

A contrastive analysis of metadiscourse patterns in academic texts by non-native authors

*Un análisis contrastivo de los patrones metadiscursivos en textos académicos
de autores no nativos*

Olga Boginskaya

Irkutsk National Research Technical University

olgae_boginskaya@mail.ru

Resumen

Este artículo tiene como objetivo explorar las diferencias en el uso del metadiscursos por parte de escritores académicos no nativos de tres diferentes orígenes culturales. Se tomaron resúmenes de artículos escritos por académicos latinoamericanos, asiáticos y de Europa del Este para el análisis de los patrones del metadiscursos. El marco teórico es la taxonomía de metadiscursos de Hyland (2005). Los resultados muestran que la prosa académica de Europa del Este contenía más dispositivos de cobertura y marcadores de actitud que la escrita por autores asiáticos y latinoamericanos. Los escritores de Europa del Este parecían ser más cuidadosos al hacer afirmaciones y a menudo enfatizaban hallazgos interesantes, cruciales o discutibles. En los subcorpus de América Latina y Asia se encontraron más estímulos utilizados para demostrar confianza. A diferencia del corpus de Europa del Este, los corpus asiáticos y latinoamericanos contenían automenciones empleadas para enfatizar la importancia de las afirmaciones de los autores. Los resultados confirmaron la suposición de que el metadiscursos se basa en diferentes estilos y tradiciones de escritura académica, que parecen variar entre culturas.

Palabras clave: discurso académico, resumen, escritura académica, metadiscursos, variación intercultural, contexto cultural.

Abstract

The study aims to explore differences in the use of metadiscourse by non-native academic writers with three different cultural backgrounds. Article abstracts by Latin American, Asian and East European scholars were taken for the analysis of metadiscourse devices. The theoretical framework of the study is Hyland's (2005) taxonomy of metadiscourse. The study revealed that East European academic prose contained considerably more hedges and attitude markers than those written by Asian and Latin American authors. East European writers seemed to be more careful in making claims and often emphasized interesting, crucial or debatable findings. In the Latin American and Asian sub-corpora, more boosters used to demonstrate confidence were found. Unlike the East European corpus, the Asian and Latin American corpora contained self-mentions employed to emphasize the importance of authorial claims. The results confirmed the assumption that metadiscourse is based on different academic writing styles and traditions, which appear to vary across cultures.

Keywords: academic discourse, research article abstract, academic writing, metadiscourse, cross-cultural variation, cultural context

1. INTRODUCTION

The increasing role of English as a lingua franca in global academia has forced scholars with diverse cultural backgrounds to publish their findings in English to become an integral part of international academia. To complete this task, they must possess adequate English language proficiency, acquire academic vocabulary in their field of knowledge, and achieve highly advanced linguistic competencies. This has caused intensive research into English-language academic texts produced by L2 writers to reveal prevailing rhetorical structures in their texts. While the use of rhetorical patterns in RA abstracts has received attention recently (Al-Khasawneh 2017; Alonso Almeida 2014; Belyakova 2017; Bondi 2014; Gessesse 2016; Gillaerts and van de Velde 2010; Hu and Cao 2011; Ji 2015; Isik-Tas 2017; Khajavy and Asadpour 2012; Khedri et al. 2015; Kozubíková Šandová 2021; Krapivkina 2014; Lores Sanz 2006; Martín 2003; Perales-Escudero and Swales 2011; Saidi and Talebi 2021; Stotesbury 2003; Van Bonn and Swales 2007), little empirical research appears to have investigated metadiscourse in academic texts by L2 writers from a cross-cultural perspective (Ahmadi 2022; Boginskaya 2023; Jabeen et al. 2023; Liu et al. 2024). The comparative analysis presented here aims to shed light on how L2 academic writers with three different cultural backgrounds (Latin American, East European, and Asian) interact with readers and make their claims persuasive.

As an important rhetorical strategy used in academic prose, Metadiscourse is difficult to grasp by non-native academic writers, as it is a heterogeneous phenomenon that can serve different functions, including text organizing, persuading, presenting authorial claims, or building relationships with the reader. These functions can be achieved through a vast repertoire of language tools ranging from single words to paragraphs, which makes it difficult for non-native English writers to use metadiscourse devices adequately. However, as far as the English academic writing style cherishes the positive attitude towards metadiscourse, non-native academic writers should become aware of its role and use it in a way similar to that of a native academic writer.

In an attempt to contribute to research into metadiscourse features in L2 academic writings, the present study analyses cultural preferences in the employment of interactional markers, seeking to answer the following questions:

- (1) Are there any cross-cultural differences in the frequencies of metadiscourse markers in RA abstracts authored by Latin Americans, Asians, and East Europeans?
- (2) Are there any cross-cultural differences between Latin American-, Asian- and East European-authored RA abstracts regarding metadiscourse categories?
- (3) Are there any cross-cultural differences between Latin American-, Asian- and East European-authored RA abstracts authored by Latin Americans, Asians, and East Europeans?

2. LITERATURE REVIEW

Comparative studies on metadiscourse in L1 and L2 academic writing have revealed significant differences in various cultural groups (Alonso-Almeida 2014; Belyakova 2017; Cmejrkova 1996; Hryniuk 2018; Hu and Cao 2011; Isik-Tas 2017; Mikolaychik 2019; Pisanski Peterlin 2005; Pyankova 1994; Vassileva 2001; Walková 2018). Hu and Cao (2011),

for example, studied the use of hedging and boosting devices in RA abstracts collected from Chinese- and English-medium applied linguistics journals and found that English RA abstracts contained more hedges than Chinese-medium ones. Khajavy and Asadpour (2012) examined the metadiscoursal features in English and Persian sociological research articles and revealed that English research articles use more overall interactive features. The authors concluded that linguistic and cultural contexts are reflected in academic texts. The cross-cultural approach was also adopted in the study by Alonso-Almeida (2014) who compared the metadiscourse patterns in RA abstracts written in English and Spanish engineering and humanities journals and revealed that the latter contained more metadiscourse features. Isik-Tas (2017) explored academic writers create an authorial presence through first person pronouns in sociology research articles in Turkish and English journals. The results obtained indicate that the frequencies and metadiscourse functions of first person pronouns did not differ significantly. Belyakova (2017) carried out a cross-cultural comparison of RA abstracts by L2 (East European) and L1 academic writers in the field of geoscience to investigate their metadiscourse features and found that writers from East European academia usually disguise themselves to a larger extent.

