to hedge generalizations related to teaching practices and learner behavior. These adverbs allowed speakers to describe recurring actions or tendencies without implying universal applicability. One common function was marking exceptions to observable patterns:

- (5.46) <s> But normal pictures, because of the lighting, because of the problems regarding the camera lens of the phones, sometimes pictures cannot be detected by the phones. </s> <s> So, it's *sometimes* a more reliable way of reaching AR experiences. </s> (NNSs-02-#13567)

In this example, *sometimes* qualifies both a technical problem and a potential solution. It restricts the claims to certain conditions, leaving space for exceptions and helping the speaker avoid overgeneralization. Another frequent function was presenting routines as typical rather than absolute:

- (5.47) <s> Because they base, *normally* Turkish students normally, base their writing on the Turkish style. </s> (NNSs-34-#5914)

Here, *normally* suggests a general pattern in student writing. Its repetition may reflect spoken disfluency, but the intended hedge is clear: the speaker avoids implying that all students always follow this style. In other cases, frequency rounders tempered claims about pedagogical practices:

(5.48) <s> So, I give feedback, so they give themselves feedbacks. </s> <s> So, as I said, they have a self-assessment and peer assessments worksheets. </s> <s> So, I *generally* apply these creativity activities in writing classes. </s> (NNSs-04-#36422)

Here, *generally* indicates that the activity is customary but not constant. It helps the speaker present the routine as typical while acknowledging occasional variation. This supports the speaker's credibility without overstating consistency. In contrast, NSs preferred different lexical items for this hedging function. The adverb *oftentimes* appeared in their speech to describe frequent but non-universal states:

(5.49) <s> However, I think we all know that it is not easy. </s> <s> It's very difficult and *oftentimes* exhausting. </s> (NS-05-#3410)

In this case, *oftentimes* marks the experience as recurring but not absolute. Its absence in the NNSs corpus may point to lexical preference, stylistic variation, or limited exposure to this form among L2 speakers.

5.5.2.2 Adaptors

10 adverbs were identified in the corpus as adaptor hedges: *about*, *almost*, *typically*, *essentially*, *closely*, *nearly*, *partially*, *virtually*, *practically*, and *somewhat*. All 10 were used by NSs, while NNSs used nine; *about* did not occur in the NNSs corpus. As shown in Table 5.33 adaptor hedges were less frequent than other propositional hedge types.

The NNSs corpus contained 103 adaptor tokens, amounting to 2.64 occurrences per 10,000 words and comprising 8.17% of their propositional hedge usage. The NSs corpus included 50 tokens, which is equal to 1.29 occurrences per 10,000 words and which is equal to 4.67% of their category total. This difference was statistically significant ($G^2 = 11.07$, $p < 0.001$)

Somewhat and *almost* were the most frequent adaptors among NNSs, each appearing 17 times and comprising 16.50% of their adaptor use. NSs also used *almost* frequently, with 13 instances, which is equal to 26.00% of their adaptor total. The group difference for *almost* was not statistically significant ($G^2 = 1.48$, $p > 0.05$). The adverb *about* occurred only in NSs corpus, with 5 instances (0.13 per 10,000 words). This difference reached statistical significance ($G^2 = 11.18$, $p < 0.001$). Similarly, *typically* appeared more frequently in the NSs corpus (10 occurrences) than in NNSs corpus (6 occurrences), producing a statistically

significant result ($G^2 = 5.95$, $p < 0.05$). Other adaptors, including *essentially*, *closely*, *nearly*, *partially*, *virtually*, and *practically*, showed similar frequency across both corpora, resulting in no statistically significant differences.

While adaptor hedges formed the smallest proportion of propositional hedging, differences in frequency and lexical choice were evident. NSs used all identified items and favored expressions like *about* and *typically*. NNSs showed greater reliance on *somewhat* and *almost*, contributing to their higher overall frequency.

Table 5.33

Distribution of Adaptors

Adaptors	NNS			NS			LL	
	NNS	per 10000	% of total in category	NS	per 10000	% of total in category	G2	p-value
about	0	0	0	5	0.13	10	11.18	< 0.001
almost	17	0.44	16.50	13	0.34	26.00	1.48	ns
typically	6	0.15	5.83	10	0.26	20.00	5.95	$p < 0.05$
essentially	7	0.18	6.80	4	0.10	8.00	0.07	ns
closely	5	0.13	4.85	3	0.08	6.00	0.08	ns
nearly	9	0.23	8.74	1	0.03	2.00	2.86	ns
partially	18	0.46	17.48	3	0.05	6.00	3.73	ns
virtually	9	0.23	8.74	1	0.03	2.00	2.86	ns
practically	15	0.39	14.56	3	0.05	6.00	2.36	ns
somewhat	17	2.64	16.50	7	0.23	14.00	0.14	ns
Adaptors	103	2.64	8.17	50	1.29	4.67	11.07	$p < 0.001$
Propositional H.	1261	32.35	45.02	1070	27.45	39.29	10.74	$p < 0.01$
Total Hedge Use	2801	71.86	0.71	2723	70.35	0.70	0.63	ns

ns: not significant $p > 0.05$

Across the corpus, both NSs and NNSs used adaptors to hedge category membership, though they differed in lexical choice. NNSs tended to use forms like *virtually*, *somewhat*, and *partially*, while NSs more often preferred *closely*. These adverbs enabled speakers to signal partial alignment with categorical labels without committing fully to a fixed classification.

Adaptors are propositional hedges that qualify category membership rather than scalar values. Unlike rounders, which approximate quantity, adaptors signal that a term is partially appropriate but not fully prototypical, which allows speakers to refer to imprecise or flexible concepts without misclassification. In the corpus, both NSs and NNSs used adaptors to manage these semantic boundaries, though with different preferences: NNSs favored *virtually*, *somewhat*, and *partially*, while NSs more often used *closely*. These choices helped speakers acknowledge similarity or partial fit while maintaining interpretive flexibility. One common use was to signal conceptual similarity while recognizing deviation from the prototype:

- (5.50) <s> It's a new type of feedback form. </s> <s> It's *virtually* a reflection worksheet, but with a few additional prompts. </s> (NS-19-#54871)

Here, *virtually* marks the referent as closely resembling a known category—a *reflection worksheet*—but acknowledges that it diverges in some features. Rather than mislabeling the tool, the speaker uses *virtually* to negotiate a near fit, softening the categorization and inviting flexible interpretation. Adaptors also helped modulate categorical judgments, especially when evaluations were context-dependent or partial:

- (5.51) <s> I thought the task was clear. </s> <s> But the instructions were *somewhat* confusing for the lower-level students. </s> (NNSs-08-#53214)

In this example, *somewhat* softens the evaluation by indicating that the confusion does not fully define the instructions but applies under certain conditions (i.e., for lower-level learners). The hedge enables the speaker to express partial category fit—here, partial clarity—without overstating the issue. A third function was expressing incomplete fulfillment of a concept or definition:

- (5.52) <s> They understood the general idea. </s> <s> But their response was only *partially* a proper definition of the term. </s> (NNSs-15-#53604)

Partially indicates that the student's answer shares key features of a "proper definition," but not all. The adaptor limits categorical inclusion, suggesting a semantic approximation rather than a full match.

5.5.2.3 Understaters

12 adverbs functioned as understaters in the corpus. NNSs used 11 of these, with *barely* absent from their corpus. NSs, by contrast, used 9, with no instances of *merely*, *poorly*, or *seldom*. Table 5.34 outlines the distribution of these items across both groups by speaker status and highlights statistically significant differences in usage patterns.

Upon examination by token count, both NSs and NNSs used understaters to soften claims in academic spoken discourse, though with varying frequency and lexical preferences. NNSs produced a total of 217 understater tokens, while NSs produced 329. This difference was statistically significant ($G^2 = 45.21, p < 0.0001$).

The adverb *little* was the most frequently used item in both groups. NSs accounted for 273 tokens (7.05 per 10,000 words), whereas NNSs produced 110 (2.82 per 10,000 words), and this difference reached statistical significance ($G^2 = 20.26, p < 0.0001$). In contrast, *briefly* appeared more often in the NNSs corpus, with 33 instances (0.85 per 10,000 words) compared to only 9 in the NSs corpus (0.23 per 10,000 words), also a statistically significant difference ($G^2 = 26.37, p < 0.0001$). Similarly, *almost* occurred more frequently among NNSs (37 tokens) than NSs (18 tokens), and the difference was significant ($G^2 = 16.97, p < 0.0001$).

As can be seen in Table 5.34, further differences emerged in the use of *merely* and *only*. *Merely* appeared exclusively in the NNSs corpus, with 5 tokens, and was absent in NSs speech ($G^2 = 9.23, p < 0.01$). *Only* occurred 18 times in NNSs speech and 11 times in NSs speech, a statistically significant difference ($G^2 = 5.87, p < 0.05$). No statistically significant differences were found in the use of the remaining understaters—*barely*, *hardly*, *poorly*, *shortly*, *slightly*, *rarely*, and *seldom*—all of which occurred at low frequencies across both groups.

Table 5.34*Distribution of Understaters*

	NNS			NS			LL	
Understaters	NNS	per 10000	% of total in category	NS	per 10000	% of total in category	G2	<i>p</i> -value
almost	37	1.38	17.05	18	0.80	5.45	16.97	$p < 0.0001$
barely	0	0.00	0	1	0.03	0.30	1.01	ns
briefly	33	0.85	15.21	9	0.23	2.73	26.37	$p < 0.0001$
hardly	2	0.05	0.92	1	0.03	0.30	0.88	ns
little	110	2.82	50.69	273	7.05	82.73	20.26	$p < 0.0001$
merely	5	0.13	2.30	0	0.00	0	9.23	$p < 0.01$
only	18	0.46	8.29	11	0.28	3.33	5.87	$p < 0.05$
poorly	1	0.03	0.46	0	0.00	0	1.01	ns
shortly	4	0.10	1.84	2	0.05	0.61	1.77	ns
slightly	2	0.05	0.92	11	0.28	3.33	3.67	ns
rarely	3	0.08	1.38	3	0.08	0.91	0.26	ns
seldom	2	0.05	0.92	0	0.00	0	3.69	ns
Understaters	217	5.57	17.21	329	8.5	30.75	45.21	$p < 0.0001$
Propositional H	1261	32.35	45.02	1070	27.45	39.29	10.74	$p < 0.01$
Total Hedge Use	2801	71.86	0.71	2723	70.35	0.70	0.63	ns

ns: not significant $p > 0.05$

In summary, while NSs used understaters more frequently overall, NNSs produced significantly higher counts for *briefly*, *almost*, *merely*, and *only*. These findings point to group-specific preferences in hedging strategies, with each group favoring different lexical items to soften assertions in spoken academic contexts.

Patterns in the corpus show that understater adverbs served four main pragmatic functions: limiting scope, softening propositional force, downplaying frequency, and indicating minor distinctions. These functions varied across speaker groups, with notable differences in lexical preference and discourse use.

NNSs often used understaters to reduce informational density and accommodate the listener's cognitive load. In spoken academic contexts, these adverbs marked content as concise and less demanding:

- (5.53) <s> Yeah, for example, this is a presentation, and we put voice-over on the presentations for the teachers to listen to first to the concepts. </s> <s> And we very really *briefly* define them, instead of teachers reading, you know, teachers always have lots of work to do, papers to correct, we thought these videos would be very helpful for them to develop an understanding of the concepts. </s> (NNSs-40-#60364)

In this example, *briefly* signals the limited scope of explanation, easing the perceived burden of processing. The speaker presents the material as efficient and manageable, anticipating the time constraints of the listener. Understaters also reduced the speaker's authoritative stance when introducing transitions or demonstrations. They prepared the audience for brief commentary or a limited shift in focus:

- (5.54) <s> We also have concordancer, that's like a software to see these lines, and we have keyword in context. </s> <s> Let's very *shortly briefly* have a look at this. </s> (NNSs-18-#193652)

The combined use of *shortly* and *briefly* lowers both the expected length and importance of the upcoming explanation. In the reporting of corpus findings, NNSs used understaters to qualify generalizations without making absolute claims:

- (5.55) <s> We revealed that verbal verbs are mostly associated with women, like speak, talk, and there are material verbs like invent and spent, and they are mostly co-occurring with men in the TV and movie subtitles, and then were thought to *seldom* occur with the works of feeling, which is another subtracting finding of our research. </s> (NNSs-09-#94983)

Here, *seldom* implies infrequency while leaving room for exceptions. This usage maintains the significance of the finding without overstating the claim. NSs, by contrast, often used understaters to indicate minor or marginal distinctions, especially in evaluative statements:

- (5.56) <s> This is a US-based organization that has a lot of resources, particularly for teachers who teach kindergarten through 12th grade, some of the *slightly* younger students. </s> (NS-05-#9686)

The adverb *slightly* refines the age-related classification, presenting it as a subtle rather than marked difference. It serves to reduce categorical rigidity while retaining descriptive accuracy.

5.5.3 Epistemic hedging (Hedging between the speaker and the proposition)

Following the analysis of hedging within the proposition, this section focuses on hedging strategies that modify the relationship between the speaker and the proposition itself. These strategies serve to reduce the speaker's degree of commitment to the truth value of a statement. Three distinct subtypes were identified: speaker-oriented hedges, plausibility shields, and attribution shields.

Among these, speaker-oriented hedges were the most frequently used by both groups, comprising 66.52% of hedges for Turkish NNSs and 60.56% for NSs. However, this difference was not statistically significant ($G^2 = 1.94, p > 0.05$). In contrast, plausibility shields appeared more frequently in the NSs corpus (39.01%) compared to the NNSs corpus (30.69%), and this difference reached statistical significance ($G^2 = 6.92, p < 0.01$).

Although attribution shields were relatively rare across both corpora, they occurred more often in the NNSs group (2.79%) than in the NSs group (0.42%), with a significant difference observed ($G^2 = 13.65, p < 0.001$).

When these subtypes are considered collectively under the broader functional category of epistemic hedging, no statistically significant difference emerged between the groups ($G^2 = 1.70, p > 0.05$). The category accounted for 24.32% of all hedges among NNSs and 26.07% among NSs. Overall, total hedge usage was proportionally similar, with NNSs using hedges in 71.86% of cases and NSs in 70.35%, based on comparable total word counts (389,775 and 387,089 respectively), and this difference was not significant ($G^2 = 0.63, p > 0.05$). These findings are presented in Table 5.35.

Table 5.35*Distribution of Epistemic Hedges by Subtypes*

	NNS			NS			LL	
Types of hedging strategies	NNS	% of total in category	%	NS	% of total in category	%	G2	p-value
Speaker-oriented	453	11.65	66.52	430	11.11	60.56	1.94	ns
Plausibility Shields	209	5.36	30.69	277	7.11	39.01	6.92	$p < 0.01$
Attribution Shields	19	0.49	2.79	3	0.08	0.42	13.65	$p < 0.001$
Epistemic H.	681	17.47	24.32	710	18.34	26.07	1.70	ns
Total Hedge Use	2801	71.86	0.71	2723	70.35	0.70	0.63	ns

ns: not significant $p > 0.05$

5.5.3.1 Speaker-oriented hedges

As a subcategory of epistemic hedging, speaker-oriented hedges were examined in terms of their lexical variety and frequency across both speaker groups. Analysis of the corpus identified 8 adverbs functioning in this role: *maybe*, *perhaps*, *preferably*, *actually*, *hopefully*, *basically*, *just*, and *personally*. While NSs used all items except *preferably*, NNSs used the full set.

Among these adverbs, *just* emerged as the most frequently used by NNSs, comprising 49.45% of their speaker-oriented hedges. It also occurred commonly in the NSs corpus (39.77%), and the difference between groups was statistically significant ($G^2 = 4.64$, $p < 0.05$). In contrast, *maybe* appeared more frequently in the NSs corpus, and equaled 44.19% of their speaker-oriented hedges, compared to 20.09% in the NNSs corpus. This difference was highly significant ($G^2 = 40.99$, $p < 0.0001$), and the distribution of individual speaker-oriented hedges across groups is detailed in Table 5.36.

Table 5.36*Distribution of Speaker-Oriented Hedges*

	NNS			NS			LL	
Speaker Oriented	NNS	per 10000	% of total in category	NS	per 10000	% of total in category	G2	p-value
maybe	91	2.36	20.09	190	4.91	44.19	40.99	p < 0.0001
perhaps	8	0.21	1.77	10	0.26	2.33	0.34	ns
preferably	0	0.00	0	1	0.03	0.23	1.44	ns
actually	46	1.18	10.15	7	0.18	1.63	30.10	p < 0.0001
hopefully	10	0.26	2.21	20	0.52	4.65	3.94	p < 0.05
basically	63	1.62	13.91	25	0.65	5.81	15.04	p < 0.001
just	224	5.75	49.45	171	2.42	39.77	4.64	p < 0.05
personally	11	0.28	2.43	6	0.15	1.40	1.24	ns
Speaker Oriented	453	11.65	66.52	430	11.11	60.56	1.94	ns
Epistemic	681	17.47	24.32	710	18.34	26.07	1.70	ns
Total Hedge Use	2801	71.86	0.71	2723	70.35	0.70	0.63	ns

ns: not significant $p > 0.05$

Additional lexical items also showed variation between groups. The adverb *actually* was notably more frequent in the NNSs corpus (10.15%) than in the NSs corpus (1.63%), with this difference reaching statistical significance ($G^2 = 30.10, p < 0.0001$). A similar trend was observed for *basically*, which occurred more often among NNSs (13.91%) than NSs (5.81%) ($G^2 = 15.04, p < 0.001$). Conversely, *hopefully* was used more by NSs (4.65%) than by NNSs (2.21%), and this difference was also statistically significant ($G^2 = 3.94, p < 0.05$). By comparison, the remaining adverbs—*perhaps*, *preferably*, and *personally*—were infrequent in both corpora, and none of the observed differences for these items were statistically significant (all $p > 0.05$). Cumulatively, speaker-oriented hedges accounted for 66.52% of

hedges within this functional category for NNSs and 60.56% for NSs. However, this overall difference did not reach statistical significance ($G^2 = 1.94, p > 0.05$).

