The study of specialized discourses has gained significant traction within applied linguistics, driven by the need to understand how language operates within specific professional and academic contexts. As specialized discourses encompass a wide range of fields, from medicine to engineering to the humanities, it is crucial to explore the distinct linguistic features and rhetorical strategies that characterize these domains. This volume, "Corpus-based Studies in Specialized Discourses," aims to shed light on these unique linguistic phenomena through rigorous corpus-based research methodologies. Corpus-based studies offer a systematic approach to analyzing large collections of texts, allowing researchers to uncover patterns and trends that might not be apparent through traditional qualitative methods. By using corpora, researchers can quantitatively assess linguistic features such as lexical density, metadiscourse markers, and rhetorical structures, providing a more nuanced understanding of how language functions in specialized contexts. This methodological rigor is particularly valuable in examining how language varies across different academic and professional fields, contributing to a comprehensive view of specialized discourses (*Biber, Conrad, & Reppen, 1998*; *Flowerdew, 2012*).

One of the central themes in the study of specialized discourses is the concept of metadiscourse, which refers to the ways in which writers organize their texts, engage with readers, and convey their stance. Metadiscourse markers, such as transitions, frame markers, and engagement markers, play a crucial role in making texts coherent and persuasive (*Hyland, 2005*). They help bridge the gap between the writer and reader, facilitating comprehension and fostering a collaborative construction of knowledge. Understanding the use of metadiscourse across different disciplines is essential for improving academic writing and enhancing communication within specialized fields (*Crismore, Markkanen, & Steffensen, 1993*; *Hyland & Jiang, 2021*). Another key area of focus is the rhetorical structure of research articles, particularly introductions. Introductions are pivotal in establishing the context of a study, presenting background knowledge, identifying research gaps, and justifying the research. Analyzing the rhetorical moves and steps within introductions can reveal how researchers from different fields construct their arguments and establish credibility. This knowledge is invaluable for teaching academic writing, as it helps students and novice researchers understand the conventions of their specific disciplines (*Swales, 1990*; *Swales & Feak, 2004*; *Ozturk, 2007*).

The customization of vocabulary software to reflect local and institutional wordlists is another innovative approach discussed in this volume. By aligning vocabulary learning tools with the specific needs of learners in different regions, educators can provide more relevant and effective language instruction. This approach underscores the importance of considering local educational contexts and cultural nuances in language teaching and learning (*Nation, 2001*; *Coxhead, 2018*). Pragmatic competence, or the ability to use language appropriately in different social contexts, is also a critical component of specialized discourses. Studies on pragmatic strategies, such as expressing disagreement or using euphemisms, highlight the challenges that learners face in mastering the socio-cultural norms of communication in academic and professional settings (*Thomas, 1983*; Rodríguez Velasco & Ainciburu, this volume; *Taguchi, 2019*). Addressing these challenges through explicit instruction can enhance learners' communicative competence and ensure their success in specialized fields (*Kasper & Rose, 2002*; *Bardovi-Harlig, 2020*).

Altogether, "Corpus-based Studies in Specialized Discourses" offers a comprehensive exploration of the linguistic and rhetorical features that characterize specialized discourses. Through a series of methodically conducted corpus-based studies, this volume provides valuable insights into the ways language operates within different academic and professional domains. The findings presented here have significant implications for teaching, research, and practice, making this volume an essential resource for scholars and educators in applied linguistics and related fields. In the first chapter, María Paula Roverso and Julia T. Williams Camus explore the rhetorical structures of research article (RA) introductions in two medical subfields: neurology and pediatrics. English, as the predominant language of scientific communication, necessitates that researchers publish their work in English for broader visibility and recognition. The analysis of RA discourse, particularly introductions, has garnered significant interest over the past three decades within the field of English for Specific Purposes (ESP). Introductions are pivotal sections where authors establish their credibility, present background knowledge, identify research gaps, and justify their studies. This chapter employs a modified version of Swales' Creating a Research Space (CARS) model to analyze 60 RA introductions, split evenly between neurology and pediatrics. The study focuses on articles published in top-tier English-language journals from North America, the UK, and Europe during 2017–2018, resulting in a corpus of 22,370 tokens. The analysis reveals that most neurology and pediatrics introductions follow the CARS model, with frequent cyclical patterns of Moves 1 (establishing a territory) and 2 (establishing a

niche) before presenting the study in Move 3 (occupying the niche). The study's findings underscore the significance of understanding subdiscipline-specific rhetorical patterns for pedagogical purposes. The consistency in following the CARS model suggests its utility as a pedagogical tool for teaching academic writing in medical contexts.