The linguistic features of RA abstracts written by L1 and L2 writers of East European cultural backgrounds were also explored in some studies (Boginskaya 2022b; Cmejrkova 1996; Pisanski Peterlin 2005; Pyankova 1994; Vassilieva 2001; Walková 2018). Pyankova (1994), who studied differences between English and Russian academic texts, found that Russian scholars underuse self-mention markers and overuse passive and impersonal structures. The article by Duszak (1994: 291) concerned with the attempts to reveal differences in metadiscourse patterns used in academic prose by L1 and L2 (Polish) writers. The author explained these differences by “a history of socialization of academics to different discourse communities”. Cmejrkova (1996: 137) revealed that Czech linguists writing in English are more “reluctant to commit themselves early to an announcement of the research purpose and prefer indirect declarations or rhetorical questions”. Some years later, Vassileva’s (2001) study of commitment and detachment patterns in English and Bulgarian linguistics RAs revealed differences in hedging and boosting tools explained by different rhetorical traditions. Pisanski Peterlin (2005) conducted a contrastive analysis focusing on variation in the use of metadiscourse in English and Slovene research articles and found that metadiscourse devices are more restricted in Slovene academic writing than in English academic prose. One more study of metadiscourse in research articles was conducted by Hryniuk (2018), who explored how British and Polish writers represent themselves in academic discourse and investigated differences in frequencies and functions of first-person pronouns in applied linguistics RAs. The results showed that Polish scholars employed fewer first-person pronouns and did not assume responsibility for what was stated. According to Walková (2018: 101), who explored how L1 and L2 (Slovak) writers position themselves in research papers, “anglophone academic culture is rather individualistic, as indicated by the predominance of the reader-inclusive perspective in the collective plural perspective and of the reader-exclusive perspective overall, the use of the first person singular by single authors, and the use of the third person for unique identification of one of multiple authors”. The same results were obtained by Bogdanović & Mirović (2018) who compared Serbian and English-medium RAs written by Serbian authors.

In the Asian context, the same conclusions were drawn by Li and Xu (2020), who analyzed metadiscourse in research articles by Chinese and native English writers in the field of

sociology. They revealed that English sociologists used metadiscourse markers more than their Chinese counterparts. It is worth mentioning that English-language academic writings by native and Chinese authors from a metadiscourse perspective have been studied in many works (Li and Wharton, 2012; Liu, 2007; Wu, 2007; Xiong, 2007). Kustyasari et al. (2021) compared metadiscourse functions in research articles by native English and Indonesian writers. Their study revealed that in academic prose by Indonesian authors, interactional and interactive metadiscourse markers performed the same functions, i.e., they were used to indicate a relation between sentences, involve readers in a dialogue, limit commitment to propositions, emphasize certainty, and signal their attitudes towards claims and readers. In the same Asian context, Azar et al. (2022) attempted to compare stance features in British, Australian, and Malaysian research articles, focusing on the “Introduction” section. They revealed notable differences in stance features that prevailed in native writers’ discourse.

The studies above have offered interesting insights into cultural differences in academic writing. However, taking prior research, it seems that English-medium academic texts produced by non-native writers have been analyzed only in terms of their distinction from an academic discourse by native writers. Less attention has been paid to differences in metadiscourse patterns used in RA abstracts by non-native English writers from different cultural backgrounds. In addition, to my knowledge, Latin American-authored academic writings have never been analyzed and compared to academic prose produced by academic writers from other cultural contexts. It is, therefore, worthwhile to conduct further research into cross-cultural variation in the use of metadiscourse.

3. CORPUS AND METHOD

3.1. Corpus design

The present study was conducted on a corpus of RA abstracts derived from 18 journals under the same focus studies ranging from language teaching to linguistics (see Table 1). Linguistics and language teaching were selected for the analysis based on the assumption that humanities are more culturally determined than hard sciences. The motivation behind choosing RA abstracts by Latin American, Asian, and East European scholars for a contrastive analysis was the striking differences in the historical contexts and cultural values. Despite these differences, however, in all three contexts, English was not used as a language of science and education. Due to the globalization of education, English has gained influence there, confirmed by a growing number of English-medium publications by scholars from these regions. It is therefore of interest to analyze similarities and differences, if any, in the ways Latin American, Asian, and East European academic writers use metadiscourse to shed light on possible intercultural differences in the use of metadiscourse features in academic prose by L2 English writers from three cultural backgrounds. In addition, to my knowledge, the use of metadiscourse markers in Latin American, Asian, and East European academic prose has never been investigated from a contrastive perspective.

Having identified the target journals, 270 research article abstracts ($N = 270$) were randomly selected to ensure a reasonable degree of objectivity and comparability of texts. To eliminate the impact of the publication period, only the RA abstracts from the most recent issues of each journal, published between 2018 and 2022, were selected in order to exhibit the linguistic characteristics of present-day academic discourse. Only one RA abstract from

every author was chosen to control the influence of an individual writing style. Their names and affiliations judged the origin of the authors. Table 1 illustrates the size of the corpus.