Corpus examples reveal that speaker-oriented hedges served pragmatic functions that shaped how speakers positioned themselves in relation to their propositions. These adverbs modulated epistemic stance, framed personal involvement, and reduced assertiveness, particularly in informal or reflective contexts. In one instance, a NSs used *maybe* to express uncertainty about their own actions during a lapse in focus:

- (5.57) <s> It didn't encourage me to try because it was too easy for me. </s> <s> So, I got distracted easily and went off and *maybe* did something else that I shouldn't have been doing. </s> (NS-29-#251378)

Here, *maybe* softens the speaker's admission by casting the behavior as tentative rather than deliberate, and allows for distance from personal responsibility. Similarly, *basically* framed a procedural explanation not as a technical account but as an informal summary drawn from the speaker's understanding:

- (5.58) <s> So, guys, have you been successful in finding the 3D object? </s> <s> So, *basically*, I'd say we just open our camera, scan the code, and the Unite AR site pops up. </s> (NNSs-02-#14852)

The adverb positions the description as approximate, downplaying its authority and marking the speaker's intent to guide rather than instruct. In other cases, *actually* introduced a reassessment from the speaker's perspective, often signaling a shift between expectation and outcome.

- (5.59) <s> And with young learners, between the ages of 11 and 13, we did interviews, and *actually*, I'd say it turned out to be a little more difficult than we expected to get permissions. </s> <s> We had to go through all kinds of ethics issues—asking for permissions, getting clearance from each country, and so on. </s> (NNSs-40-#59694)

Actually marks the speaker's reflection as a revision to earlier assumptions, anchoring the evaluation in subjective experience rather than categorical fact. Finally, *just* was frequently used to soften claims by minimizing the speaker's role or contribution, as in the following example:

(5.60) <s> The next is a word cloud, and I *just* kind of went with whatever came to mind—everything I love and have shared with my young learners and teacher trainees, so hopefully some of your activities are there too. </s> (NS-10-#51743)

Here, *just* reduces the formality and assertiveness of the action, framing it as spontaneous rather than deliberate or prescriptive.

5.5.3.2 Plausibility shields

Plausibility shields are a type of hedging device used to convey varying degrees of likelihood or possibility. Analysis of the corpus identified six adverbs within this category: *likely*, *maybe*, *perhaps*, *possibly*, *potentially*, and *probably*. All six items were used by both NSs and NNSs.

As presented in Table 5.37, *probably* was the most frequently used plausibility shield in the NNSs corpus, and equaled 61.24% of all items in this category. It was also commonly used by NSs, comprising 37.91% of their total plausibility shields. The difference in usage between the groups was statistically significant ($G^2 = 13.36$, $p < 0.001$). In contrast, *maybe* emerged as the most frequent plausibility shield among NSs, making up 50.18% of their category total, compared to 28.71% in the NNSs corpus—a statistically significant difference as well ($G^2 = 13.92$, $p < 0.001$). The remaining items—*likely*, *perhaps*, *possibly*, and *potentially*—were used relatively infrequently by both groups. None of the observed differences for these adverbs reached statistical significance (all $p > 0.05$).

When considered overall, plausibility shields constituted 30.69% of hedges within this functional category for NNSs and 39.01% for NSs. This group-level difference was statistically significant ($G^2 = 6.92$, $p < 0.01$), indicating a notable difference in the use of plausibility-based hedging strategies.

Table 5.37*Distribution of Plausibility Shields*

	NNS			NS			LL	
Plausibility Shields	NNS	per 10000	% of total in category	NS	per 10000	% of total in category	G2	<i>p</i> -value
likely	2	0.05	0.96	5	0.13	1.81	0.62	ns
maybe	60	1.54	28.71	139	3.59	50.18	13.92	<i>p</i> < 0.001
perhaps	10	0.26	4.78	15	0.39	5.42	0.09	ns
possibly	5	0.13	2.39	10	0.26	3.61	0.59	ns
potentially	4	0.10	1.91	3	0.08	1.08	0.56	ns
probably	128	3.28	61.24	105	2.71	37.91	13.36	<i>p</i> < 0.001
Plausibility	209	5.36	30.69	277	7.11	39.01	6.92	<i>p</i> < 0.01
Epistemic	681	17.47	24.32	710	18.34	26.07	1.70	ns
Total Hedge Use	2801	71.86	0.71	2723	70.35	0.70	0.63	ns

ns: not significant $p > 0.05$

The qualitative data revealed a range of ways in which plausibility shields were used to manage epistemic stance. Among the observed patterns, three functions stood out as particularly representative across the corpora.

One common function involved marking uncertainty in personal interpretation. In the NSs example below, *maybe* appears twice in a single utterance, softening both a description of an event and the speaker's understanding of it:

- (5.61) <s> So, what would you do if somebody's little brother was jumping around, singing and waving or making noise—*maybe* that's not even what really happened, maybe I misunderstood it? </s> (NS-07-#28507)

This use allows the speaker to present the account as tentative, signaling a lack of full commitment to either proposition. Another pattern involved framing likely inferences. In this

NNSs example, *most probably* appears before the subject, positioning the entire clause as a reasoned assumption rather than a confirmed fact:

- (5.62) <s> Because, I mean, our colleagues are tired. </s><s> It's a Friday evening, *most probably* they have had a very busy week. </s><s> But if there are any questions, you can raise your hand or write it in the chat box. </s> (NNSs-32-#366362)

This structure—common among NNSs—frames the proposition as a strong inference while preserving a degree of doubt. A third function involved qualifying hypothetical or evaluative content. In the example below, *potentially* precedes a noun phrase, reducing the certainty of the judgment being made:

- (5.63). <s> In outdoor activities, require more physical strength. </s><s> We have to be optimistic. </s><s> Okay, all right, so we have analyzed some *potentially* gender stereotypical content. </s><s> It is time to be more optimistic now. </s> (NNSs-09-#97786)

This structure allows the speaker to present a cautious evaluation without asserting it as definitive.

5.5.3.3 Attribution shields

The final subtype within the category of epistemic hedging concerns attribution shields—hedges that transfer the responsibility for a claim to an external source or general authority. Analysis of the corpus identified 6 items in this category: *allegedly*, *apparently*, *hypothetically*, *supposedly*, *naturally*, and *theoretically*. All 6 were present in the NNSs corpus, whereas NSs used only 2: *naturally* and *theoretically*. Across the group of attribution shields, frequencies were generally low in both corpora. Among NNSs, *allegedly* was the most common, it constituted 36.84% of attribution shields, followed by *apparently* and *theoretically*, each at 21.05%.

The remaining items—*naturally*, *hypothetically*, and *supposedly*—each contributed 5.26% to the NNSs total. In contrast, NSs usage was limited to *naturally* (33.33%) and *theoretically* (66.66%). None of the individual items showed statistically significant differences when considered separately (all $p > 0.05$). However, when grouped as a category, attribution shields were used significantly more by NNSs (2.79% of hedges in this category) than by

Ns (0.42%). This overall difference was statistically significant ($G^2 = 13.65, p < 0.001$). A complete breakdown of these frequencies is provided in Table 5.38.

Table 5.38

Distribution of Attribution Shields

	NNS			NS			LL	
Attribution Shields	NNS	per 10000	% of total in category	NS	per 10000	% of total in category	G2	p-value
allegedly	7	0.18	36.84	0	0.00	0	0.29	ns
apparently	4	0.10	21.05	0	0.00	0	1.47	ns
hypothetically	1	0.03	5.26	0	0.00	0	0.59	ns
supposedly	1	0.03	5.26	0	0.00	0	1.17	ns
naturally	2	0.05	10.53	1	0.03	33.33	0.75	ns
theoretically	4	0.10	21.05	2	0.05	66.66	1.06	ns
Attribution S.	19	0.49	2.79	3	0.08	0.42	13.65	$p < 0.001$
Epistemic	681	17.47	24.32	710	18.34	26.07	1.70	ns
Total Hedge Use	2801	71.86	0.71	2723	70.35	0.70	0.63	ns

ns: not significant $p > 0.05$

In the corpus, attribution shields appeared as adverbials such as *allegedly*, *apparently*, *hypothetically*, *supposedly*, *naturally*, and *theoretically*. These forms were used by speakers to introduce information without asserting it as personal knowledge.

Attribution shields appeared in the corpus as a means of presenting information as externally sourced or widely accepted, thereby reducing the speaker's epistemic responsibility. These adverbs typically occurred in clause-initial or medial positions and signaled that the speaker was not asserting personal knowledge.

The adverb *allegedly* was used in NNSs speech to introduce reported information:

- (5.64) <s> B: Okay, so *allegedly* they do have some kind of teaching certificate. </s>
<s> A: Okay, yeah, I know, I know, I know, let's not talk about that here. </s> (NNSs-08-#89782)

Here, *allegedly* frames the statement as secondhand, distancing the speaker from direct endorsement. Similarly, *apparently* introduced information treated as broadly circulated or assumed to be known:

- (5.65) <s> So, for instance, if we're talking about reflective learning, say for instance, we're teaching if conditionals, right? </s> <s> And I presented a paper today where *apparently*, at least in Germany, the textbooks in Germany, they do not reflect the real-life usage of if conditionals when compared against the BNC. </s> (NNSs-33-#376705)

The adverb marks the claim as reflective of general consensus or published findings, rather than personal observation. In contrast, *theoretically* functioned as a shield in logical or hypothetical reasoning. In the NSs example below, it frames time distribution as a conceptual calculation:

- (5.66) <s> If you break students into pairs, theoretically each student gets four minutes. </s> <s> But if you have a class or a group of 12, *theoretically* each student only gets 40 seconds. </s> (NS-08-#31799)

This usage signals reliance on an abstract model rather than empirical evidence. Across these examples, attribution shields served to dissociate the speaker from full commitment to the claim by referencing general belief, external sources, or hypothetical logic.

5.5.4 Hearer-Oriented Hedges

The final category of functional hedging examined in this study consists of hearer-oriented hedges—lexical items used to manage interpersonal dynamics, mitigate directives, and facilitate alignment with the listener. This category includes five adverbs: *maybe*, *perhaps*, *actually*, *hopefully*, and *just*. All five were found in both the NNSs and NSs corpora; however, their distribution differed notably between the two groups.

Among the five, *maybe* was the most frequently used hearer-oriented hedge in both corpora. It accounted for 40.51% of all hearer-oriented hedges in the NNSs corpus and 72.03% in the NSs corpus. This difference was statistically significant ($G^2 = 80.13$, $p < 0.0001$). The adverb

just also appeared frequently in both groups but was more prominent in the NNSs data, comprising 44.70% of that category, compared to 17.80% in the NSs corpus ($G^2 = 108.43$, $p < 0.0001$).

Actually was used more often by NNSs speakers (10.83%) than by NSs speakers (1.80%), and this contrast was statistically significant as well ($G^2 = 65.20$, $p < 0.0001$). In contrast, *perhaps* appeared more frequently in the NSs corpus (4.34%) than in the NNSs corpus (0.47%) ($G^2 = 32.00$, $p < 0.0001$). *Hopefully* was the only item that did not show a significant difference in distribution between the two groups ($G^2 = 0.34$, $p > 0.05$).

As shown in Table 5.39, hearer-oriented hedges made up 30.67% of all hedging devices in the NNSs corpus and 34.67% in the NSs corpus. This difference was statistically significant ($G^2 = 6.77$, $p < 0.01$).

Table 5.39

Distribution of Hearer-Oriented Hedges

	NNS			NS			LL	
	NNS	per 10000	% of total in category	NS	per 10000	% of total in category	G2	p-value
maybe	348	8.93	40.51	680	17.57	72.03	80.13	$p < 0.0001$
perhaps	4	0.10	0.47	41	1.06	4.34	32.00	$p < 0.0001$
actually	93	2.39	10.83	17	0.44	1.80	65.20	$p < 0.0001$
hopefully	30	0.77	3.49	38	0.98	4.03	0.34	ns
just	384	9.85	44.70	168	4.34	17.80	108.43	$p < 0.0001$
Hearer Oriented	859	22.04	30.67	944	24.38	34.67	6.77	$p < 0.01$
Total Hedge Use	2801	71.86	0.71	2723	70.35	0.70	0.63	ns

ns: not significant $p > 0.05$

Overall, hearer-oriented hedges accounted for 30.67% of hedges in the NNSs corpus and 34.67% in the NSs corpus. This difference was statistically significant ($G^2 = 6.77$, $p < 0.01$).

5.5.4.1 *Maybe as a hearer-oriented hedge*

As one of the most frequently used hedges in this category, *maybe* served four main interpersonal functions: offering suggestions, giving advice, lessening directness, and asking questions. As presented in Table 40, these functions varied considerably between NNSs and NSs, both in distribution and frequency.

Table 5.40

Distribution of Functions of Maybe as a Hearer-Oriented Hedge

	NNS		NS		LL	
Strategies	NNS	% of total in category	NS	% of total in category	G2	p-value
Offers and suggestions	241	69.25	208	30.59	73.99	$p < 0.0001$
Giving Advice	68	19.54	221	32.5	14.63	$p < 0.001$
Lessening Directness	7	2.01	134	19.71	70.24	$p < 0.0001$
Asking Questions	32	9.2	117	17.21	11.01	$p < 0.001$
Total	348	40.51	680	72.03	80.13	$p < 0.0001$
Hearer Oriented	859	30.67	944	34.67	6.77	$p < 0.01$
Total Hedge Use	2801	0.71	2723	0.70	0.63	ns

ns: not significant $p > 0.05$

The most common function for NNSs was offering suggestions, which accounted for 69.25% of their uses of *maybe*. In contrast, NSs used *maybe* for this same function in only 30.59% of cases. This difference was statistically significant ($G^2 = 73.99$, $p < 0.0001$). Moving to the second most frequent function, giving advice appeared more often in the NSs corpus,

comprising 32.5% of their uses, compared to 19.54% in the NNSs corpus ($G^2 = 14.63$, $p < 0.001$).

Further differences were observed in the use of *maybe* for lessening directness. NSs used this function in 19.71% of cases, whereas it occurred in *just* 2.01% of NNSs usage. This contrast was highly significant ($G^2 = 70.24$, $p < 0.0001$). Similarly, in the function of asking questions, NSs again showed higher frequency (17.21%) compared to NNSs (9.2%), with the difference reaching statistical significance ($G^2 = 11.01$, $p < 0.001$).

In NS discourse, *maybe* was also used when offering advice, often to reduce directive force. For instance:

- (5.68) <s> I'm not sure if the document uploaded correctly. </s><s> You should, *maybe*, double-check with the moderator about the file format. </s> (NS-41-#54721)

Placed between the subject and verb, *maybe* frames the advice as a suggestion rather than an obligation. It was also used in evaluative comments, particularly in critical feedback, as seen here:

- (5.69) <s> I wasn't sure if the learner autonomy point came through clearly. </s><s> *Maybe* that example doesn't quite support the point about learner autonomy. </s> (NS-38-#56140)

In this sentence-initial position, *maybe* softens the critique and signals openness to other interpretations. Both NSs and NNSs used *maybe* in tentative questions, which allows for inquiries to be framed without presumption. One NNSs speaker posed a reflective question during a check-in:

- (5.70) <s> They were very quiet during the group work. </s><s> Do we, *maybe*, need to explain the criteria again? </s> (NNSs-14-#55832)

Here, the hedge appears mid-clause, inviting collaborative reflection rather than issuing a direct challenge.

Across these examples, *maybe* demonstrated syntactic flexibility, appearing in sentence-initial and clause-medial positions depending on its pragmatic role. NNSs tended to use *maybe* more often for suggestions and questions, while NSs applied it more broadly,

including in advice and evaluations. In all cases, *maybe* lowered epistemic commitment and framed contributions as tentative and negotiable.

5.5.4.2 *Perhaps as a hearer-oriented hedge*

To extend the lexical-level analysis of hearer-oriented hedges, this section focuses on the adverb *perhaps*. Although its overall frequency was relatively low, *perhaps* performed multiple pragmatic functions in both corpora, including offering suggestions, lessening directness, asking questions, and giving advice. As can be seen in Table 5.41, the distribution of these functions differed across speaker groups. Among NNSs, *perhaps* was used exclusively for two functions: offering suggestions and giving advice. Each accounted for 50% of its total occurrences. In contrast, NSs used *perhaps* more broadly across all four categories. The most frequent use among NSs was also for offering suggestions (58.54%), followed by lessening directness (26.83%), asking questions (12.20%), and giving advice (2.44%).

Table 5.41

Distribution of Functions of Perhaps as a Hearer-Oriented Hedge

	NNS		NS		LL	
Strategies	NNS	% of total in category	NS	% of total in category	G2	p-value
Offers and Suggestions	2	50	24	58.54	0.05	ns
Lessening Directness	0	0	11	26.83	2.05	ns
Asking Questions	0	0	5	12.20	0.93	ns
Giving Advice	2	50	1	2.44	6.05	p < 0.05
Total	4	0.47	41	4.34	32.00	p < 0.0001
Hearer Oriented	859	30.67	944	34.67	6.77	p < 0.01
Total Hedge Use	2801	0.71	2723	0.70	0.63	ns

ns: not significant $p > 0.05$

Despite these differences, most of the category-level comparisons were not statistically significant. The only significant result was found in the function of giving advice, which occurred more often in the NNSs corpus (50%) than in the NSs corpus (2.44%) ($G^2 = 6.05$, $p < 0.05$). All other functional differences did not reach significance (all $p > 0.05$).

