THE CONTRASTIVE RHETORIC OF METADISCOURSE MARKERS IN L1 AND L2 RESEARCH PAPERS: A CROSS-CULTURAL COMPARISON OF ABSTRACTS AND DISCUSSION SECTIONS OF MEDICAL RESEARCH PAPERS

Most researchers find themselves in a very competitive surrounding and are supposed to be published continuously in prestigious peer-reviewed journals. However, the norms adopted by the local academic communities may differ from the norms adopted by the international academic communities. Differences have various causes and often include metadiscoursal textual features. The vast majority of the research in metadiscourse basically follow the model proposed by K. Hyland in 2005. To analyze the distribution of metadiscourse markers, four corpora were created: two corpora representing medical cardiology texts written in English by L2 Russian researchers (abstract and discussion section corpora) and two corpora representing English medical texts written by L1 English researchers. The results suggest that interactive metadiscourse markers for sequencing, announcing goals and indicating the nature of a given statement (evidentials) are more frequent in both L1 English abstracts and discussion sections than in their L2 English counterparts. The findings of this study have important pedagogical implications, especially for classes in English for Specific Purposes, English for Academic Purposes, and English for Research Publication Purposes.

Keywords: contrastive rhetoric, metadiscourse markers, disciplinary community.

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THE CONTRASTIVE RHETORIC OF METADISCOURSE MARKERS IN L1 AND L2 RESEARCH PAPERS: A CROSS-CULTURAL COMPARISON OF ABSTRACTS AND DISCUSSION SECTIONS OF MEDICAL RESEARCH PAPERS

ВОЛШЕБСТВО СОВРЕМЕННЫХ ИССЛЕДОВАТЕЛЕЙ НАХОДЯТСЯ В ВЫСОКОКОНКУРЕНТНОЙ АКАДЕМИЧЕСКОЙ СРЕДЕ И ПОСТОЯННО СТАЛКИВАЮТСЯ С НЕОБХОДИМОСТЬЮ ПОСТОЯННО ПУБЛИКОВАТЬ СВОИ ИССЛЕДОВАНИЯ В ВЫСОКОРЕЙТИНГОВЫХ АКАДЕМИЧЕСКИХ ЖУРНАЛАХ. ПОСКОЛЬКУ ВОЛШЕБСТВО ЖУРНАЛОВ С СЕКСКОМ ИМПАКТ-ФАКТОРОМ ПУБЛИКУЮТСЯ НА АНГЛИЙСКОМ ЯЗЫКЕ, ТО ВАЖНОЙ ПРОБЛЕМОЙ СТАНОВИТСЯ НЕ ТОЛЬКО СОБЛЮДАТЬ ЛЕКСИЧЕСКИЕ И ГРАММАТИЧЕСКИЕ НОРМЫ АНГЛИЙСКОГО ЯЗЫКА, НО И КОРРЕКТНО ИСПОЛЬЗОВАТЬ ДИСКУРСИВНЫЕ СТРАТЕГИИ И УЧИТЫВАТЬ МЕТАДИСКУРСИВНЫЕ ХАРАКТЕРИСТИКИ АНГЛОЯЗЫЧНОГО АКАДЕМИЧЕСКОГО ТЕКСТА. СТАТЬЯ ПОСВЯЩЕНА СРАВНИТЕЛЬНОМУ АНАЛИЗУ
метадискурсивных характеристик русских и английских статей по медицине. Для анализа было создано четыре корпуса тестов, включающих аннотации и часть «обсуждение (discussion)» в английских и русских статьях по кардиологии. Результаты исследования показывают соотношение использования метадискурсивных маркеров в двух языках. В частности, было выявлено, что интерактивные (interactive) характеристики метадискурса английских медицинских статей (маркирующих последовательность текстовых сегментов и маркеры эвиденциальности) чаще используются авторами-носителями английского языка, чем русскоговорящими авторами. Результаты исследования могут быть использованы при создании учебных курсов по английскому для специальных целей и академическому письму.

Ключевые слова: контрастивная риторика, метадискурсивные маркеры, дисциплинарные сообщества.