Academic journals	No of RA abstracts	Number of words
<i>Sub-corpus 1</i>		
Revista Brasileira de Linguística Aplicada (Brazilia)	15	2,174
Literature y Linguística (Chile)		
Anclajes (Argentina)	15	4,227
Ikala (Columbia)	15	2,010
Mextesol Journal (Mexico)	15	2,521
Lengua y Habla (Venezuela)	15	2,602
Total	15	2,956
	90	16,490
<i>Sub-corpus 2</i>		
Indonesian Journal of Applied Linguistics (Indonesia)	15	2,669
3L: Language, Linguistics, Literacy (Malaysia)	15	3,201
Gema: Online Journal of Language Studies (Malaysia)	15	2,715
Studies in English Language and Education (Indonesia)	15	2,785
Linguistic Research (South Korea)	15	2,180
SiSal Journal (Japan)	15	2,220
Total	90	15,780
<i>Sub-corpus 3</i>		
Časopis pro moderní filologii (Czech Republic)	15	2,023
Slovenski Jezik (Slovenia)	15	2,970
Poradnik Jezykowy (Poland)	15	2,675
Jazykovedný časopis (Slovakia)	15	2,538
Voprosy Jazykoznanija (Russia)	15	2,112
ESP Today (Serbia)	15	3,410
Total	90	15,928
TOTAL	270	48,198

Table 1. The size of the corpus.

The corpus was built to ensure comparability in terms of genre (RA abstracts), authors' origin (Latin American, Asian, and East European countries), field (linguistics and language teaching), and currency. Based on Wood's (2001) criteria, the first author of each article with an affiliation with an Asian university was taken to be an Asian author, the first author of each article with an affiliation with an East European university was taken to be an East European author, and the first author of each article with an affiliation with a Latin American university was assumed to be a Latin American author.

3.2. Research methodology

Since the study aims to compare the use of metadiscourse markers in English-medium RA abstracts written by L2 English writers from three different academic cultures, the quantitative and qualitative analysis methods were applied. The corpus analysis was focused. Hence, the study excluded the introduction, methodology, findings, discussion, and conclusion sections. The RA abstracts were downloaded from the journals' websites, converted to the Microsoft DOCS format, and analyzed to calculate the number of metadiscourse devices in each abstract. The quantitative analysis assisted with WordSmith Tools 5 was conducted to reveal the frequency of metadiscourse markers in RA abstracts selected to build the corpus. The inter-group contrastive analysis was performed to find potential similarities and differences between the groups.

Hyland’s (2005) framework of metadiscourse features (hedging, boosting, attitudes, self-mention, and engagement) was adopted as the initial model for revealing metadiscourse markers. The frequencies of each metadiscourse marker were normalized to 1,000 words and calculated. The frequencies of occurrence of metadiscourse markers by categories were summarized in a table format.

A careful analysis of the context was conducted to classify metadiscourse markers by their functions and categories and interpret differences revealed in the frequencies of metadiscourse devices in the subcorpora. To ensure an in-depth exploration of metadiscourse, examples were taken from the corpus being studied, and explanations were provided to describe the rhetorical functions of metadiscourse markers found in the three subcorpora.

4. RESULTS

The outcome of the quantitative analysis shows similarities and differences in the use of metadiscourse by Latin American, Asian, and East European authors in terms of categories and frequencies.

The results suggest that researchers from three different cultural backgrounds seem conscious of the need to engage with the content and readers. However, in absolute terms, the differences between the total number of metadiscourse markers were quite significant. The share of metadiscourse features was slightly different across cultures, with hedging markers representing the majority of features in SC3 and boosters in SC1 and SC2. The details are shown in Table 2.

Interactional metadiscourse markers	SC1	SC2	SC3
Hedges	12.2 (22.9)	11.7 (31.4)	36.2 (52.4)
Boosters	16.7 (31.4)	13.1 (35.2)	11.2 (16.2)
Attitude markers	14.4 (27)	9.1 (24.4)	21 (31)
Self-mention	9.9 (18.5)	3.2 (8.3)	0 (0)
Engagement markers	0.12 (0.2)	0.29 (0.7)	0.2 (0.4)
Total	53.32 (100)	37.39 (100)	68.6 (100)

Table 2. Interactional metadiscourse in the three sub-corpora (per 1,000 words and in % of the total number per sub-corpus).

Overall, we found 7,898 metadiscourse markers in the three sub-corpora. Hedges were the most frequent metadiscourse resource in East European-authored texts. Their share in the total number of occurrences in this sub-corpus was 52.4%. In the Latin American and Asian sub-corpora, their share was smaller: 22.9% and 31.4%, respectively. The frequency of occurrence of hedges per 1,000 words also differed significantly. The smaller rate of hedges (11.7 per 1,000 words) was observed in the Asian sub-corpus.

Boosters also exhibited differences in the three sub-corpora: in the Latin American- and Asian-authored texts, they were more frequent than other metadiscourse features. Attitude markers ranked second in the East-European and Latin American sub-corpora but with different shares: 27% in SC1 and 31% in SC3. In SC2, their share was slightly lower than that of SC1 (24.4%). The difference was more striking when normalized to frequencies per 1,000 words: 9.1 in SC2, 14.4. in SC1 and 21 in SC3. Engagement markers were less apparent

in all the sub-corpora. Self-mention markers were found only in SC1 and SC2, where their shares differed significantly (18.5 and 8.3%, respectively).

To answer Research Question 3, the types of individual metadiscourse markers were analyzed regarding frequencies. The results are presented in Tables 3-7.

Tables 3 and 4 manifest the distribution of hedging and boosting devices by types suggested by Hyland and Zou (2021).

	SC1	SC2	SC3
Plausibility hedges	8.7 (71.3)	7.8 (62.3)	31.1 (85.9)
Downtoners	2.9 (24.1)	3.4 (37)	4.9 (19)
Rounders	0.6 (4.6)	0.5 (0.7)	0.2 (0.8)
Total	12.2 (100)	11.7 (100)	36.2 (100)

Table 3. Types of hedges (per 1,000 words and in % of the total number per sub-corpus).

	SC1	SC2	SC3
Certainty boosters	6.8 (40.7)	5.9 (45)	5.1 (45.5)
Extremity boosters	5.3 (31.7)	3.8 (29)	1.2 (10.7)
Intensity boosters	4.6 (27.6)	3.4 (26)	4.7 (33.8)
Total	16.7 (100)	13.1 (100)	11.2 (100)

Table 4. Types of boosters (per 1,000 words and in % of the total number per sub-corpus).