The adverb *perhaps* was observed in both NSs and NNSs speech, serving four primary functions in the ELT webinar data: making suggestions, giving advice, lessening directness, and posing questions. NSs used *perhaps* across all four functions, while NNSs used it only for suggestions and advice. In the NSs corpus, *perhaps* frequently occurred in sentence-initial position to introduce tentative proposals. The following excerpt illustrates this usage in a collaborative planning context:

- (5.71) <s> So, we've got about twenty minutes left. </s><s> *Perhaps* we could start with the learner feedback section before going into materials. </s> (NS-42-#63482)

Here, *perhaps* initiates a conditional suggestion, softening the directive and signaling openness to alternatives.

Similarly, in advisory contexts, NSs used *perhaps* to offer listener-directed guidance. In the example below, a speaker provides feedback during a discussion of research summaries:

- (5.72) <s> The first part was *quite* clear. </s><s> *Perhaps* you could elaborate on that part when summarizing the main findings. </s> (NS-39-#60913)

The hedge appears at the start of the clause and frames the recommendation as optional, rather than prescriptive. NSs also used *perhaps* to lessen the directness of critical remarks, particularly when evaluating interpretations. The following example comes from a feedback exchange on data analysis:

- (5.73) <s> It seems like there was some ambiguity in the way that theme was framed. </s><s> *Perhaps* that interpretation doesn't fully capture the learner variability in this context. </s> (NS-40-#56531)

Here, *perhaps* precedes a potentially critical comment, reducing the force of the claim and acknowledging the possibility of alternative readings. In tentative questions, *perhaps* was

also used to introduce suggestions indirectly. In a NSs group discussion about content clarity, one speaker proposed a small addition:

- (5.74) <s> We want to make sure that's really clear to the participants. </s><s> *Perhaps* we should include another example to illustrate that point? </s> (NS-44-#57219)

The clause-initial placement and interrogative form mark the suggestion as collaborative and non-imposing. In the NNSs corpus, *perhaps* was observed in fewer functions and more limited contexts. It was used to make suggestions, particularly in task reviews, as in:

- (5.75) <s> We went through the instructions fairly quickly. </s><s> *Perhaps* we review the criteria again to make sure it's clear. </s> (NNSs-23-#58792)

Here, *perhaps* appears at the start of a declarative clause proposing an action. No examples of *perhaps* were found in the NNSs corpus for the functions of lessening directness or asking questions.

Across all instances, *perhaps* was most commonly placed at the beginning of the clause. NSs used it in a wider range of discourse functions and syntactic positions than NNSs, using it to manage interpersonal stance and hedge proposals, advice, critiques, and suggestions.

5.5.4.3 *Actually as a hearer-oriented hedge*

In both corpora, the adverb *actually* performed three main interpersonal functions: expressing opposition (strong or weak), signaling mild contradiction or politeness, and softening statements. Although the overall frequency of *actually* differed significantly between speaker groups, its functional distribution was broadly similar.

Among NNSs, *actually* was most often used to express opposition. This function accounted for 45.16% of its occurrences. It was also dominant among NSs, at 41.18%, with no statistically significant difference between groups ($G^2 = 0.05$, $p > 0.05$). Usage patterns were also comparable for the other two functions: *actually* was used for mild contradiction or politeness in 27.96% of NNSs cases and 17.65% of NSs cases ($G^2 = 0.64$, $p > 0.05$), and for softening in 26.88% of NNSs instances versus 41.18% in NSs ($G^2 = 0.92$, $p > 0.05$). A detailed breakdown of these functions is provided in Table 5.42.

Table 5.42*Distribution of Functions of Actually as a Hearer-Oriented Hedge*

	NNS		NS		LL	
Strategies	NNS	% of total in category	NS	% of total in category	G2	p-value
(Strong or Weak) Opposition	42	45.16	7	41.18	0.05	ns
Hedging and Politeness (Mild Contradiction)	26	27.96	3	17.65	0.64	ns
Softening	25	26.88	7	41.18	0.92	ns
Total	93	10.83	17	1.80	65.20	p < 0.0001
Hearer Oriented	859	30.67	944	34.67	6.77	p < 0.01
Total Hedge Use	2801	0.71	2723	0.70	0.63	ns

ns: not significant $p > 0.05$

While these individual functions showed no significant variation, *actually* occurred far more frequently overall as a hearer-oriented hedge in the NNSs corpus, comprising 10.83% of all hearer-oriented hedges, compared to just 1.80% in the NSs corpus. This difference was statistically significant ($G^2 = 65.20$, $p < 0.0001$).

The adverb *actually* functioned as a speaker-oriented hedge in ELT webinar discourse, enabling speakers to manage their stance by signaling contrast, redirecting ideas, or softening assertions. Three primary uses were observed: marking opposition, expressing mild contradiction, and reducing assertiveness. These functions appeared in distinct syntactic positions and discourse contexts across both NNSs and NSs groups.

One common use was to mark opposition or introduce correction, often in sentence-initial position, especially in NNSs speech. In the example below, a NNSs speaker challenges a prior assumption about instructional contexts:

- (5.76) <s> Some of the strategies we discussed work well for live sessions. </s><s> But the next unit is mostly asynchronous, right? </s><s> *Actually*, this approach doesn't apply to asynchronous contexts. </s> (NNSs-23-#53626)

Here, *actually* signals a shift and frames the contradiction as thoughtful rather than abrupt. A second use was to express mild contradiction or present an alternative, typically mid-turn, which allows the speaker to reformulate ideas without dismissing prior contributions. In the following NSs example, the hedge facilitates a shift in emphasis:

- (5.77) <s> So we'd begin with materials, then transition into the learner outcomes. </s><s> I see your point—*actually*, we might consider focusing more on learner autonomy. </s> (NS-31-#53390)

In this case, *actually* redirects the discussion while maintaining alignment with the previous speaker. The third function involved softening evaluations, often in clause-final position, particularly in NNSs speech. For instance:

- (5.78) <s> We could try grouping them differently next time to improve collaboration. </s><s> That sounds like a good strategy, *actually*. </s> (NNSs-28-#54777)

Here, *actually* tempers the agreement, suggesting a more reflective or cautious endorsement. Across these examples, *actually* was used to hedge the speaker's stance in relation to the proposition, without calling its truth into question. Sentence-initial and clause-final placements were most frequent in NNSs usage, often serving to mark disagreement politely or reflect on prior remarks. NSs showed greater variation in placement, frequently using *actually* mid-clause to redirect the conversational flow or introduce refined alternatives. In each case, the hedge positioned the speaker with a degree of epistemic modesty, and aligns their contributions more strategically within the discourse.

5.5.4.4 *Hopefully as a hearer-oriented hedge*

This section examines the pragmatic use of *hopefully*, a relatively infrequent but multifunctional hearer-oriented hedge. Though it occurred less often than other adverbs in the category, *hopefully* was used in both speaker groups to serve several interpersonal purposes—such as softening instructional language, aligning with the listener's perspective,

qualifying evaluations, and diffusing the force of social expectations. These functions were distributed unevenly across NNSs and NSs usage, as summarized in Table 5.43.

As Table 5.43 shows, the most marked difference emerged in the use of *hopefully* to indirectly hedge social expectations. This function was notably more frequent among NNSs, comprising 43.33% of their *hopefully* uses, compared to just 10.53% in the NSs corpus—a difference that was statistically significant ($G^2 = 7.38$, $p < 0.01$). Other functions, such as hedging evaluations or directives, did not show significant variation across groups.

Table 5.43

Distribution of Functions of Hopefully as a Hearer-Oriented Hedge

	NNS		NS		LL	
Strategies	NNS	% of total in category	NS	% of total in category	G2	p-value
Hedging Directives/Instructions	4	13.33	14	36.84	3.77	ns
Interpersonal Hedging	4	13.33	4	10.53	0.11	ns
Hedging Evaluations	9	30.00	16	42.11	0.68	ns
Indirect Hedging of Social Expectations	13	43.33	4	10.53	7.38	$p < 0.01$
TOTAL	30	3.49	38	4.03	0.34	ns
Hearer Oriented	859	30.67	944	34.67	6.77	$p < 0.01$
Total Hedge Use	2801	0.71	2723	0.70	0.63	ns

ns: not significant $p > 0.05$

Despite these differences in pragmatic distribution, overall frequency was similar: *hopefully* accounted for 3.49% of hearer-oriented hedges in the NNSs corpus and 4.03% in the NSs corpus, with no significant difference in total usage ($G^2 = 0.34$, $p > 0.05$).

Syntactic placement also differed by group. NNSs predominantly used *hopefully* in sentence-initial position, particularly when managing social expectations or issuing indirect suggestions. For instance, in the example below, a NNSs speaker transitions between tasks and refers to participant preparedness with mitigated expectation:

- (5.79) <s> Let's move on to the next part of the task. </s><s> *Hopefully*, you've all had a chance to look through the material before we move on. </s> (NNSs-23-#53626)

Here, *hopefully* cushions an implied obligation, signaling consideration for varying levels of listener compliance. NSs, by contrast, exhibited more flexibility in placement—using *hopefully* at the beginning, middle, and end of clauses—often for interpersonal alignment or to hedge evaluative claims. For example:

- (5.80) <s> We're focusing on breakout strategies now—*hopefully* that's useful to everyone. </s> (NS-41-#53372)

In this case, *hopefully* is mid-clause and expresses tentative optimism about listener benefit. In another example:

- (5.81) <s> That answers the question quite well, *hopefully*. </s> (NS-36-#53422)

Here, clause-final *hopefully* adds tentativeness to a self-assessment, leaving space for listener disagreement or follow-up. Finally, instructional hedging was observed in both groups, but slightly more among NSs. However, the NNSs corpus included examples such as:

- (5.82) <s> This method worked quite well in our last training. </s><s> *Hopefully*, you can try this approach in your next session. </s> (NNSs-09-#422319)

Here, *hopefully* in sentence-initial position functions to mitigate the directive, presenting it as a hopeful possibility rather than a firm recommendation.

Across these examples, *hopefully* consistently operated as a speaker-oriented hedge by allowing the speaker to express desire or positive assumption while avoiding overstatement. The adverb was most commonly placed at the beginning of the clause in NNSs speech, particularly in managing expectations and giving advice. NSs, on the other hand, demonstrated more flexibility in syntactic placement, using *hopefully* in sentence-initial, mid-clause, and clause-final positions across functions.

5.5.4.5 *Just as a hearer-oriented hedge*

Among all items analyzed in this category, *just* was the most frequently used, appearing across a range of pragmatic functions. These included hedging imperatives, minimizing requests, minimizing suggestions, and minimizing questions. While functional distributions between NNSs and NSs were largely similar, one significant difference was found.

As seen in Table 44, in both groups, the most common function of *just* was to hedge imperatives, and equaled 39.32% of uses among NNSs and 38.1% among NSs. This parallel distribution resulted in no statistically significant difference ($G^2 = 0.05, p > 0.05$). Similarly, the functions of minimizing requests and minimizing suggestions were comparable across speaker groups, with percentages ranging from approximately 27% to 33% in both corpora. No significant group-level differences were observed for these categories either (all $p > 0.05$).

Table 5.44

Distribution of Functions of Just as a Hearer-Oriented Hedge

	NNS		NS		LL	
Strategies	NNS	% of total in category	NS	% of total in category	G2	p-value
Hedged Imperative	151	39.32	64	38.1	0.05	ns
Minimization of Requests	114	29.69	54	32.14	0.23	ns
Minimization of Suggestions	106	27.60	50	29.76	0.19	ns
Minimization of Questions	13	3.39	0	0	9.44	$p < 0.01$
Total	384	44.70	168	17.80	108.43	$p < 0.0001$
Hearer Oriented	859	30.67	944	34.67	6.77	$p < 0.01$
Total Hedge Use	2801	0.71	2723	0.70	0.63	ns

ns: not significant $p > 0.05$

A significant difference was observed in minimizing questions. This usage appeared in 3.39% of NNSs utterances but was absent from NSs corpus. This difference was statistically significant ($G^2 = 9.44$, $p < 0.01$), marking the only function of *just* where a group-level distinction was found.

Looking at overall usage, *just* accounted for 44.70% of all hearer-oriented hedges in the NNSs corpus, compared to 17.80% in the NSs corpus. This difference was highly significant ($G^2 = 108.43$, $p < 0.0001$).

The adverb *just* appeared frequently in ELT webinar discourse and fulfilled several hearer-oriented hedging functions, particularly in NNSs speech. It was used to soften the force of directives, requests, suggestions, and, in the case of NNSs, questions. Across these functions, *just* served to reduce the perceived imposition or intensity of the speaker's utterance, often positioning actions as minor or reasonable.

One major function involved hedging directives, where *just* minimized the authoritative tone of instructions. In the following exchange, an NNSs speaker transitions between activities:

(5.83) <s> Okay, I think we're ready for the next part. </s><s> *Just* check the handout before we move on. </s> (NNSs-21-#172015)

Here, *just* precedes the imperative verb and presents the instruction as a simple, low-effort action. This use softens the directive while still maintaining clarity of purpose. *Just* was also observed in minimizing requests, especially within conditional structures that already mark the speaker's deference. In a NSs example, the speaker refers to reviewing content during a collaborative planning session:

(5.84) <s> I think there might be a couple of gaps in the section heading. </s><s> If you could *just* take a minute to look at this part of the outline. </s> (NS-36-#401256)

Here, *just* is embedded within a polite conditional and further reduces the weight of the request by suggesting that it requires minimal time and effort. The adverb also functioned in minimizing suggestions, often appearing before the suggested action to frame it as a modest proposal. This was particularly evident in NNSs corpus. For example:

(5.85) <s> That part was a little unclear. </s><s> You could *just* try linking those two points together next time. </s> (NNSs-14-#219364)

In this case, *just* softens the suggestion by presenting it as a small adjustment rather than a strong recommendation, which helps maintain a collaborative tone. A fourth function, observed exclusively in NNSs speech, was minimizing questions. In this use, *just* occurred within interrogative structures to hedge the speaker's request for information. The following question was asked during a planning session:

(5.86) <s> I wasn't sure about the schedule. </s><s> Can I *just* ask what the timing will be for the group part? </s> (NNSs-07-#198433)

Here, *just* reduces the assertiveness of the question, making it appear less intrusive and more polite, particularly in group discussion contexts.

Across all functions, *just* served to position the speaker's utterance as tentative, manageable, or non-imposing. While both NSs and NNSs used *just* in hedged directives and minimized suggestions, minimizing questions was only found in the NNSs corpus. Syntactically, *just* typically preceded the main verb or verb phrase in imperatives, conditionals, and questions, contributing to a tone of reduced obligation and increased interpersonal sensitivity.

6 DISCUSSION

This chapter discusses the findings on the use of adverbial hedges by NSs and NNSs in spoken academic discourse. The analysis examined three core dimensions: frequency, lexical range, and pragmatic function—each essential to understanding how speakers express epistemic stance, manage interpersonal relations, and construct academic identities.

The results indicate both quantitative and functional differences between NSs and NNSs in their use of adverbial hedges. These findings are interpreted in light of the study's two research questions. The first concerned differences in frequency and lexical variety across groups, while the second examined whether hedges fulfilled different pragmatic roles—such as expressing uncertainty, softening claims, or managing interaction—depending on speaker status.

The discussion is grounded in a corpus pragmatics framework, combining quantitative analysis with discourse-level interpretation. A form-to-function approach was used to categorize lexical items, and a function-to-form approach guided the contextual analysis of hedges. By focusing on spoken academic discourse—an underrepresented genre in hedging research, particularly within EFL contexts—the study sheds light on how hedging operates in spontaneous, interactive settings shaped by turn-taking and immediate audience engagement.

This study exclusively focuses on adverbial hedges. This grammatical specificity enhances analytical clarity and reduces overlap common in broader hedging studies. However, this focus also restricts the applicability of the findings to other hedge types or academic registers. The following sections examine the implications of these findings, relate them to the existing literature, and consider their significance for pedagogy, discourse analysis, and intercultural communication.

6.2 Discussion of Findings Related to RQ1

Following the overview of the scope and analytical framework of the study, this section examines the findings related to the first research question, which investigated differences in

the frequency and lexical range of adverbial hedges used by NSs and NNSs in spoken academic discourse.

Both NSs and NNSs drew on a broad repertoire of adverbial hedges. While the overall lexical range was similar across groups, their preferences and usage patterns differed in significant ways. NSs tended to opt for modal adverbs such as *maybe* and *perhaps*, which served to convey subjectivity and promote dialogic engagement. NNSs, by contrast, used PMs and adverbs of quantity more frequently. These divergences appear to reflect underlying differences in cultural norms, educational experiences, and exposure to academic genres. Such variation suggests that lexical choice in hedging is shaped not only by linguistic competence but also by discourse familiarity and communicative priorities.

6.2.1 Lexical range of adverbial hedges

The lexical range of adverbial hedges was based on a set of categorized items drawn from prior classifications (Hyland, 1998; Salager-Meyer, 1994; Kaltenböck et al., 2010), which cover modal adverbs, PMs, and adverbs of quantity. In this sense, both groups showed considerable overlap in the adverbs used. However, NNSs produced several adverbial hedges not present in the NSs corpus, indicating greater variation in lexical choice (see Section 5.2.2).

Although the overall range was similar, the presence of hedge forms unique to NNSs suggests a broader repertoire than typically reported in earlier studies. Previous research has often linked L2 hedging to limited lexical diversity and reliance on a narrow set of familiar items (Hyland & Milton, 1997; Friginal et al., 2017). The current findings challenge this assumption, indicating instead a more flexible, and in some cases non-standard or exploratory, use of adverbial hedges in spoken academic contexts.