The subsequent chapter by Begoña Bellés-Fortuño and Lucía Bellés-Calvera deals with the metadiscourse patterns in research articles (RAs), specifically examining the disciplinary and cross-cultural variations of engagement markers. The evolution of academic writing over the past few decades has transitioned from an objective, impersonal mode of communication to a more interactive and dynamic process. This shift has highlighted the importance of metadiscourse, which encompasses self-reflective expressions that negotiate interactional meanings and establish connections with readers. Previous studies have shown that researchers from various linguistic backgrounds use metadiscoursal elements to disseminate disciplinary knowledge and contribute to the construction of scientific discourse. National culture and local academic norms significantly influence these elements, as evidenced by comparisons of RAs written by non-native English speakers from countries like Spain, Greece, Sweden, Finland, Turkey, Iran, and Korea, with those authored by English or American researchers.

This chapter addresses the need for further investigation into the metadiscourse conventions deployed in English and Spanish RAs. It aims to understand how academic writing in these two languages compares by analyzing engagement markers in RAs from three fields: Medicine, Engineering, and Linguistics. The study's significance lies in its comparison of papers published in international journals in two of the world's most widely used languages, focusing on how writers construct persuasive arguments and foster inclusive relationships with their readers. The research is conducted within the framework of the IAMET project, which compiled a large contrastive corpus of Spanish and English journal articles from various disciplines. Using METOOL, a newly developed corpus tool software, the study identifies and labels engagement markers across distinct categories. The analysis is grounded in the taxonomies proposed by Mur Dueñas (2011) and Salas Valdebenito (2015), with a focus on personal asides, questions, imperatives, and directives.

The findings reveal that engagement markers are more prevalent in Linguistics articles compared to Medicine and Engineering. English RAs generally exhibit higher occurrences of these markers than their Spanish counterparts, though personal asides and questions are more common in Spanish medical RAs. The use of personal pronouns, rhetorical questions, and imperatives varies across disciplines, reflecting different approaches to engaging readers and establishing credibility. The chapter concludes that understanding these variations has important pedagogical implications for teaching academic writing and can help scholars publish in both English and Spanish. Future research could expand on these findings by analyzing a broader range of disciplinary fields and developing tools to track language evolution patterns and enhance discourse comprehension.

This third chapter, entitled "Logical Metadiscursive Markers in Research Papers Written in English: A Corpus-based Approach" by Elena Quintana-Toledo and Margarita Esther Sánchez-Cuervo, focuses on the pivotal role of logical metadiscursive markers in the construction and dissemination of scientific knowledge through research articles. Recognizing these articles as fundamental tools for scientific communication, the chapter highlights the shift from viewing scientific discourse as impersonal and objective to understanding it as inherently interactive and interpersonal. Logical metadiscursive markers, such as additive, contrastive, and consecutive linkers, are instrumental in this process, as they help to connect various parts of the text, guiding readers through complex arguments and facilitating comprehension. The chapter emphasizes the importance of these markers in organizing academic texts and enhancing reader engagement. Building on Hyland's model of metadiscourse, which classifies these markers within the interactive dimension, the authors argue that transition markers not only provide structural coherence but also reflect the writer's consideration of the reader's cognitive and processing needs. This dual function underscores the markers' role in both structuring discourse and fostering a collaborative construction of knowledge between writer and reader.

A key asset of this chapter is its corpus-based approach, which involves a detailed analysis of research articles from three distinct disciplines: Linguistics, Engineering, and Medicine. By examining the frequency and function of logical metadiscursive markers across these fields, the chapter provides insights into disciplinary variations in academic writing practices. The findings reveal that while additive markers are most prevalent across all disciplines, the use of contrastive and consecutive markers varies significantly, reflecting different rhetorical strategies and epistemological approaches. Furthermore, the chapter's

methodological rigor is evident in its comprehensive corpus and meticulous annotation process, which ensures the reliability and validity of the results. This systematic analysis not only contributes to our understanding of metadiscourse in academic writing but also offers practical implications for improving the clarity and persuasiveness of research articles. In short, the chapter underscores the significance of logical metadiscursive markers in enhancing the readability and rhetorical effectiveness of academic texts. By bridging the gap between writer and reader, these markers play a crucial role in the dynamic process of scientific communication, making this chapter an essential contribution to the study of specialized discourses.

The chapter "Lexical Diversity and Lexical Density of Metadiscourse Devices in Academic English Papers on Linguistics, Engineering, and Medicine" by María Luisa Carrió-Pastor and Hanna Skorczynska focuses on the complex interaction between academic English papers, metadiscourse, lexical diversity, and lexical density. While most studies on lexical diversity and density focus on second language vocabulary acquisition, this chapter investigates these measures within metadiscourse devices across three distinct fields: engineering, linguistics, and medicine. These fields represent hard sciences (engineering), soft sciences (linguistics), and a combination of both (medicine). The authors aim to fill a research gap by examining two underexplored measures – lexical diversity (the variety of different words used) and lexical density (the proportion of lexical items) – within metadiscourse in academic papers. The objectives are threefold: first, to determine if lexical density and diversity vary across specific fields of knowledge and rhetorical markers (textual and interpersonal); second, to explore the relationship between the frequencies of rhetorical markers and lexical measures; and third, to investigate the correlation and frequency of lexical diversity and density across different domains.