The distribution of attitude markers by type is presented in Table 5. The taxonomy proposed by Dueñas (2010) was adopted to compare the metadiscourse functions expressed by attitude markers. Dueñas divided all attitude markers into three groups: attitude markers expressing assessment (e.g., *adequate, better, caution, complex, comprehensive, difficult, reliable*), attitude markers expressing significance (e.g., *central, core, contribute, critical, crucial, essential, fundamental, important, influential, key*), attitude markers expressing emotion (e.g., *intriguing, paradoxical, surprising, unfortunately*). The taxonomy is a simplified version of Swales. Burke's (2003) classification, which establishes seven categories of evaluative lexical items according to features express insight (e.g., *clearly, precisely, accurately*), aesthetic appeal (e.g., *beautiful, elegant, stunning*), assessment (e.g. *excellent, poor, remarkable*), deviance (e.g., *surprisingly, oddly, bizarrely*), relevance (e.g., *significantly, crucially, importantly*), size (e.g., *vast, minute, extensive*), and strength (e.g., *strong, powerful, intense*). In Dueñas' (2010) model, significance markers indicate the study's relevance and importance; assessment markers emphasize acuity, efficacy, novelty, interestingness, validity, strength, and quality, and emotion markers are employed in personal and emotional judgments.

	SC1	SC2	SC3
Assessment markers	6.7 (61.9)	6.5 (72)	13.1 (62)
Significance markers	3.9 (38.1)	2.6 (28)	7.9 (38)
Emotion markers	0 (0)	0 (0)	0 (0)
Total	12.4 (100)	9.1 (100)	21 (100)

Table 5. Types of attitude markers (per 1,000 words and in % of the total number per sub-corpus).

Two types of self-mention were identified in the corpus: first-person singular and first-person plural pronouns. The number of first-person plural pronouns was calculated for each type of RA: single-authored and co-authored.

	SC1	SC2	SC3
First person plural pronouns	6.5 (65.7)	3.2 (100)	0
- in single-authored RA abstracts	2.3 (23.2)	1.2 (37.5)	0
-in co-authored RA abstracts	4.2 (42.5)	2.1 (62.5)	0
First-person singular pronouns	3.4 (34.3)	0	0
Total	9.9 (100)	3.2 (100)	0

Table 6. Types of self-mentions (per 1,000 words and in %).

The widely used taxonomy proposed by Hyland (2005) was adopted to compare engagement features in the two sub-corpora. It includes five engagement markers (reader mentions, directives, questions, shared knowledge markers, and personal asides), which reveal how writers address readers to develop their arguments and build solidarity. The frequency of appearance of these markers is shown in Table 6.

	SC1	SC2	SC3
Reader mention markers	0.02 (16.6)	0 (0)	0.04 (20)
Directives	0	0.12 (41.3)	0.06 (30)
Questions	0	0 (0)	0 (0)
Shared knowledge markers	0.1 (83.4)	0.17 (58.7)	0.1 (50)
Personal asides	0	0 (0)	0 (0)
Total	0.12 (100)	0.29 (100)	0.2 (100)

Table 7. Types of engagement markers (per 1,000 words and in % of the total number per sub-corpus).

The following section will explain the functions of interactional metadiscourse features in the analyzed texts.

4.1. Hedges

Hedges downplay “a writer’s commitment to a proposition, modifying its scope, relevance or certainty” (Hyland 2005:176) and helping to acknowledge alternative viewpoints. They withhold commitment to the presented proposition and are used to steer the reader to the conclusion or reasoning of the writer’s choice.

Table 3 shows that the hedging devices used in the three sub-corpora differed in the occurrence frequencies and were employed differently in terms of their types. As can be seen from the table, the general trends in the types of hedging, however, were similar. Plausibility hedges that protect the author from taking full responsibility for the propositional content prevail in all the sub-corpora as they are used to recognize the limitations of claims. However, in SC3, plausibility hedges were employed almost three times more frequently than in SC1 and SC2, which indicates that East European writers more actively showed authors’ reservations about the accuracy of statements by moderating the way of expressing ideas. Here are examples of plausibility hedges that indicate that the statements are based on assumptions rather than facts and implicate that the author is uncertain about a proposition.

- (1) *The need to find gold in those unknown regions was a major boost in the process of conquest and was one of the strongest motives, and **perhaps** the most important one.* (SC1)
- (2) *The conclusion is drawn that languages sharing the same sound contrast **may** exhibit different phonetic implementations in marking a phonological contrast”* (SC3)

The frequency of occurrence of downtoners per 1,000 words was slightly different in the three sub-corpora. In (3) and (4), *quite* mitigates the intensity of the statements.

- (3) *It is also worth mentioning that ellipses, contractions and abbreviations were used **quite** frequently due to the word limit of tweets.* (SC2)
- (4) *As trainers of future translation professionals, we are **quite** aware of this reality, but at the same time, reaching out to these constantly evolving manifestations that need to — or should — be expressed in another language differently poses a permanent challenge to us.* (SC1)

The downtoners used in these examples lessen the certainty of claims and arguments. In (7), the downtoner *usually* conveys a certain qualification regarding the degree of accuracy of the conclusion, demonstrating that the statement might be inaccurate (Hyland 2001).

- (5) *There are speech substitutes **usually** containing repetitions and rhymes* (SC3).

One more type of hedging distinguished by Hyland and Zou (2021) – rounders indicating an approximation – was relatively scarce in all three sub-corpora. Here is an example from the corpus:

- (6) *There was **almost** an even attending a General Psychology course within which they participated in the survey* (SC1)

By making the number a little fuzzy, the adverb employed as a rounder expresses approximation, making the claim less persuasive. In addition, the authors can use this type of hedging when they need to learn precise terms or numbers or when they are irrelevant.

The relatively high frequency of hedges might be a disciplinary-specific feature. It is a trend in humanities academic prose that is openly evaluative and provides opportunities for alternative views. Humanities authors tend to minimize the risk of being too confident by using hedging devices, which mitigate statements and signal an author’s awareness of opposing viewpoints. East Europeans seemed to follow this more widely than their Asian and Latin American peers.