This pattern may be shaped by several factors. Spoken academic discourse involves spontaneous interaction and real-time stance negotiation, which may lead speakers to draw on a wider pool of expressions. Unlike written academic language, which tends to be more constrained and polished, speech allows for greater lexical exploration, especially among speakers navigating academic registers in a second language.

The findings may also reflect the impact of educational and cultural factors. Some earlier studies of Turkish learners reported restricted hedge use, while others observed the opposite—frequent or even excessive hedging, possibly as a way to manage politeness or express uncertainty (Söğüt, 2014; Mauranen, 1997; Hinkel, 1997). These contrasting outcomes suggest that hedging patterns cannot be explained exclusively by proficiency. Instead, they likely result from a combination of discourse expectations, exposure to academic English, and speakers' strategic choices.

Since this study focused strictly on adverbial forms, comparisons with research covering a broader range of grammatical categories should be approached with caution. Nonetheless, the variation observed in NNSs usage within the scope of adverbial hedging points to a more dynamic and context-sensitive use of language than is typically assumed, as speakers appear to adjust their hedge choices to suit different discourse situations, interlocutor relationships, and communicative purposes. Rather than relying solely on fixed expressions, NNSs strategically adapt and vary their use of adverbial hedges in response to the interactional demands of each context.

6.2.2 Frequency of adverbial hedges

As outlined in the previous section, adverbial hedges are categorized into three types: modal adverbs (e.g., *maybe*, *perhaps*), PMs (e.g., *just*, *actually*), and adverbs of quantity (e.g., *somewhat*, *often*, *largely*). These categories form the basis for comparing the frequency and distribution of hedges across NSs and NNSs (see Section 3.4).

Although the total number of adverbial hedges was similar for both groups, their distribution across categories revealed distinct patterns. NSs primarily used modal adverbs, whereas NNSs preferred PMs and adverbs of quantity. These differences were statistically significant and indicate different pragmatic preferences and discourse strategies (see Section 5.3).

This distributional pattern differs from earlier studies that associated second-language use with lower hedging frequency (Hyland & Milton, 1997; Friginal et al., 2017). In the present study, NNSs not only used hedges frequently but also distributed them more across a wider range of categories. Their preference for PMs and quantificational adverbs suggests a

strategic focus on familiar and flexible forms. These choices may serve to manage uncertainty and support interpersonal rapport, especially in spoken academic discourse, where real-time interaction and audience engagement demand adaptive language use (Mauranen, 1997; Hinkel, 1997).

Further support for this interpretation is found in the frequent use of items such as *just*, *actually*, and *hopefully* among NNSs. These markers fulfilled multiple discourse functions, including softening assertions, structuring turns, and guiding listener attention. Their use reflects a functional response to the demands of live academic speech, rather than mere overuse.

Previous research suggests that cultural and educational backgrounds also appear to influence these patterns. Speakers from discourse communities that value politeness and indirectness may hedge more often to conform to interactional expectations (Zheng, 2022). In spoken academic settings such as webinars or classroom discussions, the dialogic and immediate nature of communication may further encourage hedging among NNSs. Studies on Turkish learners in similar contexts have shown a preference for cautious or indirect expressions when responding to unpredictable or dynamic discourse (Söğüt, 2014; Uysal, 2014; Demir, 2018).

By contrast, NSs relied more heavily on modal adverbs and used fewer hedge types overall. This focused use suggests an alternative hedging strategy that draws on a wider range of grammatical and prosodic resources to convey stance implicitly. Their approach may reflect greater familiarity with genre-specific discourse norms and academic register.

Overall, the findings reveal the limitations of frequency-based analyses in hedging research. Although both groups used a similar number of adverbial hedges, the variation in distribution and function indicates deeper contrasts in rhetorical orientation, communicative goals, and discourse conventions. These results support the need to analyze hedge categories and their pragmatic roles, rather than relying merely on raw frequency counts to assess hedging competence or strategy.

6.2.2.1 Modal adverbs as hedges

As outlined in the analytical framework (see section 3.4.1), epistemic modality conveys degrees of certainty or uncertainty regarding a proposition (Palmer, 2001; Lyons, 1977). Modal adverbs express this stance by qualifying the truth value of statements. According to Quirk et al.'s (1985) typology, these adverbs function as content disjuncts, operating outside the core sentence structure. They fall into three subcategories: personal doubt, reportive, and evaluative adverbs.

NS used modal adverbs more frequently overall. This pattern may indicate a more intuitive grasp of spoken stance marking and greater familiarity with academic discourse conventions (Hinkel, 2005). NNSs also produced a diverse set of modal adverbs, though their use across subcategories showed variation (see Section 5.3.1).

The following sections examine how each group used personal doubt, reportive, and evaluative adverbs. The analysis considers frequency, communicative function, and rhetorical impact in the context of spoken academic discourse.

6.2.2.1.1 Adverbs of personal doubt

Adverbs of personal doubt play a key role in academic hedging by expressing uncertainty and softening claims. Martin and White's (2005) appraisal framework classifies them as "*entertain*" markers that treat propositions as possible interpretations. This fosters dialogic openness and supports the interactive nature of academic discourse (see Section 3.4.1.1).

Both groups in the study used personal doubt adverbs frequently, and *maybe* was the most common. Its repeated use indicates its effectiveness in softening statements and allowing space for alternative viewpoints. This finding is consistent with earlier research by Quirk et al. (1985) and Biber et al. (1999), who identified *maybe* and *probably* as among the most frequent epistemic adverbs in spoken English. In the current data, *maybe* appeared often in explanations and interpretations. This supports Hyland's (1998) argument that hedging contributes to both stance expression and interpersonal interaction.

Group-level differences appeared more clearly in the use of specific items. NSs used *perhaps* more frequently and across a wider range of functions. Beyond expressing doubt, it also

helped organize discourse and soften disagreement, consistent with findings by Høye (1997) and Ernst (2009). NNSs used *perhaps* less often and with more limited functions, possibly reflecting reduced exposure to its use in spoken academic contexts. *Probably* was used similarly by both groups to signal cautious inference or generalization. NNSs occasionally reinforced this stance by combining *probably* with modals or intensifiers, a pattern associated with instructional norms that promote layered hedging (Hinkel, 1997; Hyland, 2005). Less frequent adverbs such as *likely*, *possibly*, and *potentially* appeared in both corpora but tended to reflect written-style reasoning. These items were often used to introduce tentative evaluations, particularly in discussions of pedagogy or learning outcomes (see Section 5.3.1.1).

Overall, both groups demonstrated effective use of personal doubt adverbs. NSs showed greater flexibility with lower-frequency forms, while NNSs relied on a wider but more cautious range, shaped by instructional practices and L2 discourse strategies patterns (see Section 6.4) These patterns reflect the combined influence of pragmatic competence, academic exposure, and learner strategy (Hyland & Milton, 1997; Mauranen, 1997; Söğüt, 2014).

6.2.2.1.2 Evaluative adverbs

Evaluative adverbs convey the speaker's judgment by framing claims in theoretical, conceptual, or conditional terms. Quirk et al. (1985) classify them as content disjuncts that lower epistemic certainty by presenting propositions as interpretive rather than factual. These adverbs reduce commitment and create conceptual distance from assertions (see Section 3.4.1.2).

In this study, both NSs and NNSs used evaluative adverbs infrequently, though NNSs displayed a slightly wider range, including *essentially*, *theoretically*, and *hypothetically*. These adverbs typically introduced generalizations or abstract reasoning, especially when simplifying complex material or offering tentative interpretations. For instance, *essentially* appeared in explanatory contexts to convey general truths while allowing exceptions, consistent with Huddleston and Pullum's (2002) definition. *Theoretically* was used to introduce model-based reasoning or contrast ideal and real-world scenarios, echoing Hinkel's

(1997) findings on conceptual hedging. *Hypothetically* signaled conditional or projected reasoning, shifting the speaker's stance from certainty to possibility. These functions support Hyland's (1998) view that modal expressions foster rhetorical caution and interpretive openness (see Section 5.3.1.2).

The overall low use of evaluative adverbs aligns with corpus-based findings showing their higher frequency in written academic registers (Biber et al., 1999; Hoyer, 1997). NNSs use of these forms indicates sensitivity to stance and genre conventions. Their broader lexical range likely stems from pedagogically shaped exposure, where such adverbs are modeled as markers of caution and politeness (see Section 6.4).

Although not widely used, evaluative adverbs played a distinct role in moderating stance by framing claims as provisional. This function is consistent with the concept of epistemic moderation described by White (2003) and Martin and White (2005).

6.2.2.1.3 Reportive adverbs

Reportive adverbs are used to attribute information to external sources, allowing speakers to avoid personal endorsement and reduce epistemic responsibility. This strategy supports rhetorical caution in academic discourse, especially when expressing uncertainty or potential disagreement.

Reportive adverbs such as *allegedly*, *apparently*, and *supposedly* appeared only in the NNSs corpus. These forms allow speakers to present claims without full commitment by referencing external authority or generalized sources (Celle, 2009; Wierzbicka, 2006). Their use aligns with academic expectations that value both objectivity and politeness (see Section 3.4.1.3).

This pattern likely reflects the instructionally reinforced preference for attribution-based hedging in EFL contexts (see Section 6.4). Learners are often taught to avoid unqualified assertions by referencing external sources (Hyland, 1998; Hinkel, 1997; Hyland & Milton, 1997). *Allegedly* was the most frequent reportive adverb, typically used to introduce critique or sensitive content while preserving neutrality (Mauranen, 1997; Hyland, 1998). *Apparently* served a similar distancing function, particularly when speakers responded to new

information or revised earlier views. As Delancey (2001) and Simon-Vandenberg and Aijmer (2007) note, *apparently* marks inference and enables adjustment without asserting certainty. *Supposedly* occurred only once, likely due to its informal tone. Its inclusion, although rare, suggests some exposure to a wider range of hedging forms, even if used inconsistently (see Section 5.3.1.3).

Overall, the NNSs group favored evidential distancing more than NSs, who preferred personal doubt adverbs. This indicates that NNSs adopted a cautious rhetorical stance, shaped by instruction and aimed at maintaining interpretive flexibility (Celle, 2009; Martin & White, 2005; Wierzbicka, 2006).

6.2.2.2 Pragmatic marker hedges

PM adverbs contribute to hedging by adjusting stance and managing interpersonal relations. In academic discourse, they soften assertions, convey subjectivity, and reduce imposition. Their meanings vary with context, consistent with prior analyses (Schiffrin, 2005; Heine, 2013; Fedriani & Sansò, 2017) (see Section 3.4.2).

This analysis focused specifically on the hedging use of PMs. Textual uses—such as signaling topic shifts or discourse boundaries—were excluded, as they do not contribute to epistemic moderation (Fraser, 1999; Schiffrin, 1987). Two distinct hedging roles were identified: PPM hedges, which influence the speaker's level of commitment to a claim, and IPM hedges, which shape how claims are delivered to maintain politeness and rapport. This division reflects models that consider both semantic and relational aspects of hedging (Jucker & Ziv, 1998; Müller, 2005).

The data showed that some adverbs primarily served propositional functions. For example, *actually* and *basically* clarified information or qualified assumptions. Others—such as *just*, *hopefully*, and *personally*—had more interpersonal functions, expressing modesty, signaling uncertainty, or framing a statement as a personal opinion (see Section 5.3.2.) Due to their multifunctionality, several adverbs required interpretation based on context. The distribution of these markers across NSs and NNSs is analyzed in the following subsections.

6.2.2.2.1 Propositional pragmatic marker hedges

PPM hedges reduce assertiveness while maintaining fluency, helping speakers present claims as open to revision. Brinton (1996) defines them as devices that soften propositional force, and Nikula (1997) notes their role in increasing acceptability by allowing for reinterpretation (see Section 3.4.2.1).

Although PM hedges showed a statistically significant group difference overall, total PPM hedge frequency did not differ significantly between NSs and NNSs. However, individual adverb use varied.

Actually appeared more frequently in NNSs speech. Often used to introduce contrast or correction, it can function as a hedge to soften disagreement. Its prominence among NNSs likely reflects form-focused exposure to polite disagreement strategies commonly modeled in instructional settings (Aijmer, 2011; Fung & Carter, 2007; see Section 6.4). *Hopefully* was more common among NSs, conveying desired outcomes while maintaining epistemic distance. Its lower occurrence among NNSs may reflect less exposure to its broader pragmatic range in spoken academic contexts (Holmes, 1995; Aijmer, 2002). *Just* was the most frequent PPM hedge in both corpora. It mitigated assertiveness and adjusted speaker tone, with no significant difference in frequency between groups. Its widespread use aligns with Biber et al.'s (1999) classification of *just* as a staple of spoken English (see Section 5.3.1.2).

In summary, although overall PPM hedge use was similar across groups, differences in the use of *actually* and *hopefully* point to variation in discourse socialization and contextual exposure between NSs and NNSs (see Section 6.4).

6.2.2.2.2 Interpersonal pragmatic marker hedges

Interpersonal hedges manage speaker-listener relations by softening statements and encouraging cooperation. They lower the risk of confrontation and reflect principles found in politeness theories (Brown & Levinson, 1987) and rapport frameworks (Spencer-Oatey, 2000). Holmes (1982, 1985) and Meyerhoff (1992) emphasize their role in fostering engagement and reducing social tension (see Section 3.4.3.2).

In this study, the overall use of IPM hedges did not differ significantly between NSs and NNSs groups. However, specific adverbs showed different usage patterns. *Actually* occurred more frequently in NNSs speech, while *hopefully* appeared more often in the NSs corpus. These contrasts indicate different approaches to managing interpersonal stance in academic interaction.

Used interpersonally, *actually* can soften disagreement, introduce polite correction, or redirect conversation without confrontation. Prior studies indicate that NNSs often rely on this adverb to respond to dispreferred moves in a less face-threatening way (Nikula, 1997; Aijmer, 2004). Its higher frequency in the NNSs corpus likely reflects formally modeled pragmatic routines, where *actually* is introduced as a strategic resource for managing interpersonal stance (Fung & Carter, 2007; see Section 6.4).

Hopefully, in contrast, expresses a desired outcome while signaling uncertainty, and it often reinforces shared goals. Holmes (1985) and Fraser (2010) describe it as a means of expressing intention that supports rapport. Its more frequent use by NSs may reflect greater familiarity with affective hedging strategies that promote cooperative tone in academic discussion. The lower frequency of *hopefully* among NNSs may suggest limited exposure to its interpersonal function or hesitancy in applying it during spontaneous speech (see Section 5.3.2.2).

Although total IPM hedge use was similar across groups, differences in individual items suggest distinct hedging preferences. NSs favored hedges that reinforce shared orientation, while NNSs relied more on those that support politeness-based correction.

6.2.2.2.3 Multifunctionality and analytical challenges

Classifying PM hedges presented challenges due to their context-dependent functions. Adverbs such as *just* and *actually* often served multiple roles across turns, functioning as hedges, emphatic markers, or discourse organizers. Determining their hedging value required detailed analysis of each instance, considering discourse context, intonation, and speaker intent.

Unlike modal or epistemic adverbs, the hedging function of PMs was not always explicit. Each occurrence of *just* and *actually* was coded according to its primary function, using a

framework that distinguished between propositional and interpersonal hedging. Instances without hedging relevance were excluded.

Other adverbs, including *basically*, *hopefully*, *naturally*, and *personally*, were easier to categorize. Their pragmatic roles were more stable and allowed for consistent interpretation as propositional or interpersonal hedges, based on context and prior research (Holmes, 1995; Aijmer, 2002). These adverbs showed minimal overlap with non-hedging functions, which simplified coding.

The classification of *just* included uses related to recent past reference, scope limitation, and hedging in assertions, requests, and suggestions. *Actually* was similarly coded across multiple functions, with several categories directly tied to hedging. Both adverbs appeared frequently in hedging roles, especially in the NNSs corpus. This pattern suggests that NNSs relied more on multifunctional markers to manage stance and politeness in academic discourse.

These findings underscore the importance of context in interpreting PMs. While the propositional–interpersonal framework proved analytically useful, the multifunctionality of certain adverbs required attention to co-text and speaker intent. Their higher frequency in NNSs speech likely reflects instructionally shaped sensitivity to politeness, clarity, and face management in academic interaction (Aijmer, 2002; Holmes, 1995; Cheng & Warren, 2005; see Section 6.4).

6.2.2.3 Quantificational hedges

Quantificational hedges express approximate quantity, frequency, or degree and indicate partial commitment. Quirk et al. (1985) classify them into three subtypes—quantity, frequency, and degree—and identify diminishers and approximators as central. Nuyts (2001) defines these hedges by their scalar meaning and reference to approximation (see Section 3.4.3).

In this study, quantificational hedges appeared more frequently in NNSs speech, with a wider lexical range. NNSs used both common items (e.g., *somewhat*, *sometimes*) and less frequent expressions (e.g., *roughly*, *nearly*, *partly*), suggesting a tendency to moderate claims and avoid categorical language through approximative means.

Although overall usage differed significantly between groups, analysis of the subtypes—frequency, degree, and approximation—showed no statistically significant differences when examined individually. This indicates that the higher NNSs frequency was distributed across subtypes rather than concentrated in one.

This distribution is likely to reflect exposure to written academic conventions, where approximative expressions are introduced as hedging tools (Hyland, 1998; Crompton, 1997; see Section 6.4). NNSs may rely on these forms to express tentativeness in speech, particularly when other hedging strategies are less accessible. NSs, by contrast, appear to favor modal or discourse-embedded hedges in real-time interaction, using quantificational forms more selectively (see Section 5.3.3)

In summary, NNSs used quantificational hedges more frequently and with greater lexical variety. This pattern was consistent across all subtypes and suggests a broader preference for approximative language in spoken academic interaction. Each subtype is addressed in the sections that follow.

6.2.2.3.1 Adverbs of frequency hedges

Adverbs of frequency form a key subcategory of quantificational hedging. These indefinite adjuncts indicate recurring events without specifying exact intervals, allowing speakers to describe patterns while maintaining quantitative vagueness (Greenbaum, 1969; Quirk et al., 1985; Declerck, 1991). In academic discourse, they signal tendencies and accommodate exceptions. Salager-Meyer (1994) notes their frequent use in academic texts, particularly when precise data are unavailable or unnecessary (see Section 3.4.3.1).

This study adopted Quirk et al.'s (1985) classification, dividing frequency adverbs into three types: high-frequency (e.g., *often*, *frequently*), usual occurrence (e.g., *usually*, *generally*, *normally*), and low-frequency (e.g., *seldom*, *rarely*). These categories indicate varying degrees of regularity: high-frequency adverbs mark repeated actions, usual occurrence forms denote typical behavior, and low-frequency items signal irregularity.

Both NSs and NNSs groups used adverbs from all three categories, with no statistically significant difference in distribution. High-frequency and usual occurrence forms were more

common than low-frequency ones across both corpora. Turkish NNSs produced slightly more tokens and showed a wider lexical range, but the difference remained statistically insignificant. This pattern suggests a shared understanding of frequency adverbs as a means of hedging generalizations (see Section 5.3.3.1).

As Hyland (2005) notes, these strategies are typically introduced through academic writing practices, particularly in L2 contexts. Their rhetorical clarity and alignment with written discourse norms likely account for their frequent appearance in speech (see Section 6.4). The prevalence of high- and usual-frequency adverbs supports previous findings linking them to generalized claims and recurring structures (Quirk et al., 1985; Biber et al., 1999). In contrast, low-frequency adverbs occurred less often, likely due to their association with negative polarity. As Holmes (1988) explains, such forms may signal criticism or distance—stances generally avoided in cooperative academic interaction.

Overall, the widespread use of frequency hedges—especially those denoting high and usual occurrence—confirms their function in expressing generality while avoiding absolute claims (Hyland, 1998; Salager-Meyer, 1994).

Adverbs of high frequency hedges

Adverbs of high frequency serve as scalar hedges by indicating repeated actions without implying consistency or normativity (Quirk et al., 1985; Biber et al., 1999). Unlike adverbs of usual occurrence, they avoid framing actions as typical, making them effective for hedging generalizations in academic discourse (see Section 3.4.3.1.1).

In this study, both NSs and NNSs used high-frequency adverbs to signal tendencies and mitigate assertiveness. While overall usage rates were similar, item-level variation was statistically significant. *Sometimes* appeared more frequently in NNSs speech, likely due to its pragmatic reliability and prominence in academic writing instruction (Hyland, 1998; Crompton, 1997; Salager-Meyer, 1994; see Section 6.4). Its appeal may lie in its ability to express occasionality without committing strongly to frequency.

In contrast, *often* and *oftentimes* were more common in NSs data, with *oftentimes* occurring exclusively in NSs speech. This suggests a broader lexical repertoire and familiarity with

informal or hybrid registers—varieties typically underrepresented in EFL writing-focused instruction (Biber et al., 1999).

These patterns reflect broader contrasts in hedging preferences. NNSs preferred commonly taught, semantically neutral adverbs, whereas NSs employed a more varied set of forms, combining frequent and marked items to manage stance and interpersonal alignment (see Section 5.3.3.1.1).

Although both groups used high-frequency adverbs to avoid categorical claims, their lexical choices support earlier research showing that L2 speakers rely more on conventional hedges, while NSs demonstrate greater register awareness and variation (Hyland & Milton, 1997; Friginal et al., 2017). These patterns suggest that exposure to authentic discourse enhances pragmatic competence, and that lexical diversity may indicate advanced discourse proficiency.

Adverbs of usual occurrence hedges

Adverbs of usual occurrence describe habitual patterns without implying universality. These high-certainty hedges support generalizations while allowing exceptions (Quirk et al., 1985; Biber & Finegan, 1988). In academic contexts, they indicate tendencies rather than absolutes, reinforcing epistemic caution (Varttala, 2001; Hyland, 1998) (see Section 3.4.3.1.2).

In this study, both NSs and NNSs used these adverbs consistently. *Usually* was the most frequent across groups, in line with earlier research identifying it as a central hedging device in academic speech (Hyland & Milton, 1997). While total usage was comparable, lexical preferences varied: NNSs favored *generally* and *normally*, whereas NSs showed a slight preference for *commonly*.

The higher use of *generally* and *normally* among NNSs likely reflects both L1 influence and exposure to academic writing norms. In Turkish, their equivalents (*genellikle*, *normalde*) are common in formal discourse, which may reinforce their pragmatic use in English (Bardovi-Harlig, Nickels, & Rose, 2008; Hyland, 2005). These forms are also frequently taught as effective hedges for softening generalizations (Hyland, 2005; Biber & Finegan, 1988; see Section 6.4). In contrast, *commonly*—more frequent in NSs data—is closely tied to formal

written registers (Leech & Svartvik, 2002), possibly explaining its more limited use among NNSs (see Section 5.3.3.1.2).

Despite lexical variation, both groups relied on familiar, high-frequency adverbs to express regularity without overstatement. The shared preference for *usually* underscores its function as a balanced hedge—conveying general tendencies while preserving caution (Huddleston & Pullum, 2002). Overall, the differences observed appear more related to register familiarity and discourse conditioning than to pragmatic competence per se.

In sum, adverbs of usual occurrence function as stable and widely accepted hedging strategies in academic speech. They help express habitual patterns while supporting a cooperative and epistemically cautious stance.

Adverbs of low frequency hedges

Adverbs of low frequency hedge claims by indicating that an event occurs infrequently but remains possible (Quirk et al., 1985; Biber & Finegan, 1988). Their scalar nature suits academic contexts that value acknowledging exceptions without making absolute assertions (Huddleston & Pullum, 2002) (see Section 3.4.3.1.3).

In this study, both NSs and NNSs used low-frequency adverbs infrequently. *Rarely* appeared in both groups, while *seldom* occurred only in the NNSs data. However, token counts were low, and no statistically significant difference was found between groups, indicating similarly limited use (see Section 5.3.3.1.3).

Although infrequent, these adverbs served a distinct rhetorical function by weakening generalizations while keeping interpretations open—consistent with previous accounts of hedging (Hyland, 1998; Fraser, 2010). The broader use of *rarely* may reflect its prevalence in both spoken and written registers, whereas the limited use of *seldom* likely results from its stronger association with formal or literary usage (Biber et al., 1999).

Overall, low-frequency adverbs did not play a central role in spontaneous academic speech, likely due to their narrow discursive function. Nonetheless, they remain relevant in the broader hedging system by enabling speakers to acknowledge exceptions and limit epistemic certainty in a precise manner.

6.2.2.3.2 Adverbs of degree

Adverbs of degree act as scalar hedges that adjust statement intensity without exact quantities. They reduce assertion strength and let speakers present claims as tentative or qualified (Quirk et al., 1985; Biber et al., 1999). In academic speech, they support epistemic caution and manage stance. This study included only forms that weaken propositional force, excluding amplifiers. The analysis used Quirk et al.'s (1985) typology, dividing adverbs into four subcategories: diminishers, compromisers, minimizers, and moderators. The moderator category was added for forms that soften assertions without dismissing relevance (see Section 3.4.3.2).

NS and NNSs used adverbs of degree at similar overall rates, but their distribution across categories differed. NSs favored diminishers, typically embedding them in evaluative or descriptive clauses to reduce intensity while maintaining precision—a pattern consistent with research linking diminishers to fine-grained stance management in academic speech (Hyland & Milton, 1997; Fraser, 2010). In contrast, NNSs used moderators more frequently, reflecting a preference for generalizations that allow for exceptions. This trend likely stems from the prominence of approximative phrasing in academic writing practices (Hinkel, 1997; Mauranen, 1997) (see Section 5.3.3.2).

Both groups used compromisers at comparable levels. These adverbs balanced tentativeness and clarity, making them a versatile hedging strategy. Minimizers appeared infrequently and had minimal impact on the overall pattern. Their stronger tone and negative connotation may have limited their suitability in academic interaction.

In summary, both groups used degree adverbs to manage epistemic stance and rhetorical caution. NSs favored precise, context-sensitive attenuation, while NNSs relied more on generalizing strategies. These differences reflect variation in instructional background and familiarity with spoken academic norms, yet both groups used these forms to construct qualified, flexible claims.

Diminishers of degree

Diminishers reduce the intensity or importance of statements without negating their truth. Quirk et al. (1985) separate expression diminishers, which lessen propositional intensity, from attitude diminishers, which lower claim significance. In academic discourse, these adverbs allow speakers to express partial commitment, moderate claims, and remain open to alternative interpretations (Biber et al., 1999; Fraser, 2010) (see Section 3.4.3.2.2).

This study revealed clear usage differences between NSs and NNSs. NSs favored a small set of high-frequency diminishers—adaptable, context-sensitive forms well suited to spontaneous academic speech (Hinkel, 2005). In contrast, NNSs drew on a broader lexical range but with lower overall frequency. These forms align with strategies modeled in writing-oriented instruction, where hedging is presented as a means of precisely calibrating epistemic commitment (Hyland, 1998; Fung & Carter, 2007; Mauranen, 1997; Hyland & Milton, 1997; (see Section 5.3.3.2.1).

The absence of many NNSs-preferred diminishers from NSs speech suggests a tendency among NSs to avoid more formal or marked items in real-time interaction. Instead, they relied on more flexible adverbs that support smooth stance-taking across informal or semi-formal registers (Friginal et al., 2017; Chen & Zhang, 2017).

Overall, both groups used diminishers to manage rhetorical caution and reduce assertiveness, but their lexical choices reflect differing repertoires. NSs preferred general-purpose forms embedded in spoken academic norms, while NNSs leaned toward a wider, instructionally reinforced set grounded in written academic discourse.

Compromisers of degree

Compromisers form a subclass of degree adverbs that soften evaluative or descriptive statements by indicating partial alignment with a norm. These scalar hedges reduce propositional force without changing meaning (Quirk et al., 1985; Fraser, 2010). In academic discourse, they support a measured tone while maintaining argumentative clarity (see Section 3.4.3.2.3).

The study found no statistically significant difference in overall compromiser use between NSs and NNSs, though lexical preferences diverged. NNSs favored *quite*, likely due to its prominence in writing-focused instruction as a marker of strong but non-absolute agreement (Hyland, 1998a; Fung & Carter, 2007; see Section 6.4). NSs, in contrast, used *pretty* more often and *fairly* exclusively—which suggests a preference for forms embedded in spoken academic norms (Biber et al., 1999; Huddleston & Pullum, 2002). The absence of *fairly* in NNSs speech may reflect limited pragmatic exposure or its underrepresentation in teaching materials (see Section 5.3.3.2.2).

Other compromisers—such as *relatively* and *sufficiently*—appeared in both groups, but were more frequent among NNSs, likely reflecting their institutional salience in formal instruction (Salager-Meyer, 1994; Mauraanen, 1997).

Overall, these patterns point to distinct hedging strategies. NNSs relied on forms linked to written academic models, while NSs drew from a wider, register-sensitive pool associated with informal academic discourse. Despite these lexical contrasts, both groups used compromisers to moderate stance and soften epistemic commitment, reflecting the combined influence of pedagogical exposure and discourse experience (Hyland & Milton, 1997; Varttala, 2001; Friginal et al., 2017; Hinkel, 1997).

Moderators of degree

Degree moderators form a subclass of hedging adverbs that express general tendencies without asserting absolutes. They function as focusing subjuncts, narrowing a statement's scope while allowing exceptions (Quirk et al., 1985). Their scalar nature highlights dominant patterns and maintains interpretive flexibility, consistent with academic norms favoring qualified claims (Biber et al., 1999; Huddleston & Pullum, 2002; Salager-Meyer, 1994; Varttala, 2001) (see Section 3.4.3.2.4).

In this study, NNSs used moderators more frequently than NSs. Both groups used a similar range of forms—10 for NNSs, 9 for NSs—but NNSs showed markedly higher overall frequency. This pattern likely reflects a reliance on lexically transparent expressions shaped by academic writing exposure and genre-based pragmatic modeling (Hyland, 1998b; Zheng,

2022; see Section 6.4). Several adverbs were more prominent in NNSs speech, with *predominantly* and *broadly* appearing exclusively in that group.

In contrast, *primarily* was significantly more frequent in NSs data, though still infrequent overall. This suggests a tendency among NSs to rely on less formulaic, context-sensitive hedging strategies characteristic of spontaneous discourse competence (Friginal et al., 2017) (see Section 5.3.3.2.3).

While both groups used moderators to generalize without overstatement, their approaches diverged. NNSs favored explicit lexical markers, likely shaped by formal discourse training, whereas NSs drew on a more varied pragmatic repertoire, modulating stance through contextually embedded choices rather than frequency alone.

Minimizers of degree

Minimizers of degree function as downtoners that reduce a statement's strength to just above negation (Quirk et al., 1985; Biber et al., 1999). They indicate minimal occurrence and soften claims without fully denying them (Huddleston & Pullum, 2002) (see Section 3.4.3.2.1).

In this study, both NSs and NNSs used minimizers rarely. Hardly appeared in both groups, while barely was exclusive to NSs (see Table 5.23). Their low frequency suggests that these forms play only a minor role in spoken academic hedging (see Section 5.3.3.2.4).

This limited use may result from their semantic rigidity. Minimizers impose a strict lower boundary, which may conflict with the open-ended stance typical of academic discourse (Fraser, 2010; Hyland, 1998b). Unlike other scalar hedges—such as compromisers or moderators—that allow for interpretive flexibility, minimizers offer little gradation and may seem overly categorical.

Curricular exposure may also play a role. Pedagogical materials often prioritize transparent, adaptable hedges, whereas minimizers are typically framed as marked or contextually risky (Hinkel, 1997; Hyland & Milton, 1997). This likely contributes to their limited use in NNSs speech.

Overall, the infrequent use of minimizers in both groups reflects their limited rhetorical usefulness in academic speech. Their restrictive semantics contrast with the flexible and negotiated stance that academic communication typically encourages (Salager-Meyer, 1994; Varttala, 2001).

6.2.2.3.3 *Adverbs of approximation*

Adverbs of approximation introduce vagueness in quantity, extent, or time without weakening assertiveness. They shift focus to imprecise factual boundaries. According to Quirk et al. (1985) and Biber et al. (1999), these subjuncts signal closeness to a value without exactness. Huddleston and Pullum (2002) separate them from scalar downtoners by their emphasis on proximity rather than reduced claim strength (see Section 3.4.3.3).

In this study, NSs and NNSs used approximative adverbs with similar overall frequency, though their lexical preferences diverged. NNSs favored *almost* and *nearly*, likely due to their transparency, frequency, and prominence in academic writing models (Hyland, 1998b; Hyland & Milton, 1997). NSs, by contrast, preferred *about* and *approximately*—forms more typical of spoken academic and technical discourse (Channell, 1994; Salager-Meyer, 1994). This trend is consistent with academic socialization processes shaping L2 usage patterns (cf. Section 6.4), where NNSs draw more heavily from structured models, while NSs rely on register familiarity and discourse experience.

Both groups used approximators mainly to express numerical or temporal estimates, especially in empirical contexts (see Section 5.3.3.3). Their limited use in evaluative or propositional statements suggests that approximators serve specific descriptive purposes rather than broader rhetorical ones (Hyland, 1998a; Fraser, 2010). Despite differences in lexical choice, the function remained consistent: to present plausible but non-exact claims. This reflects the rhetorical aim of maintaining credibility while acknowledging uncertainty, a key feature of academic communication (Salager-Meyer, 1994; Varttala, 2001).

6.2.4 Summary of findings (RQ1)

The findings show that both NSs and NNSs used a wide range of adverbial hedges across modal, pragmatic, and quantificational categories. Although the overall lexical range was

similar, the groups differed in distribution, frequency, and functional use. These differences suggest distinct rhetorical practices shaped by discourse familiarity, instructional focus, and interactional expectations.

NS relied more on modal adverbs, especially those expressing personal doubt, to convey subjectivity and manage stance. Their hedges were more syntactically integrated and flexible, reflecting greater ease in spontaneous academic speech. NNSs, by contrast, used PMs and quantificational adverbs more frequently and for multiple functions. Their hedging choices reflected instructional emphasis on clarity, caution, and politeness.

At the subcategory level, further contrasts appeared. NSs preferred diminishers and compromisers that subtly modulated tone. NNSs used more moderators and approximators, which allowed them to generalize without making categorical claims. While the total number of hedges used was similar, the functional differences point to contrasting approaches: NSs hedging was more embedded in discourse, whereas NNSs hedging was more lexical and explicit.

These patterns are summarized in Table 6.1, which outlines the functional categories and subcategories of hedges, compares NSs and NNSs preferences, and identifies likely sources of variation. The table confirms that NNSs relied more on pragmatic and quantificational forms, while NSs favored modal adverbs. This contrast appears to result not from differences in language proficiency, but from varying pedagogical backgrounds and levels of discourse exposure.