4.2. Boosters

In contrast to hedges, boosters function by “presenting the proposition with conviction while marking involvement, solidarity, and engagement with readers” (Hyland 2005:145). An analysis has revealed that boosters are more common per 1,000 words in SC1, which indicates that Latin American writers tend to take a stronger stance and are more keen to express their convictions and highlight the significance of their work. Here is an example from the corpus.

- (7) *It was **apparent** that some of the interlinguistic contrast was the reason behind the errors.* (SC2)

The booster in the above example helps remove doubts about the claim, closing down potential opposition.

Similar to hedges, boosters differed both numerically and functionally. Table 4 illustrates that certainty boosters were used more in SC1 and SC2. In the East European sub-corpus, intensity boosters prevailed. Extremity boosters ranked second in SC1 and were rarely employed in SC2 and SC3.

As Hyland and Zou claim (2021:7), “certainty boosters indicate the writer’s epistemic conviction.” In addition to claiming the accuracy of research results, writers employ these devices to emphasize the importance of the study and exclude alternative views from readers.

- (8) *The results **showed** new information focus in particular improves the perception and production of the double accusative ditransitive construction, but only to a small degree.* (SC2)
- (9) *Our findings **reveal** that move structure varies across fields: in chemistry, only Results are obligatory, while in medicine the obligatory pattern is Methods-Results-Conclusion.* (SC3)

In the above examples, the authors anticipate possible reader responses but choose to prevent them. The boosting verbs “show” and “reveal” express the authors’ certainty in the research results obtained or the claims presented.

Intensity boosters function by amplifying the emotive strength of a statement. In contrast to certainty boosters, they add affective color to claims rather than concern epistemic assurance (Hyland and Zou 2021).

- (10) *This work is **very important** in Cuban literature in the second half of the 20th century.* (SC1)
- (11) *There are also exceptional cases of “abnormal” negative VOT (prevoicing) for voiceless stops and “abnormal” positive VOT (devoicing) for voiced stops, with an **extremely larger** number of devoiced tokens.* (SC2)

These intensity boosters function by enhancing persuasion through an involved attitude.

Regarding the extremity boosters, they “emphasize the upper edge of a continuum” (Hyland and Zou 2021:8), as in here:

- (12) *This article serves, on the one hand, to present what type of evaluative lexicon students use in one of **the most successful** social networks.* (SC1)

By upgrading the propositions, the writers emphasize the success of social networks (18), the level of teachers’ understanding of technical skills (19), and the significance of works on noun classifications (20) without elaborating.

4.3. Attitude markers

Attitude markers express writers’ attitudes to what they are discussing and the influence on the information presented. They also signal that the writer shares disciplinary values.

The findings show that the Latin American, Asian, and East European writers used attitude markers differently regarding frequencies and types. The Asian writers used attitude markers twice as rarely as their East European peers who established their claims and evaluated the

novelty, importance, and usefulness of their research findings more explicitly. The Latin American sub-corpus ranked second by the frequency of these markers. The shares of these markers in the total number of metadiscourse features in all three sub-corpora were slightly different.

Regarding the types of attitude markers, we can see that assessment outnumbers significance, and emotion markers are absent in all three sub-corpora. Thus, there is more focus on outlining features such as the novelty and usefulness of the study and its findings than on outlining the significance of these parameters.

Assessment markers signal the writer's evaluation of the study, emphasizing interesting, crucial, or debatable findings. This rhetorical strategy helps promote and evaluate research. Here are examples from the corpus.

- (13) *It is concluded that the use of study groups can be an **effective** strategy for the professional development of teachers.* (SC1)
- (14) *Although the success of information rendition in simultaneous interpreting (SI) is susceptible to many factors, the speed of the source speech (SS) is perceived as one of the **most challenging** problem triggers.* (SC2)
- (15) *The emergence of the video abstract as a new digital genre of science communication has allowed researchers to increase their visibility and engage with larger audiences by employing a **complex** interplay of different semiotic modes.* (SC3)

Assessing the efficiency of the strategies used and the complexity and urgency of the research problems are critical features of research, particularly among humanities scholars who usually take a more involved position on issues.

Significance markers are used to show the role of research results and present a valid argument, as in the example below.

- (16) *As for the geographical extension of these two elements, a **significant** difference between American Spanish and European Spanish is confirmed using CORPES data.* (SC1)

The significant type of attitude markers is used here to evaluate the research results. The authors highlight the importance of their studies for the body of disciplinary knowledge.

4.4. Self-mention markers

Self-mention indicates to the reader the perspective from which the statement should be interpreted (Hyland 2005). Yet novice academic writers have often been instructed to avoid personal pronouns in their papers. An analysis of research articles shows regular use of self-mentions to emphasize the importance that should be given to authorial claims or choices. For example, Graff and Birkenstein (2010) advise abandoning the perceived prohibition about using personal pronouns because it will not eliminate subjective opinions and may hurt writers' ability to distinguish their views from other people's perspectives. Similarly, Hyland (2005) argues that self-mention markers are essential in emphasizing the writer's contribution in the humanities. Here are examples from SC1 and SC2, in which the first-person pronouns were found.

- (17) *In this text, we seek to discuss issues on a topic a little debated in Applied Linguistics - the emotions of black English teachers. (SC1)*
- (18) *We take a different tack from Kim's, proposing that the preference for demonstratives rather than bare NPs as a continuing topic is attributed to the fact that NUN as a topic marker increases the discourse salience of the NP with it. (SC2)*

In (17), the pronoun *we* helps the authors outline the aim of the study, i.e. affect, the rhetorical function of explaining why the research was conducted. In (18), *we* helps the writer express his position which is different from the one proposed another researcher. The pronouns used in these examples are exclusive rather than inclusive, i.e., the authors speak on behalf of themselves.

It is worth noting that example (28) was taken from the single-authored RA abstract, while example (27) was derived from the article written by two authors.

In the Anglophone academic writing style, which is predominantly followed in international journals, the use of first-person singular pronouns is a fashionable trend reflecting a constantly growing awareness of the role of the author. However, instances of these pronouns were found only in SC1. Here are examples:

- (19) *In this sense, I review some articles published in Anclajes that contribute to under-examined topics, such as the recovery and study of literature written by women and other areas not explored by the metropolitan imaginary. (SC1)*
- (20) *My goal is to advance our understanding of this phenomenon with an assemblage of conceptual tools such as languaging, emotioning, conversation, reflection and orthogonal interactions. (SC1)*

As the frequency data summarized in Table 6 shows, Latin American authors more actively exploited the pronominal system for highlighting critical problems, emphasizing their contributions to the field, describing methods, and organizing the text for the reader. They had a higher confidence level in their claims since self-mention is a powerful rhetorical strategy in claiming a writer's contributions (Boginskaya 2022a).

4.5. Engagement markers

Engagement markers explicitly bring readers into a dialogue with the writer, focus readers' attention, and guide them to a particular interpretation. Twenty-one engagement features were found in the whole corpus (4 items in SC1, 11 in SC2, and 6 in SC3). When normed for text length, the Asian sub-corpus showed a more significant number of engagement markers. The proportion of engagement markers was quite different across cultures. Shared knowledge markers were dominant in all the sub-corpora. Directives followed them in SC2 and SC3 and reader-mention markers in SC1. In SC3, the reader mentions markers ranked third.

Reader mentions markers "offer the most explicit ways of bringing readers into a discourse by directly referring to them" (Hyland 2008: 10). These devices account for the fifth part of all engagement markers in both sub-corpora. Here is an example from the corpus.

- (21) *My goal is to advance **our** understanding of this phenomenon with an assemblage of conceptual tools such as languaging, emotioning, conversation, reflection and orthogonal interactions. (SC1)*

Our here is used as a reader pronoun rather than to express the writer's self. The author uses them to tell readers to interpret the text in a particular way. In contrast to self-mentions

described above, the first-person plural pronoun in this example is inclusive, which enhances dialogicity. While exclusive, *we* refer only to the author, inclusive *we* – both to the author and the reader, giving the latter a sense of membership with similar understandings as the writer.

Directives, one more engagement tool, encourage readers to perform certain actions or see things in a certain way, thus managing the readers' understanding and modifying writer-reader relations (Hyland 2002). In the corpus, they were verbalized through the deontic modal verb *should*. Here is an example from the corpus where the author uses this modal to emphasize the need to include the global language technology in a new set.

(22) *It casts light also on the issue of the ever-changing technological advance and how the global language of technology **should** be also included in this new set of regulations for Colombian international trade practices. (SC1)*

Shared knowledge markers are used when the writer seeks “to position readers within the boundaries of disciplinary understandings” (Zou and Hyland 2020:276). The study showed that these appeals were the most frequently used engagement markers in all the sub-corpora:

(23) *People affiliated with Greenpeace, for example, are **commonly** portrayed as advocates of green causes, while companies are **commonly** represented as villains who care nothing about the environment. (SC1)*

The above appeals to shared knowledge, which refers to an awareness of discourse community traditions, views, and beliefs (Hyland and Jiang 2016). In these examples, writers use these markers to support their claims by emphasizing the take-for-granted facts or to bring the readers in agreement with themselves. As we can see from the above examples, shared knowledge appeals add more to the writer-reader interaction.

Table 7 shows that personal asides that “interrupt the argument to offer a comment on what has been said” (Hyland 2005: 123) and questions that bring readers into the discussion as participants and make arguments more negotiable did not appear in the corpus.

Overall, the low frequency of engagement markers compared to other metadiscourse devices might be explained by generic characteristics of RA abstracts rather than differences in cultural and academic writing traditions. RA abstracts serve the promotional function rather than “bring readers into the discourse to relate to them and anticipate their possible objections” (Hyland 2005: 151).

6. DISCUSSION AND CONCLUSION

The present study intended to contribute to a better understanding of intercultural aspects of academic discourse and to provide an answer to the question of how cultural backgrounds manifest themselves in scholarly communication. Conducted from a cross-cultural perspective, it aimed to explore variation in the employment of metadiscourse features in a corpus of English-medium RA abstracts by academic writers presenting three continents, which previously did not attract much attention from linguists.

Regarding the first research question, the study revealed significant cross-cultural differences between Latin American-, Asian- and East European-authored RA abstracts regarding frequencies of metadiscourse markers. East European writers left more traces of themselves

and took far more explicitly involved positions. RA abstracts written by East European authors contained 15.3 and 31.2 more interactional metadiscourse elements in 1,000 words than abstracts written by their Latin American and Asian counterparts, respectively.

Moving on to the second question, the Latin American-, Asian- and East European-authored differed in categories of the metadiscourse features. Hedges were the most frequent metadiscourse resource in the East European-authored texts, while boosters were more frequently used in the Latin American and Asian sub-corpora. Attitude markers ranked second in the East-European sub-corpus, while in the Asian and Latin American texts, they ranked third, following boosters and hedges. Engagement markers were rarely used in all the sub-corpora, explained by generic features of RA abstracts. Self-mention markers were found only in SC1 and SC2. Interestingly, in the latter, their share was twice as small as in SC1, indicating that only Latin American authors were aware of self-mentions' significant role in emphasizing the writer's contribution.

Finally, in answer to the third question, cross-cultural differences were also revealed regarding types of individual metadiscourse features. However, these differences were not significant. Generally, the same trends in using different hedges, boosters, and attitude engagement markers were observed in all the sub-corpora. Differences were revealed only for self-mentions. Two types of these markers were found only in SC1. SC2 featured only first-person plural pronouns, while SC3 showed no instances of these metadiscourse markers.