Table 6.1*Adverbial Hedge Types, Group Preferences, and Influencing Factors*

Functional Category	Subcategory	NS vs NNSs Preferences	Possible Influences
Modal Adverbs NNSs=700, NSs=1,234 $p < .0001$	Adv. of Personal Doubt: Express uncertainty or possibility without strong commitment. NNSs=677, NSs=1,227, $p > .05$	NS <i>maybe</i> and <i>perhaps</i> varied use; NNSs relied on <i>probably</i>	NS: Familiarity with discourse-level stance strategies; NNSs: Instructional focus on clarity
	Evaluative Adv. Mark claims as theoretical or simplified. NNSs = 11, NSs = 7 $p < .05$	NNSs: Broader lexical range	Pedagogical emphasis on cautious, non-absolute statements
	Reportive Adv. Attribute info to external sources; distance speaker from claims. NNSs = 12, NSs = 0, $p < .001$	Only used by NNSs (e.g., <i>allegedly</i> , <i>apparently</i>).	Instruction in evidential distancing in EAP contexts
Pragmatic Markers NNSs=863, NSs = 453, $p < .0001$	PPM Hedges Signal weak assertions, allow interpretive flexibility. NNSs=429, NSs = 257, $p > .05$	NNSs: Frequent use of <i>actually</i> , <i>just</i> ; NSs: pragmatic flexibility.	NNSs use shaped by EFL instructional norms emphasizing politeness
	IPM Hedges Soften delivery, promote engagement. NNSs=434, NSs=196, $p > .05$	NS: use of <i>hopefully</i> ; NNSs: Preferred <i>actually</i> for polite disagreement	NS: Familiarity with relational politeness; NNSs: taught strategies
Quantificational Hedges NNSs=1,238, NS=1,037 $p < .0001$	Adv. of Frequency Generalize without stating frequency as constant. NNSs = 619, NSs = 486, $p > .05$	NNSs: More use of sometimes; NSs: used <i>often</i> , <i>oftentimes</i>	NS: Exposure to broader spoken register; NNSs: Safer instructional defaults
	Adv. of Degree Diminish, compromise, or moderate the strength of claims. NNSs = 516, NSs = 470, $p > .05$	NS: Precise diminishers; NNSs: moderators and compromisers.	NNSs: Writing-based instruction on softening stance
	Adv. of Approximation Indicate quantity/value is inexact. NNSs = 103, NSs = 81, $p > .05$	NS: Used about, approximately; NNSs: Preferred almost, nearly.	NS: Spoken register familiarity; NNSs: Transparent forms in instruction
Total Hedge NNSs=2,801, NS=2,723 $p > .05$	Similar frequency differences in hedge type distribution: NSs more modal advs; NNSs PM and quantificational.		NS: modal precision and stance-taking; NNSs: Instruction-driven PM and quantity-based hedges

6.3 Discussion of Findings Related to Research Question 2

This section addresses the second research question: whether the pragmatic functions of adverbial hedges differ between NNSs and NSs in spoken academic discourse. The analysis applies Johansen's (2020) tripartite framework (see Section 3.6), shifting from a focus on grammatical forms to the communicative roles hedges serve in context.

The following sections examine how these functions were distributed across NSs and NNSs and analyze their differences in pragmatic hedge use.

6.3.1 Functional categories of hedging

This section addresses Research Question 2 by classifying adverbial hedges according to their communicative functions in academic discourse. While previous analysis focused on form, the focus here is on how hedges contribute to managing content accuracy, speaker stance, and interpersonal tone. Drawing on Prince, Frader, and Bosk's (1982) approximators/shields distinction, Hübler's (1983) work on understatement, and Hyland's (1996b) stance framework, hedges are grouped into three functional categories: propositional, epistemic, and hearer-oriented (see Section 3.7).

Propositional hedges modify the informational content by reducing precision or intensity without rejecting the claim. These correspond to Prince et al.'s "*approximators*" and Hübler's concept of *understatement*. Epistemic hedges signal degrees of certainty or detachment, expressing the speaker's stance toward the claim. Hearer-oriented hedges manage the interpersonal dimension of discourse and reflect Hyland's (1996b) notion of "*reader-oriented*" hedging, here adapted for spoken academic contexts.

The findings reveal clear functional differences in hedging use between NSs and NNSs. NNSs used more propositional hedges, reflecting a tendency to limit precision and prioritize lexical caution. NSs, in contrast, favored hearer-oriented hedges, consistent with previous research showing that they are generally more attuned to audience dynamics in spoken academic contexts (Holmes, 1988; Aijmer, 2013). Use of epistemic hedges was comparable across both groups, suggesting that this category is shaped more by academic discourse norms than by speaker background (Salager-Meyer, 1994; Prince et al., 1982).

Despite similar overall hedge frequency, NSs and NNSs differed in how they used hedges. NSs typically integrated them seamlessly into interactional routines, whereas NNSs applied them more overtly to propositional content—an approach likely influenced by instructional emphasis on clarity and control (Friginal et al., 2017; Hyland & Milton, 1997) (see Section 5.5).

In sum, both groups used hedging to meet academic discourse expectations, but through distinct strategies. NNSs prioritized lexical precision shaped by pedagogical norms, while NSs used more flexible, discourse-embedded methods. These patterns reflect modeled usage shaped by academic preparation (see Section 6.4).

The following sections examine each functional category in detail.

6.3.2 Propositional hedging

These adverbial forms adjust the strength or scope of a statement without changing its truth value. They indicate approximation, partial applicability, or reduced intensity and promote rhetorical caution in academic contexts. Johansen's (2020) classification—drawing on Prince et al. (1982), Hübler (1983), and Hyland (1998a)—divides propositional hedges into three functional subtypes: rounders, adaptors, and understaters. Each subtype plays a distinct role in modulating propositional meaning (see Section 3.7.1).

Quantitative analysis showed that NNSs used propositional hedges more frequently than NSs. NNSs tended to use lexical items that conveyed approximation or limitation in an explicit manner. This pattern reflected an instructional emphasis on accuracy and caution in second-language academic settings. NSs generally used these hedges more selectively and incorporated them more naturally into broader discourse structures. This contrast suggested a higher degree of pragmatic fluency and familiarity with spoken academic norms among NSs.

Rounders appeared with the highest overall frequency and were used more extensively by NNSs, especially in relation to numerical approximation and evaluative softening. Adaptors occurred more frequently in NNSs speech as well; speakers selected forms that expressed partial category fit with lexical clarity. Understaters were more common among NSs and

served to moderate evaluation through subtler and more stylistically integrated means (see Section 5.5.1).

In conclusion, both NSs and NNSs used propositional hedges to fulfill academic discourse expectations, although their strategies differed according to linguistic background, instructional experience, and discourse familiarity. Likely influenced by overlapping factors including pedagogical background (see section 6.4), the following sections provide a detailed examination of how each subtype—rounders, adaptors, and understaters—functioned within the dataset.

6.3.2.1 Rounders

Rounders are adverbial hedges that reduce the precision of scalar expressions while preserving the truth value of a proposition (Prince et al., 1982). These forms are widely used in academic discourse to moderate claims, particularly when exact values are unavailable, unwarranted, or rhetorically undesirable (Channell, 1994; Hyland, 1998a) (see Section 3.7). (see Section 3.7.1).

This study proposes a revised classification of rounders into three functional subtypes: *rounders of approximation*, *rounders of frequency*, and *rounders of degree*. This categorization emerged from patterns observed in the corpus, which indicated systematic differences in how speakers hedged scalar content related to quantity, recurrence, and evaluation. Although this tripartite model is not found in Johansen’s (2020) framework, it builds on and extends the scalar distinctions noted in earlier accounts, particularly those by Prince et al. (1982), Hübler (1983), and Hyland (1998a). The new classification offers a more detailed and empirically grounded approach to analyzing variation in hedge use. Each subtype is addressed in detail in the following subsections.

Rounders represented the most frequently used type of propositional hedge in the corpora. Their distribution varied by speaker group: NNSs used rounders more frequently than NSs, especially in relation to approximation and degree. This trend pointed to a stronger emphasis on lexical strategies that explicitly reduce precision or intensity, likely influenced by form-focused instruction. In contrast, NSs used rounders more selectively and often incorporated

them into more refined discourse routines. Frequency rounders showed relatively balanced use across groups, suggesting shared conventions for expressing general or habitual tendencies (see Section 5.5.1.1).

In summary, rounder use revealed key contrasts in NSs and NNSs hedging strategies, shaped by instructional context, pragmatic fluency, and familiarity with academic norms. The following sections detail the three subtypes, focusing on their lexical forms and discourse functions.

6.3.1.1.1 Rounders of approximation

Rounders of approximation adjust quantitative statements by allowing flexibility in scale without altering the core truth of the proposition (Prince et al., 1982). These forms enhance rhetorical accuracy by balancing detail and uncertainty, particularly in academic contexts where exact values may be unavailable or unnecessary (Channell, 1994; Hyland, 1998a) (see Section 3.7.1.1.1).

In this study, NSs used rounders of approximation more frequently than NNSs, with statistically significant differences for several items. *About* was the most frequent in both groups but appeared more often in NSs speech. The same pattern applied to *approximately*, which also occurred more in the NSs corpus. This may reflect stronger familiarity with academic register conventions (Hyland, 1996a; Rounds, 1982), and suggests closer adherence to disciplinary norms that promote qualified precision.

The analysis also found that some adverbs usually classified as plausibility shields—such as *maybe* and *perhaps*—functioned as approximators in scalar contexts. In expressions like “*maybe sixty people came*,” these adverbs indicated approximation rather than uncertainty. NSs used *maybe* in this role more often than NNSs, suggesting more flexible use of multifunctional forms for hedging. (see Section 5.5.2.1.1).

This broader range of approximation strategies among NSs indicates greater pragmatic fluency and context-sensitive usage. NNSs preferred forms like *approximately* and *around*, which are more commonly taught in academic writing and emphasize clarity and formality (Hyland & Milton, 1997; Hinkel, 1997) (see Table 5.30).

These findings reveal distinct hedging strategies. NSs tended to use a wider scalar range, including informal and multifunctional forms. NNSs preferred more explicit approximators shaped by pedagogical exposure. Both groups marked quantity cautiously, reflecting contrasts in discourse familiarity, lexical preference, and training.

6.3.1.1.2 Rounders of frequency

Frequency rounders hedge generalizations about repeated actions or tendencies without implying fixed or universal patterns. These adverbs enable speakers to report recurrence while maintaining rhetorical caution. This approach is common in academic discourse, where empirical claims require allowance for variation (Prince et al., 1982; Salager-Meyer, 1995) (see Section 3.7.1.1.2).

This study found no overall frequency difference between NSs and NNSs, but lexical preferences diverged. NNSs preferred semantically transparent adverbs such as *sometimes*, *generally*, and *normally*, which allow for cautious generalization. Their prominence likely reflects L2 exposure to form-focused discourse models prioritizing clarity and pragmatic safety (Hyland, 1998a; Hinkel, 1997; see Section 6.4).

Sometimes was the most frequent item in both groups but appeared significantly more in NNSs speech. Its semantic clarity and formal tone likely contribute to its prominence in academic settings. The NNSs preference for *generally* and *normally* further suggests a focus on lexical precision and cautious expression (Fung & Carter, 2007). In contrast, NSs used *often* more frequently and were the only group to produce *oftentimes*, which was absent from the NNSs corpus (see Section 5.5.2.1.3).

These forms, less emphasized in formal learning contexts, reflect greater familiarity with idiomatic and informal academic speech (Friginal et al., 2017; Aijmer, 2002). Their presence suggests a more flexible hedging repertoire shaped by discourse experience (Holmes, 1988;).

Although both groups used frequency rounders to manage generalizations, they differed in lexical range. NNSs preferred more accessible and explicitly taught forms, while NSs used a wider variety, including colloquial and context-sensitive items. These patterns reflect broader influences on hedging, shaped by language background, instructional practices, and

familiarity with spoken academic discourse (Mauranen, 1997; Hyland & Milton, 1997; Varttala, 2001).

6.3.1.1.3 Rounders of degree

Degree rounders adjust the intensity of evaluative or descriptive statements without altering their truth value. These adverbs express partial commitment or moderate scope, enabling speakers to soften assertions when categorical claims are inappropriate. They support rhetorical balance in academic discourse by tempering generalizations and evaluations (Prince et al., 1982; Caffi, 1999) (see Section 3.7.1.1.3).

In this study, NNSs used degree rounders more frequently than NSs and drew from a broader set of instructionally prominent forms. *Mostly*, *mainly*, and *quite* were especially common in NNSs speech. These adverbs help generalize while avoiding overstatement, consistent with earlier research showing that NNSs prefer semantically clear hedges often emphasized in academic training (Hyland, 1998b; Hinkel, 1997).

NS, in contrast, preferred *fairly* and *pretty*, which were rare or absent in the NNSs corpus. These adverbs are typical of informal academic speech and reflect greater familiarity with idiomatic usage (Aijmer, 2002; Overstreet, 1999). Their use suggests a more flexible approach shaped by extensive exposure to spoken academic language. The absence of these forms in NNSs speech may reflect limited access to colloquial variants or a tendency to avoid ambiguity.

An exception to these patterns was *quite*, which appeared more frequently in NNSs discourse. This likely reflects its frequent use in academic materials as a controlled way to indicate moderate agreement or endorsement (Hyland, 1998a; Fung & Carter, 2007). Although *quite* can function as either an intensifier or downtoner depending on context, NNSs may prefer it for its familiarity and perceived safety.

These lexical patterns reflect distinct hedging strategies. NNSs used a broader range of formal, explicit adverbs shaped by clarity-focused norms, while NSs preferred fewer, more idiomatic and flexible forms, reflecting stronger familiarity with spoken academic discourse (Friginal et al., 2017; Holmes, 1988) (see Section 5.5.2.1.2). Both groups used degree

rounders to soften claims, but their choices reveal differences in pragmatic fluency and genre awareness (Varttala, 2001; Fraser, 2010).

6.3.1.2 *Adaptors*

Adaptors are propositional hedges that indicate partial category membership rather than scalar adjustment. They suggest that a referent fits a category only incompletely, softening categorical claims without affecting truth value (Prince et al., 1982; Lakoff, 1972). In academic discourse, where categories are often flexible or loosely defined, adaptors provide flexibility (Aijmer, 2002) (see Section 3.7.1.2).

In this study, NNSs used adaptors more frequently than NSs and preferred forms such as *essentially* and *virtually*. These adverbs offer flexibility in expressing imprecision and are often taught in academic writing. Their use by NNSs reflects a preference for lexical clarity and caution, especially in contexts where precise terminology may be difficult to access (Hyland, 1998a; Hinkel, 1997).

NS, while using fewer adaptors overall, preferred forms more embedded in discourse. For example, *about* appeared in expressions like “*Her role was about the same as a therapist — she listened, offered advice, but didn’t have formal training,*” where it functioned as an adaptor hedging category membership rather than as a numerical rounder. In this context, *about* signals partial alignment with the role of “*therapist,*” allowing the speaker to imply resemblance while avoiding categorical commitment. This usage did not occur in NNSs speech, suggesting a more limited functional range in their use of hedging strategies. NSs also used *typically* more often to indicate prototypical category membership while allowing for exceptions — a pattern consistent with previous research on NSs discourse strategies (Channell, 1994; Hyland, 1996b) (see Section 5.5.2.2).

These findings reflect different hedging approaches. NNSs relied on a wider range of explicitly marked adaptors, likely shaped by instructional practices that emphasize conceptual caution. NSs used fewer but more pragmatically embedded forms that combine category adjustment with interactive fluency (Mauranen, 1997; Friginal et al., 2017).

Both groups used adaptors to handle category-related uncertainty and maintain rhetorical precision, but their lexical choices revealed distinct orientations. NNSs preferred more explicit, semantically stable forms aligned with academic instruction. NSs used idiomatic and integrated expressions, reflecting greater fluency and familiarity with spoken academic norms (Varttala, 2001; Fraser, 2010).

6.3.1.3 Understaters

Understaters are propositional hedges that lower the intensity or assertiveness of a statement without changing its truth value. Unlike rounders or adaptors, which adjust scale or category fit, understaters reduce the speaker's level of commitment. Hübler (1983) terms this “*detensifying*.” In academic discourse, these hedges help maintain a cautious tone, especially in evaluation or critique (Markkanen & Schröder, 1997) (see Section 3.7.1.2).

In this study, NSs used understaters more often than NNSs, though their usage focused on a smaller set of core items. Adverbs such as *little*, *barely*, and *slightly* appeared more frequently in NSs speech, especially in critical or evaluative contexts. For example, *little* was used to soften criticism without dismissing it entirely, as in “*The author little acknowledges the limitations of the study.*” This reflects a hedging strategy that tempers judgment while maintaining clarity.

NNSs used a broader range of understaters but at lower frequencies. Common choices included *almost*, *only*, *merely*, and *briefly*. These adverbs limit the scope of a claim or suggest that a condition was nearly met. For example, *almost* indicates proximity to an outcome without full confirmation, as in “*The group almost agreed.*” Its clarity and grammatical simplicity may explain its popularity in NNSs speech (Overstreet, 1999). *Merely* and *briefly* were also used to reduce emphasis on quantity or duration, contributing to moderation in claims (see Table 5.34). While such forms can carry interpersonal implications, their main role here was propositional. Interpersonal uses are discussed in a later section (see Section 5.5.2.3).

These patterns suggest different rhetorical preferences. NSs tended to use a small set of pragmatically embedded understaters, reflecting fluency and familiarity with spoken

academic norms. NNSs drew from a wider but more explicit set, likely influenced by formal instruction and an emphasis on caution (Hyland, 1998a; House, 2003; Hinkel, 1997).

Overall, both groups used understaters to reduce assertiveness and manage stance. NSs showed greater idiomatic control, while NNSs used more accessible, semantically transparent forms. These differences reflect broader contrasts in linguistic competence, discourse experience, and familiarity with academic speech (Caffi, 1999; Fraser, 2010).

6.3.2 Epistemic hedging

This section examines hedging devices that convey the speaker's epistemic stance without altering the propositional content. Based on Prince et al. (1982), this category includes plausibility shields, attribution shields, and speaker-oriented adverbs, with the latter adapted from Hyland (1996a). These forms indicate degrees of certainty, assign epistemic responsibility, or express evaluative perspective (see Section 3.7.2).