Thus, the results confirmed the assumption about the reflection of cultural contexts in academic prose. Metadiscourse is based on different academic writing styles and traditions that vary across cultures. A comparison of the RA abstracts has shown that the Latin American, Asian, and East European academic communities manifested different metadiscourse preferences. Cultural values appeared to be determinants of academic writers' rhetorical behavior, affecting how they express their commitment to their claims and interact with the reader (Krapivkina 2017). East European authors seemed to be much more careful in making claims. In contrast, Latin American and Asian writers seemed more confident and committed to their views, using more boosters to suppress alternative views, express convictions, and highlight the significance of their studies.

It should be admitted that the research results presented here are limited due to a limited data set. The generalization of the research results requires more support from other cultural contexts. It is also essential to continue this research using data from different disciplines. Diachronic variation in the employment of metadiscourse patterns in RA abstracts by culturally diverse academic writers could also be of interest. It might be interesting to study how expert academic writers with different cultural backgrounds know when to use metadiscourse devices in their English-medium texts or how metadiscourse in non-native English writers' prose affects editors and reviewers of international journals. Further empirical research could look into other metadiscourse features in academic prose. Thus, despite the abovementioned limitations, this research could be a starting point for future studies of metadiscourse in academic prose from a cross-cultural perspective since the results confirm that metadiscourse has manifestations that may vary across cultures.

The results of this study are also expected to help Latin American, Asian, and East European authors become aware of metadiscourse patterns so that they can successfully publish their research articles in international journals. Metadiscourse is a key pragmatic feature that

enables writers to present their claims and findings in a way accepted in their disciplinary community, “supplement propositional information in the text, and alert readers to the writer’s opinion” (Hyland 1994: 240).

References

- Ahmadi, L. 2022. Interactional Metadiscourse Markers in Scientific Texts (Based on Research Articles Written by Native and Non-Native Speakers). *Vestnik Volgogradskogo gosudarstvennogo universiteta. Seriya 2. Yazykoznanie*, 21(4), 99-110.
- Al-Khasawneh, Fadi Maher. 2017. A genre analysis of research article abstracts written by native and non-native speakers of English. *Journal of Applied Linguistics and Language Research* 4(1). 1-13.
- Alonso-Almeida, Francisco. 2014. Evidential and epistemic devices in English and Spanish medical, computing and legal scientific abstracts: A contrastive study. In Marina Bondi & Rosa Lorés Sanz (eds.), *Abstracts in Academic Discourse: Variation and Change*, 21-42. Bern: Peter Lang.
- Azar, Ali Sorayyaei, Hassaram Praemela, Imani Mohd Farook & Nur Hasyimah Romli. 2022. A Comparative Analysis of Stance Features in Research Article Introductions: Malaysian and English Authors. *GEMA Online Journal of Language Studies* 22(2). 261-287.
- Belyakova, Maria. 2017. English-Asian cross-linguistic comparison of research article abstracts in geoscience. *Estudios de Lingüística Universidad de Alicante* 31. 27-45.
- Bogdanović, Vesna & Ivan Mirović. 2018. Young researchers writing in ESL and the use of metadiscourse: Learning the ropes. *Educational Sciences: Theory & Practice* 18. 813–830.
- Boginskaya, Olga. 2022a. Cross-disciplinary variation in metadiscourse: A corpus-based analysis of Russian-authored research article abstracts. *Training, language and culture*, 6(3), 55-66.
- Boginskaya, Olga. 2022b. Functional categories of hedges: A diachronic study of Russian research article abstracts. *Russian Journal of Linguistics*, 26(3), 645-667.
- Boginskaya Olga. 2023. Interactional Metadiscourse Markers in English Research Article Abstracts Written by Non-Native Authors: A Corpus-Based Contrastive Study. *Ikala*, 28(1), 139 – 154.
- Bondi, Marina. 2014. Changing voices: Authorial voice in abstracts. In Marina Bondi & Rosa Lorés Sanz (eds.), *Abstracts in Academic Discourse: Variation and Change*, 243-270. Bern: Peter Lang.
- Cmejrkova, Svetla. 1996. Academic writing in East European and English. In Eija Ventola & Anna Mauranen (eds.), *Academic writing. Intercultural and textual issues*, 137-152. Amsterdam/Philadelphia: John Benjamins.

- Duszak, Anna. 1994. Academic discourse and intellectual styles. *Journal of Pragmatics* 21. 291-313.
- Dueñas, Pilar Mur. 2010. Attitude markers in business management research articles: A cross-cultural corpus-driven approach. *International Journal of Applied Linguistics* 20(1). 50-72.
- Gessesse, Cherie Mesfin. 2016. An investigation into the macro rhetorical structures of the EFL research abstracts of graduates of 2013: the case of Bahir Dar University in Ethiopia. *Online Journal of Communication and Media Technologies* 6(1). 1–22.
- Gillaerts, Paul & Freek van de Velde. 2010. Interactional metadiscourse in research article abstracts. *Journal of English for Academic Purposes* 9(2). 128-139.
- Graff, Gerald & Cathy Birkenstein. 2010. *They say/I say*. New York: Norton.
- Hryniuk, Katarzyna. 2018. Expert-Like Use of Hedges and Boosters in Research Articles Written by Polish and English Native-Speaker Writers. *Research in Language* 16(3). 263-280.
- Hu, Guangwei & Fenglong Cao. 2011. Hedging and boosting in abstracts of applied linguistics articles: A comparative study of English-and Chinese-medium journals. *Journal of Pragmatics* 43(11). 2795-2809.
- Hyland, Ken. 2002. Directives: Argument and engagement in academic writing. *Applied Linguistics* 23(2). 215-239.
- Hyland, Ken. 1994. Hedging in Academic Writing and EAP Textbooks. *English for Specific Purposes* 13(3). 239-256.
- Hyland, Ken. 2005. *Metadiscourse: Exploring Interaction in Writing*. London: Continuum.
- Hyland, Ken. 2010. Metadiscourse: Mapping interactions in academic writing. *Nordic Journal of English Studies* 9(2). 125–143.
- Hyland, Ken. 2008. Persuasion, interaction and the construction of knowledge: Representing self and others in research writing. *International Journal of English Studies* 8(2). 1-23.
- Hyland, Ken & Feng Kevin Jiang. 2016. ‘We must conclude that...’: A diachronic study of academic engagement. *Journal of English for Academic Purposes* 24. 29-42.
- Hyland, Ken & Hang Zou. 2021. ‘I believe the findings are fascinating’: Stance in three-minute these’. *Journal of English for Academic Purposes* 50. 100973.
- Jabeen, Ismat, Almutairi, Hind Shujaa S., & Hend Naif H. Almutair. 2023. Interaction in Research Discourse: A Comparative Study of the Use of Hedges and Boosters in PhD Theses by Australian and Saudi Writers. *World Journal of English Language*, 13(8), 119-129.
- Ji, Xiaoli. 2015. Comparison of abstracts written by native speakers and second language learners. *Open Journal of Modern Linguistics* 5. 470-474.
- Khajavy, Gholam Hassan & Seyyedeh Fatemeh Asadpour. 2012. A Comparative Analysis of Interactive Metadiscourse Features in Discussion section of Research Articles Written in English and Persian. *International Journal of Linguistics* 4(2). 147-159.