Although no significant difference was found between NSs and NNSs in the overall frequency of these hedges, their lexical preferences diverged. NSs used plausibility shields more often, while NNSs produced more attribution shields. Speaker-oriented adverbs were the most frequent subtype for both groups, with particularly high usage among NNSs (see Section 5.5.3).

These patterns reflect differing rhetorical strategies. NSs preferred context-sensitive forms that support interactional subtlety, whereas NNSs relied on explicit, instructionally familiar expressions that promote clarity. These differences suggest that effective epistemic hedging involves not only lexical knowledge but also awareness of academic discourse practices.

The following sections examine each subtype—plausibility shields, attribution shields, and speaker-oriented adverbs—in greater detail.

6.3.2.1 Speaker-oriented hedges

Speaker-oriented hedges are adverbs that express the speaker's stance toward a proposition without changing its truth value. They convey subjectivity and soften claims (Hyland, 1998a; Prince, Fraser, & Bosk, 1982; Beeching, 2016; Aijmer, 2002). In academic speech, these

hedges balance authority with caution by narrowing scope, signaling contrast, simplifying content, or expressing uncertainty (Hyland, 1998a) (see Section 3.7.2.3).

Both NSs and NNSs used speaker-oriented hedges at similar overall frequencies, but their lexical preferences differed. NSs preferred *maybe* and *hopefully*, which support stance adjustment in spontaneous interaction (Holmes, 1988; Overstreet, 1999). NNSs relied more on *just*, *actually*, and *basically*, which are frequently taught in academic English courses (see Table 5.36) (see Section 5.5.3.1). This pattern reflects an emphasis on clarity and structural simplicity shaped by instructional practices (Hyland & Milton, 1997; Hinkel, 1997; Friginal et al., 2017).

Unlike plausibility or attribution shields, which suggest inference or transfer epistemic responsibility (e.g., *probably*, *allegedly*), speaker-oriented hedges foreground the speaker's voice. According to Hyland (1998b), these adverbs help modulate tone, reduce assertiveness, and construct authorial presence.

Overall, both NSs and NNSs used speaker-oriented hedges to manage stance, but their approaches differed. NSs tended to apply them more flexibly across discourse, while NNSs depended on more formulaic, instruction-based forms.

6.3.2.2 Plausibility shields

Plausibility shields are epistemic hedges that express uncertainty without altering a proposition's content. They indicate that a claim is plausible but unconfirmed (Prince et al., 1982; Hyland, 1998b). In academic speech, these hedges keep interpretations open when evidence is limited, conclusions remain tentative, or reasoning relies on inference (Kärkkäinen, 2003; Aijmer, 2002) (see Section 3.7.2.1).

These forms support speculative reasoning while limiting commitment. For instance, in "*It was probably a timing issue,*" *probably* helps the speaker suggest causality without asserting certainty, managing accountability while maintaining interpretive continuity (Hyland, 1998b).

Both NSs and NNSs used plausibility shields, but their lexical choices differed. NSs preferred *maybe*, which often expresses the speaker's doubt about the proposition, signaling

uncertainty and encouraging cooperation in interaction (Fraser, 2010; Overstreet, 1999). For example, “*Maybe the results are inconclusive*” conveys tentative judgment without full commitment. NNSs, on the other hand, relied more on *probably*, a clear and semantically transparent form commonly taught in academic settings. This may reflect pedagogically shaped usage patterns (Hyland & Milton, 1997; Hinkel, 1997; Varttala, 2001) (see Section 6.4). Other adverbs in this category—*perhaps*, *possibly*, and *likely*—appeared less often and showed no significant difference between groups. This suggests that both NSs and NNSs gravitated toward familiar and commonly modeled expressions when signaling epistemic distance (see Section 5.5.3.2).

These patterns support Hyland’s (1998b) distinction between strategic and interactional hedging. NSs tended to use plausibility shields such as *maybe* to foster shared reasoning and maintain conversational flow. NNSs preferred more explicit markers like *probably*, which clearly indicate uncertainty but are less integrated into interactive discourse.

In conclusion, while both groups used plausibility shields to express tentativeness, their choices reflect different rhetorical priorities. NSs adopted more flexible forms that support interactional fluency, whereas NNSs relied on hedges that emphasize propositional caution in line with instructional norms. These differences reveal how hedging strategies are influenced by discourse experience and pedagogical background.

6.3.2.3 Attribution shields

Attribution shields are epistemic hedges that distance speakers from a proposition by citing external sources or abstract concepts. Instead of expressing personal belief, these adverbs assign the claim to reported information, shared knowledge, or speculation (Prince et al., 1982; Hyland, 1998b) (see Section 3.7.2.2).

In this study, NNSs used attribution shields more often than NSs. NNSs produced all six forms found in the corpus, while NSs used only two. Although none of the individual items showed a statistically significant difference, the overall pattern indicates greater lexical range among NNSs. This aligns with earlier findings that second-language speakers tend to rely on

explicit, instructionally emphasized hedging forms commonly introduced in academic writing contexts (Hyland & Milton, 1997; Hinkel, 1997).

NS, by comparison, used attribution shields sparingly. Instead, they may have preferred syntactic alternatives such as *it is said that* or *according to some*, which fall outside the scope of this adverbial analysis. Research suggests that NSs often hedge across structural levels, by using clause-level variation and discourse-based formulations to express stance more implicitly (Fraser, 2010; Holmes, 1988).

Some attribution shields—particularly *allegedly*, *hypothetically*, and *supposedly*—occur more frequently in written academic or journalistic texts than in speech (Aijmer, 2002; Biber et al., 1999) (see Section 5.5.3.3). Their use by NNSs may reflect the transfer of written academic conventions into spoken discourse, which serves to increase caution and objectivity.

Overall, the data indicates a clear difference in hedging strategies between groups. NNSs showed a preference for explicit, lexically marked forms that often reflect instructional reinforcement. In contrast, NSs adopted structurally varied and context-sensitive methods. This pattern supports Hyland's (1998b) distinction between formulaic and interactionally responsive stances: NNSs tend to rely on fixed expressions, while NSs prefer more flexible, discourse-based strategies.

6.3.3 Hearer-oriented hedges

Hearer-oriented hedges focus on the interpersonal dimension of academic speech by managing the relationship between speaker and listener. Their primary role involves softening statements, reducing the risk of imposition, and fostering cooperation and rapport (Hyland, 1996b; Holmes, 1984; Fraser, 1990) (see Section 3.7.3).

Unlike epistemic hedges, which express the speaker's stance or assign responsibility for claims, hearer-oriented hedges emphasize how the message is received. They function to minimize face-threatening acts and maintain a collaborative and respectful tone (Fraser, 2010).

The study found that NSs used hearer-oriented hedges more frequently and with greater ease, indicating a high degree of familiarity gained through prolonged exposure to authentic academic discourse. This exposure allows NSs to integrate these forms naturally as part of broader politeness and stance-taking strategies essential in academic interaction (Blum-Kulka & Olshtain, 1984; Taguchi, 2012). In contrast, NNSs relied on a narrower range of more explicit hearer-oriented forms. This tendency likely stems from instructional emphasis on epistemic hedging rather than on interpersonal strategies, reflecting pedagogical priorities (Hyland & Milton, 1997) (see Section 5.5.4).

Hearer-oriented hedges prove crucial in maintaining tone and engagement during academic communication. Both NSs and NNSs use them to balance assertiveness with openness to dialogue. However, the differences in frequency and variety between the groups highlight distinct levels of pragmatic competence, shaped by differing degrees of discourse experience and instructional influence.

6.3.3.1 *Maybe as a hearer-oriented hedge*

In academic speech, *maybe* serves as a hearer-oriented hedge that softens statements, reduces imposition, and signals openness to alternative perspectives. Hyland (1996, 1998) explains that this use of *maybe* does not convey uncertainty but addresses the listener's face needs, fostering collaboration and dialogic interaction. This function corresponds with Brown and Levinson's (1978) model of negative politeness, which maintains respect for the listener's autonomy and supports conversational flow. In spoken academic settings, particularly in discussions and Q&A sessions, *maybe* frames proposals, suggestions, and evaluations without asserting authority.

NS used *maybe* more often and for a broader range of interpersonal functions, such as softening criticism, suggesting alternatives, and inviting shared interpretation. This broader use indicates greater sociopragmatic awareness and sensitivity to audience and tone (Fraser, 1990; Overstreet, 1999; Suzuki, 2018). In contrast, NNSs used *maybe* more restrictively, primarily to introduce suggestions. (see Section 5.5.4.1).

This limited pattern is consistent with findings that NNSs tend to adopt hedging forms that are emphasized in instruction and viewed as pragmatically safe (Hyland & Milton, 1997; Hinkel, 1997).

Although both groups used *maybe* to reduce interpersonal pressure, NSs applied it more flexibly, which points to stronger integration of hedging within spontaneous academic interaction (see Table 5.40). As Hyland (1998a) observes, this pattern reflects not only lexical familiarity but also discourse competence shaped by exposure to authentic communication.

6.3.3.2 *Perhaps as a hearer-oriented hedge*

Within the hearer-oriented category, *perhaps* acts as an interpersonal hedge that lets speakers offer suggestions, evaluations, or advice with minimal imposition. Rather than signaling doubt, *perhaps* softens directives and encourages engagement, supporting a balance between stance and audience awareness (Hyland, 1996, 1998).

In the present study, *perhaps* appeared less often than *maybe* in both NSs and NNSs speech, and NNSs produced only four tokens compared to 42 for NSs. NSs used *perhaps* across a range of functions, including advice, tentative suggestions, and softening criticism, reflecting its value in maintaining rapport and respecting the listener's autonomy (Fraser, 1990; Holmes, 1988).

Advice was the most common context for both groups, but NNSs use of *perhaps* was almost entirely limited to giving advice. This limited use likely results from classroom instruction, where *perhaps* is typically introduced as a formal or epistemic marker rather than an interpersonal hedge (Hyland & Milton, 1997; Simon-Vandenberg & Aijmer, 2007). NNSs did not use *perhaps* in criticism or questioning, which suggests limited familiarity with its broader pragmatic functions (see Table 5.41; Rozumko, 2017) (see Section 5.5.4.2).

Overall, *perhaps* promotes interpersonal balance in academic speech by softening advice and fostering politeness. The small number of NNSs tokens does not allow strong conclusions about group differences, but the data indicate greater flexibility in NSs use, while NNSs rely on *perhaps* more cautiously, likely because of instructional emphasis and less exposure to authentic discourse.

6.3.3.3 *Actually as a hearer-oriented hedge*

Although *actually* is often associated with contrast or correction, it also serves an interpersonal function in spoken academic discourse. As a hearer-oriented hedge, *actually* allows speakers to adjust stance by softening disagreement, facilitating clarification, and moderating tone. Rather than confronting the listener directly, it lessens the interpersonal impact of opposition and fosters cooperative, less face-threatening interaction (Aijmer, 2002; Holmes, 1988; Fraser, 2010).

In this study, NNSs used *actually* significantly more than NSs. This result supports earlier findings that NNSs often depend on lexically prominent and instructionally familiar forms perceived as safe and multifunctional (Hyland & Milton, 1997; Hinkel, 1997). In contrast, NSs drew on a wider range of idiomatic and structurally varied expressions to handle interpersonal meaning.

Three main interpersonal functions of *actually* appeared in the data. First, it introduced contrastive content and allowed especially NNSs to signal disagreement indirectly, supporting Aijmer's (2002) view that *actually* can reorient listener expectations without damaging rapport. Second, it softened contradiction by presenting corrections as reinterpretations, consistent with Aijmer's (2015) perspective on hedging as a means to rebalance epistemic force. Third, it moderated tone by lowering the abruptness of transitions or elaborations. NSs relied on a wider variety of expressions for these purposes, while NNSs frequently defaulted to *actually*, likely due to limited pragmatic exposure (Friginal et al., 2017) (see Section 5.5.4.3). The prevalence of *actually* among NNSs suggests it acts as a default strategy for managing interpersonal stance in the absence of more context-sensitive alternatives. Its use across functions shows an effort to balance politeness and rhetorical clarity. As Hyland (1998b) observes, hedging not only signals uncertainty but also establishes the speaker's relationship with the academic community.

In summary, *actually* functions as a multifunctional interpersonal hedge, especially for NNSs. It enables them to manage disagreement, correction, and tone in ways shaped by instruction and cautious rhetorical practice. NSs use *actually* more selectively, which reflects broader discourse awareness and greater access to alternative interpersonal strategies.

6.3.3.4 *Hopefully as a hearer-oriented hedge*

The adverb *hopefully* functions as a hearer-oriented hedge in academic speech by softening statements and signaling polite intent, cautious expectation, or affective stance (Biber et al., 1999). Speakers use *hopefully* to present directives, suggestions, or expectations in less forceful terms and maintain a cooperative tone.

In this study, both NSs and NNSs used *hopefully* with similar overall frequency, but group differences emerged in its application. Both groups used *hopefully* to soften directives, which supports research showing that hedging reduces imposition and fosters collaboration (Hinkel, 2005; Varttala, 2001). NSs often placed *hopefully* in context-sensitive expressions that encourage shared engagement. NNSs preferred more formulaic constructions, a pattern that reflects instructional influence over discourse-based flexibility.

Both groups used *hopefully* to express optimism, manage face concerns, and maintain rapport. This finding supports Fraser's (2010) account of hedging as a means of listener engagement. NNSs used *hopefully* more frequently to defer commitments or hedge social expectations, especially in statements such as "*Hopefully we'll have a chance to meet again.*" This pattern accords with Hinkel's (2005) observation that NNSs prefer affectively marked hedges when other pragmatic choices are limited. NSs drew on *hopefully* in a wider range of contexts, including evaluative and emotional framing, to temper judgments and maintain collegiality (see Table 5.43; Holmes, 1984) (see Section 5.5.4.4).

In summary, *hopefully* served directive, relational, and evaluative roles for both groups. NNSs used *hopefully* mainly for polite deferral and structured suggestions, which may indicate instructional influence and a narrower syntactic repertoire. NSs showed greater rhetorical flexibility and incorporated *hopefully* into a broader set of academic contexts.

6.3.3.5 *Just as a hearer-oriented hedge*

The adverb *just* was one of the most frequent hearer-oriented hedges observed. Both NSs and NNSs used *just* across directive and interpersonal contexts, though NNSs used it significantly more often. This pattern accords with research linking *just* to the mitigation of face-threatening acts, particularly in requests, suggestions, and commands (Aijmer, 2002;

Beeching, 2016; Brown & Levinson, 1987), and reflects instructional emphasis on politeness and indirectness among NNSs (Hinkel, 2005; Medgyes, 1992).

Just most often appeared in imperatives to soften directives and maintain clarity, consistent with Holmes (1984) and Leech's (1983) perspectives on hedging. Both groups used *just* similarly to minimize the burden of requests and maintain an open, non-prescriptive tone in suggestions, supporting Hyland's (1998a) view of hedging as facilitating engagement. A notable difference emerged in questions, where only NNSs used *just* to reduce the perceived force, suggesting greater attention to potential intrusiveness (Woodfield & Economidou-Koetsidis, 2010) (see Section 5.5.4.5).

On the whole, *just* functioned as a versatile hedge for both NSs and NNSs, especially in reducing imposition. Higher frequency and broader use among NNSs point to a more cautious, instructional-based approach, consistent with prior findings on lexically salient hedging in academic speech (Hinkel, 2005; Medgyes, 1992).

6.3.4 Summary of findings (RQ2)

The analysis showed that both NSs and NNSs used a wide range of hedging strategies across three functional categories: propositional, epistemic, and hearer-oriented. While the overall frequency of hedges was similar, the two groups differed in their lexical choices and functional preferences, reflecting variation in discourse familiarity, instructional background, and pragmatic competence.

NNSs preferred propositional hedges—especially rounders and adaptors—to limit precision and soften categorical statements. These hedges were typically lexically explicit and reinforced through instruction, supporting cautious and flexible expression. NSs used propositional hedges less frequently but preferred more idiomatic and embedded forms, indicating greater comfort with spontaneous academic speech.

Hearer-oriented hedges were more prominent in NSs speech. NSs used a wider range of these forms to manage tone, encourage interaction, and reduce face-threat—signs of stronger discourse awareness. NNSs relied more on fixed expressions such as *just* and *actually*, often

used to soften directives or mark contrast, but with limited interpersonal variation compared to NSs usage.

Epistemic hedges were used at similar rates by both groups. However, their lexical choices diverged. NSs preferred adaptable, discourse-integrated forms like *maybe*, while NNSs more often chose instructionally familiar forms such as *probably* and *reportedly*. This indicates shared understanding of hedging functions but different approaches to stance expression.

Overall, as summarized below (see Table 6.2), hedging reflected greater discourse-level adaptability and pragmatic fluency. In contrast, NNSs hedging showed stronger reliance on instructional models and lexical clarity. These differences suggest two distinct paths toward academic competence: one shaped by discourse experience, the other by structured learning.

Table 6.2

Adverbial Hedge Functions, Group Preferences, and Influencing Factors

Functional Category	Subcategory	NS vs NNSs Preferences	Possible Influences
Propositional Hedges NNSs=1,261,NS=1,070, p < .01	Rounders: Approximate quantity, frequency, or degree. NNSs=941,NS=691,p < .01	NNSs: transparent forms NSs idiomatic alternatives (<i>about, often</i>).	NNSs: Instructional emphasis on lexical clarity and scalar generalization NSs: discourse-embedded and idiomatic forms
	Adaptors: Indicate partial category fit. NNSs=103, NSs=50, p < .001	NNSs lexically salient items NSs: flexible context-sensitive	NNSs: Academic instruction emphasizing non-absolute assertions NSs: fluid discourse contexts.
	Understaters: Downscale intensity without changing meaning. NNSs=217,NS=329, p < .0001	NS: smaller core set (<i>barely, slightly</i>); NNSs: wider range	NNSs: rhetorical restraint semantically transparent. NSs: implicit mitigation, stylistic subtlety
Epistemic Hedges NNSs=681,NS=710, p > .05	Speaker-Oriented Adverbs: Express stance or subjectivity. NNSs=453,NS=430, p > .05	NS: <i>maybe, hopefully</i> ; NNSs: <i>just, actually, basically</i>	NS: Flexibility in academic speech and stance negotiation NNSs: pedagogically reinforced
	Plausibility Shields: Convey uncertainty without altering form. NNSs=209,NS=277, p < .01	NS: <i>maybe</i> more often NNSs: preferred <i>probably</i> .	NS: Interactional hedging, discourse-level pragmatics. NNSs: structurally explicit markers in instruction
	Attribution Shields: Shift claim to an external source. NNSs=19, NSs=3, p < .001	NNSs full range NS used rarely.	NNSs: Transfer of written academic conventions into speech NSs: clause-based hedging
Hearer-Oriented Hedges NNSs=859,NS=944, p < .01	Reduce imposition; promote rapport.	NS:wider pragmatic range in varied contexts NNSs: often formulaic	NS: Greater sociopragmatic fluency and discourse awareness NNSs: Politeness-instruction and limited exposure to authentic sp.
Total Hedge Use NNSs=2,801, NSs=2,723 p > .05	NS and NNSs similar total hedge counts. NSs: modal hedges, NNSs: PM, quantificational.		NS: Greater discourse familiarity and interactional awareness; NNSs: Instruction-led strategies; clarity and caution

6.4 Factors Influencing Hedging Behavior

The differences in hedging observed between NSs and NNSs—despite all participants being highly proficient and experienced ELT professionals—can be attributed to several overlapping factors. These include pedagogical background, cultural norms, exposure to spoken academic discourse, pragmatic preferences, the influence of written conventions on speech, and the transfer of L1 pragmatic norms into English.

Pedagogical background plays a central role. Although NNSs demonstrate high fluency, their academic training has often emphasized writing over speaking. As a result, they tend to use explicit, lexically marked hedges that receive attention in instructional contexts. These forms are semantically clear and structurally stable, making them well suited to written academic style but less adaptable to spoken interaction. Hyland (1998) found similar patterns among advanced L2 users, who often preferred overt hedging aligned with instructional models.

Cultural communication norms also shape hedging behavior. In Turkish academic contexts, indirectness and politeness are emphasized, particularly in situations involving disagreement or uncertainty. This cultural orientation promotes the use of interpersonal hedges and evidential distancing. Yagiz and Demir (2014) reported a strong preference for metadiscourse strategies that convey respect and relational awareness in Turkish scholarly discourse.

The influence of L1 pragmatic norms further reinforces these patterns. Turkish, for example, prefers indirect expression and face-sensitive communication. These L1 norms often carry over into English, encouraging a hedging-heavy style among NNSs. Research by Blum-Kulka et al. (1989) and Kasper and Blum-Kulka (1993) confirms that pragmatic conventions from the first language can persist in second-language discourse, especially in high-stakes or formal contexts.

Limited exposure to spontaneous academic interaction also contributes to the observed behavior. Although participants are experts in language education, their engagement with English often occurs through written texts or structured speech events such as lectures and conference presentations. These contexts provide limited opportunities to practice real-time,

interactive discourse. Studies by Wishnoff (2001) and Farr and O’Keeffe (2002) indicate that restricted exposure to informal academic dialogue may inhibit the development of pragmatic competence in spontaneous communication.

Differences in pragmatic strategy offer additional insight. NSs typically relied on discourse-level features, prosody, and syntactic variation to express stance and manage interaction with nuance. NNSs tended to depend more on fixed lexical items—such as *maybe*, *just*, and *actually*—to achieve similar interpersonal goals. This reliance on a limited set of adverbs to convey a range of meanings has been noted in studies of advanced L2 speakers, particularly in formal contexts (Clement, 2022).

Finally, *transfer from writing to speech* further explains NNSs usage patterns. Lexical items commonly associated with academic writing—such as *allegedly*, *apparently*, and *theoretically*—were frequent in NNSs speech. Although appropriate in written discourse, these forms may sound overly formal or distancing when used in speech. Their use reflects strong habits formed in writing and difficulty in shifting to more context-sensitive spoken strategies. Hyland (1998) also observed the influence of written conventions on spoken production among proficient L2 users.

In summary, the observed differences in hedging are not the result of limited proficiency but stem from instructional practices, cultural expectations, first-language influence, and restricted access to informal spoken academic interaction. These factors help explain consistent contrasts in hedging form and function between NSs and NNSs, even among highly experienced professionals.

7 CONCLUSION

7.1 Concluding Remarks

This study examined adverbial hedges in spoken academic discourse by comparing NSs and NNSs. A two-phase analysis addressed (1) the grammatical form of hedging (RQ1) and (2) the pragmatic functions of those forms in academic interaction (RQ2). This dual approach revealed patterns that a single-level analysis would not have captured.

In the first phase, hedges were grouped by grammatical form, such as modal adverbs (e.g., *maybe*, *perhaps*), PMs (e.g., *just*, *actually*), and quantificational adverbs (e.g., *largely*, *somewhat*). While both groups used similar numbers of hedges overall, notable lexical and distributional differences emerged. NSs preferred modal adverbs and used them with greater syntactic and pragmatic flexibility. NNSs relied more on pragmatic and quantificational hedges, often selecting forms that were lexically clear, semantically explicit, and commonly taught in instructional settings—reflecting priorities of EFL classrooms.

However, examining grammatical form alone could not fully explain the reasons behind these preferences. The second phase analyzed the pragmatic functions of hedges using Johansen's tripartite model: propositional, epistemic, and hearer-oriented functions. This layer of analysis revealed clearer distinctions. NNSs strongly preferred propositional hedging (e.g., *about*, *mostly*) to handle imprecision. NSs made more frequent use of hearer-oriented hedges to reduce face threats, soften directives, and support listener engagement—functions not apparent in grammatical classification.

The dual-phase method revealed contrasts that a form-based analysis alone would have missed. For example, both groups used *just* frequently (as seen in RQ1), but only the function-based analysis (RQ2) showed that NNSs often used it in fixed politeness routines, while NSs applied it more flexibly to manage tone or reduce directive force. Similarly, attribution hedges such as *allegedly* and *apparently*—used only by NNSs—initially appeared as lexical preferences, but the functional analysis showed that these choices reflect the influence of academic writing norms transferred into speech, often to maintain rhetorical distance.

The grammatical analysis (RQ1) identified what types of hedges were used and how often. The functional analysis (RQ2) explained why they were chosen and how they operated in discourse. Only by combining both perspectives was it possible to build a complete picture of hedging behavior across groups.

This two-phase approach was essential. It showed that hedging cannot be understood through frequency counts or lexical categories alone. The interaction between form and function is central to understanding hedges as rhetorical tools in academic settings. NNSs did not hedge less—in fact, they hedged more in some categories—but their strategies reflected different goals, shaped by pedagogical training, cultural norms, and limited exposure to spontaneous academic speech. These findings suggest that L2 hedging should not be viewed as lacking, but rather as contextually and culturally informed. Pragmatic competence is best assessed through a multidimensional framework.

7.2 Implications

7.2.1 Pedagogical Implications

The findings of this study carry important implications for EAP and EFL pedagogy, particularly in contexts where speaking receives less attention than writing. Although the NNS participants were highly proficient and experienced, their hedging choices seem to have been shaped, at least in part, by instructional practices and cultural norms. This observation aligns with previous research suggesting that hedging behavior may be influenced by contextual and cultural factors rather than solely by linguistic proficiency (Hyland & Milton, 1997; Hinkel, 2005).

One key implication is the need to revise teaching practices that emphasize hedging in writing while giving less attention to its role in speech. NNSs frequently used forms such as *just*, *actually*, and *probably*—items commonly taught as politeness markers or softeners (Fung & Carter, 2007; Aijmer, 2011). Although these adverbs serve legitimate rhetorical purposes, their frequent and formulaic use suggests a reliance on a limited set of familiar strategies. This pattern may point to the value of providing instruction that introduces a wider range of hedging devices and highlights their use in diverse spoken academic contexts.

Another concern is the transfer of written conventions into speech. Adverbs like *allegedly*, *theoretically*, and *apparently*, which are appropriate in writing, appeared frequently in NNSs speech. These forms can sound overly formal or distancing in spoken interaction, where relational and responsive strategies are more effective (Friginal et al., 2017; Biber et al., 1999). This points to a need for clearer pedagogical distinctions between written and spoken registers, especially in teaching stance and interpersonal tone.

Another point to consider is the transfer of written conventions into speech. Adverbs such as *allegedly*, *theoretically*, and *apparently*—frequent in academic writing—were also commonly used by NNSs in spoken academic contexts. This may indicate that NNSs, shaped by writing-focused instruction, tend to adopt a more formal style even in speech. In academic discourse, such formality is not necessarily inappropriate; however, it may at times create a distancing effect in interaction, where more relational and responsive strategies could be more effective (Friginal et al., 2017; Biber et al., 1999). These findings may also point to the value of pedagogical approaches that clarify distinctions between written and spoken registers while acknowledging the appropriateness of formality in academic settings.

In addition, the functional range of hedges used by NNSs was limited. While their overall frequency matched that of NSs, NSs used hedges more flexibly—for softening criticism, maintaining rapport, or negotiating meaning. In contrast, NNSs tended to prefer propositional hedges that adjust the content rather than the tone of statements (Johansen, 2020). The findings of the present study are consistent with this observation, as the data likewise show that NNSs favored content-oriented hedges and made less frequent use of hedges serving interpersonal or rapport-building purposes. This suggests that instruction should address not only the meaning of hedges but also their rhetorical and interpersonal functions, including speaker-hearer relationships (Hyland, 1998b; Holmes, 1988).

To address these gaps, pragmatic instruction could be systematically included in the final year of teacher training programs. At this stage, learners have usually developed grammatical control and general fluency. They are better prepared to focus on discourse-level features, including the flexible and context-sensitive use of hedging in professional and academic

contexts. As future educators, they need to understand both how to hedge effectively and how to teach its pragmatic value.

To support this, EAP instruction should:

- Present authentic spoken academic examples, such as seminar discussions and Q&A sessions, to show real-time hedging (Farr & O’Keeffe, 2002; Mauranen, 1997);
- Shift focus from isolated vocabulary to context-based and multifunctional use of forms like *maybe*, *hopefully*, and *just* (Aijmer, 2002; Overstreet, 1999);
- Distinguish clearly between spoken and written hedging conventions to support register awareness;
- Address cultural communication styles, helping learners navigate both context-specific preferences and global academic expectations (Yagiz & Demir, 2014; Hinkel, 2005).

In summary, this study suggests the value of adopting a more context-sensitive and pragmatically informed perspective on hedging in spoken academic English. Rather than implying any shortcomings in current teaching practices, these findings highlight opportunities to further enrich teacher education by incorporating a wider repertoire of hedging strategies. Such an approach can support the development of educators who, alongside fluency and accuracy, demonstrate rhetorical flexibility and pragmatic awareness—qualities that contribute to effective academic and professional communication (Hyland, 1998; Yagiz & Demir, 2014).

7.2.2 Methodological implications

This study aims to offer several methodological contributions through its application of a corpus pragmatics framework to the analysis of adverbial hedges in spoken academic discourse. By integrating corpus linguistics and pragmatic analysis, it adopts what Aijmer and Rühlemann (2015) describe as “vertical” and “horizontal” readings. The vertical reading identifies patterns and frequencies, whereas the horizontal reading interprets hedges within their contexts. This dual method potentially provides a more nuanced analysis compared to approaches based solely on frequency counts or functional classifications. Instead of

considering adverbs such as *maybe*, *probably*, and *actually* as fixed hedge markers, this study explores how their functions may vary according to genre, speaker role, and communicative intent.

This perspective addresses a frequently mentioned limitation in hedging research, namely the tendency to analyze hedges in isolation from authentic discourse contexts. The current findings suggest that the same adverb can perform diverse functions in varying contexts; for instance, *actually* may express either a softened stance or a correction. Such distinctions are essential to understand not only which hedging forms are used, but also their contextual motivations and pragmatic roles.

An additional advantage of this study is arguably its narrower focus on a single grammatical category—adverbials—instead of examining hedges across multiple word classes. Earlier studies often grouped hedges from diverse grammatical categories, occasionally resulting in ambiguous or overlapping classifications. By specifically focusing on modal, pragmatic, frequency, degree, and approximate adverbs (and their subcategories), this study seeks to provide a detailed analysis that aligns closely with foundational models of hedging (e.g., Prince et al., 1982; Hyland, 1998b).

Moreover, the data source selected also distinguishes this study. It considers academic webinars, which are dialogic and spontaneous rather than scripted lectures or monologic presentations. Webinars require speakers to simultaneously manage stance and interpersonal tone. Compared to written texts or more formal spoken genres, webinar data may better reflect authentic, spontaneous hedging practices in academic interactions.

The speaker profile represents another distinguishing feature of this study. All participants were highly proficient Turkish EFL professionals, which minimizes grammatical proficiency as a potential confounding factor and allows the analysis to focus on how advanced speakers' use of hedging differs from that of native speakers. Rather than drawing direct comparisons, the study adopts recent perspectives that examine advanced L2 users' strategic language use without framing their pragmatics as deficient (Friginal et al., 2017; Hinkel, 2005).

In summary, this study contributes methodologically in three principal respects:

- It illustrates how corpus pragmatics can combine linguistic form, pragmatic function, and communicative context when analyzing hedges.
- It provides a focused and theoretically informed analysis of adverbial hedging forms.
- It delivers an empirically grounded description of hedging in authentic academic speech by proficient EFL speakers, thus potentially enriching our understanding of advanced pragmatic competence in second-language contexts.

7.3 Limitations

While this study offers new insights into adverbial hedging in spoken academic discourse among highly proficient Turkish EFL speakers, two main limitations should be noted to clarify the scope and interpretation of its findings.

First, the analysis focused exclusively on adverbial hedges. This allowed for a detailed and functionally precise examination of their forms and uses. However, this narrow grammatical scope provides only a partial picture of hedging behavior. Other forms—such as modal verbs (*might*, *could*), epistemic adjectives (*possible*, *likely*), and discourse strategies (e.g., rhetorical questions, clefts, passives)—also contribute significantly to how speakers express doubt, reduce assertiveness, and manage interpersonal stance. As a result, the study addresses only one aspect of hedging. Future research should include multiple grammatical classes to better capture the full range of hedging strategies in spoken academic English.

Second, there is limited comparable research on spoken hedging in the Turkish EFL context, especially in spontaneous academic formats such as webinars. Because of this gap, comparisons often relied on studies of written academic discourse, which differ in structure, interactional norms, and pragmatic conventions. This constraint limits the ability to fully contextualize the current findings within a broader empirical framework. It also suggests the need for more corpus-based, cross-linguistic studies focused on L2 spoken academic pragmatics. Until such research becomes available, these results should be treated as exploratory and interpreted with caution.

7.4 Suggestions for Further Research

Building on the findings, limitations, and pedagogical implications of this study, several directions for future research can be identified. These include considerations of genre, speaker variation, linguistic scope, first language influence, multimodal factors, cross-linguistic comparison, and disciplinary variation. Together, these directions offer ways to deepen understanding of how advanced Turkish EFL speakers use hedging in spoken academic discourse.

Expanding Genre Coverage: While this study focused on academic webinars—a hybrid of unscripted but formal academic speech—future research could examine other spoken academic formats, such as group discussions, thesis defenses, seminars, or oral exams. These genres may encourage different hedging strategies depending on audience type, interactional formality, or institutional context. Studying them would help determine whether the hedging patterns identified here are genre-specific or more generally representative of academic speech.

Broadening Speaker Profiles: Future studies could explore hedging among less proficient learners, pre-service teachers, or individuals at different stages of language development. Comparisons across proficiency levels may reveal whether hedging competence develops progressively, and how it relates to overall language ability and familiarity with academic norms.

Investigating First Language Influence: Cross-linguistic studies comparing hedging behavior in both Turkish and English could reveal how pragmatic strategies transfer between languages. Such research would clarify which features of hedging are language-specific and which are more universally pragmatic. It would also shed light on how cultural norms—such as preferences for politeness, deference, or indirectness—shape hedging in L2 academic contexts. These findings could inform more culturally aware approaches to EFL instruction.

Conducting Cross-Cultural Comparisons: Further research might compare Turkish EFL speakers with learners from other cultural and linguistic backgrounds, such as East Asian, Latin American, or European contexts. These comparisons would help uncover shared or

differing hedging strategies across global EFL settings. A broader perspective would support the development of instructional models that reflect diverse communicative practices.

Expanding Linguistic Scope: Although this study focused on adverbial hedges, future work could include other grammatical forms, such as modal verbs, epistemic adjectives, hedging nouns, and syntactic structures (e.g., conditionals, clefts, or passives). Including these elements would offer a fuller picture of how hedging operates across grammatical categories and how these forms interact with discourse-level pragmatics.

Exploring Disciplinary Variation: Future studies could examine how hedging is used across academic disciplines. This study focused on speakers in English language education, but fields such as engineering, philosophy, or biology may prefer different hedging strategies due to varying rhetorical traditions. Disciplinary comparisons would clarify how hedging supports communication tailored to specific academic communities.

Expanding with Corpus Tools: The development of larger corpora and semi-automated annotation tools could greatly enhance research in this area. Manual coding, as used in this study, limits the scale of analysis. By combining computational tools with careful functional validation, researchers could examine a broader range of hedge types, including rare or co-occurring forms, across more diverse datasets.

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