- Khedri, Mohsen, Swee Heng & Helen Tan. 2015. Interpersonal-driven features in research article abstracts: Cross-disciplinary metadiscoursal perspective. *Pertanika Journal of Social Sciences & Humanities* 23(2). 303-314.
- Koutsantoni, Dimitra. 2004. Attitude, certainty and allusions to common knowledge in scientific research articles. *Journal of English for Academic Purposes* 3(2). 163-182.
- Kozubíková Šandová, Jana. 2021. Interpersonality in research article abstracts: a diachronic case study. *Discourse and Interaction* 14(1). 77-99.
- Krapivkina, Olga. 2014. Pronominal choice in academic discourse. *Middle-East Journal of Scientific Research* 20(7). 833-843.
- Krapivkina, Olga. 2017. Analysis of discourses as forms of social interaction (a case-study of court shows). *Vestnik Tomskogo Gosudarstvennogo Universiteta, Filologiya*, 46, 21-30.
- Kustyasari, Dian, Yazid Basthomi & Mirjam Anugerahwati. 2021. Interactive and interactional metadiscourse markers in research articles of Asian expert writers. *Journal of English Education Society* 6. 90-95.
- Jakob Lenardič, J., Fišer, D. (2021): Hedging modal adverbs in Slovenian academic discourse. *Slovenščina* 2.0, 9(1): 145–180.
- Li, Tingyou & Sue Wharton. 2012. Metadiscourse repertoire of L1 Mandarin undergraduates writing in English: A cross-contextual, cross-disciplinary study. *Journal of English for Academic Purposes* 11(4). 345–356.
- Liu, Chuan. 2007. The empirical study on the use of metadiscourse in argumentative writing. *Journal of Hebei Normal University of Science & Technology (Social Science)* 6(1). 29–33.
- Liu, Kanglonga, Yin, Haob, & Andrew Cheung. 2024. Interactional metadiscourse in translated and non-translated medical research article abstracts: a corpus-assisted study. *Perspectives: Studies in Translation Theory and Practice*, March, 1-21.
- Lorés Sanz, Rosa. 2006. I will argue that: First person pronouns as metadiscoursal devices in research article abstracts in English and Spanish. *ESP across Cultures* 3. 23-40.
- Martín, Pedro Martin. 2003. A genre analysis of English and Spanish research paper abstracts in experimental social sciences. *English for Specific Purposes* 22(1). 25-43.
- Mikolaychik, Margarita. 2019. Lexical Hedging in English Abstracts of Asian Economics Research Articles: A Corpus-Based Study. *Science Journal of Volgograd State University. Linguistics* 19(5). 38-47.
- Perales-Escudero, Moises & John Swales. 2011. Tracing convergence and divergence in pairs of Spanish and English research article abstracts: The case of Ibérica. *Ibérica* 2(1). 49-70.
- Pisanski Peterlin, Agnes. 2005. Text-organising metatext in research articles: An English-Slovene contrastive analysis. *English for Specific Purposes* 24(3). 307-319.
- Pyankova, Tatiana. 1994. *A practical guide for the translation of Asian scientific and technical literature into English*. Moscow: Letopis.

- Saidi, Mavadat & Said Talebi. 2021. Genre Analysis of Research Article Abstracts in English for Academic Purposes Journals: Exploring the Possible Variations across the Venues of Research. *Education Research International* 2. 1-5.
- Stotesbury, Hikka. 2003. Evaluation in research article abstracts in the narrative and hard sciences. *Journal of English for Academic Purposes* 2. 327-341.
- Tang, Ramona & Suganthi John. 1999. The 'I' in identity: Exploring writer identity in student academic writing through the first person pronoun. *English for Specific Purposes* 18. 23-39.
- Van Bonn, Sarah & John Swales. 2007. English and French journal abstracts in the language sciences: Three exploratory studies. *Journal of English for Academic Purposes* 6(2). 93-108.
- Vassileva, Irena. 2001. Commitment and detachment in English and Bulgarian academic writing. *English for Specific Purposes* 20(1). 83-102.
- Walková, Milada. 2018. Author's self-representation in research articles by Anglophone and Slovak linguists. *Discourse and Interaction* 11(1). 86-105.
- Yakhontova, Tatyana. 1997. The signs of a new time: Academic writing in ESP curricula of Ukrainian universities. In Anna Duszak (ed.), *Culture and Styles of Academic Discourse*, 323-341. Berlin: Mouton de Gruyter.
- Xiong, Di. 2007. A Comparison Between English and Chinese Metadiscourse. *Journal of Chongqing Jiaotong University* 7(6). 101-105.
- Wu, Siew Mei. 2007. The use of engagement resources in high- and low-rated undergraduate geography essays. *Journal of English for Academic Purposes* 6(3). 254-71.
- Zou, Hang & Ken Hyland. 2020. Academic blogging: scholars' views on interacting with readers. *Iberica* 39. 267-294.