Members of modern academic community find themselves under enormous pressure to enhance their effort to pursue their careers through continuous publishing, and most of their success comes from doing so in peer-reviewed journals indexed in prestigious international citation databases. Both scholars and journals pay great attention to the norms adopted by the international academic communities. When we turn to the academic text produced by L2 Russian speakers from different discourse communities, however, we can see that the distribution patterns of textual features can differ greatly from those in L1 research texts. Such a state of affairs results from different perceptions that L1 and L2 speakers have of academic conventions for different research paradigms. Research efforts in contrastive or intercultural rhetoric in academic English could help solve this problem by embedding explicit explanations in the academic writing process.

The dialogical nature of academic text is successfully elaborated in the famous monograph by Ken Hyland *Metadiscourse: Exploring Interaction in Writing* (2005), where he explains the two-fold nature of textual information, consisting of a proposition and comments (in other words metadiscourse) on the proposition constructed by a researcher. The author based his research on “a view of writing (and speaking) as a social and communicative engagement, offering a means of understanding the ways we project ourselves into our texts to manage our communicative intentions” [Hyland, 2005, p. 14]. According to Hyland, expressions that are used in the process of producing metadiscourse have two dimensions: one oriented towards the text (the interactive dimension) and the other oriented towards the reader (the interactional dimension). As he sees it, the researcher not only feels obliged to guide and interact with the reader but also offers his stance on, evaluation of, and engagement with the prop-
ositional aspects of the text [2005, p. 17]. However, we can find the strongest contradictory opinion in John Swales’s argumentative essay (2019). He acknowledges the positive side of analyzing stance and engagement [Swales, 2019, p. 77] but is not sure that negotiating knowledge claims and straightening the logic and coherence of a text can be explained by the author’s aim to gain his reader’s approval. Notwithstanding the real intention of an author, Swales and many other authors (see below) at least accept that beyond the propositional content there are different language mechanisms that signal, for example, “stance and engagement” and other metadiscourse markers [Swales, 2019, p. 77].

Despite a long-established history of research into different aspects of metadiscourse, the “fuzzy” nature of the term itself is still being discussed [Hyland, 2017; Vafaeimehr, 2015, p. 38; Kobayashi, 2016, p. 22]. This “fuzziness”, according to Hyland’s later review [Hyland, 2017] has several aspects. First, many text items can act both propositionally and metadiscursively, showing text information from the outer world or presenting attitude or stance. Then, not only do we see that metadiscourse items can differ in length but also that the list of potential markers never does seem to be complete, thus making pure quantitative calculations methodologically inviable. Moreover, we can see “unexpected realizations” of linguistic forms, and we have to be ready to enlarge any existing list. For example, Jiang and Hyland (2016) extended the list of metadiscourse markers (MM) to include “metadiscursive nouns”, which “assist writers in pointing to material somewhere in the current context and shape how the reader responds to that material” (Jiang, Hyland, 2016, p. 508). This is exemplified by the authors’ “according to this paradigm” text, which contains not only an evidential marker but also points to the source of information. The “metadiscoursal noun” paradigm reminds readers of a previously mentioned [Jiang & Hyland, 2016, p. 509] approach and offers writers an “assessment of that approach”.

**Literature review**

The vast majority of the research in metadiscourse basically follows the model proposed by Hyland [Hyland, 2005]. Authors generally base their research on the assumption that the better they demonstrate their awareness of the reader, the more easily they will integrate into the disciplinary community and general academic community on the whole. Two dimensions are specified by Hyland: interactive and interactional, with further subdivision into five sub-categories for the interactive dimension and five for the interactional dimension (see Table 1).
Table 1. Model of metadiscourse (Hyland, 2005, p. 49)

<table>
<thead>
<tr>
<th>Category</th>
<th>Function</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interactive</td>
<td>Help guide readers through the text</td>
<td>Examples</td>
</tr>
<tr>
<td>Transitions</td>
<td>express relations between main clauses</td>
<td>in addition; but; thus; and</td>
</tr>
<tr>
<td>Frame markers</td>
<td>refer to discourse acts, sequences or stages</td>
<td>finally; to conclude; my purpose is</td>
</tr>
<tr>
<td>Endophoric markers</td>
<td>refer to information in other parts of the text</td>
<td>noted above; see Fig; in Section 2</td>
</tr>
<tr>
<td>Evidentials</td>
<td>refer to information from other texts</td>
<td>according to X; Z states</td>
</tr>
<tr>
<td>Code glosses</td>
<td>elaborate propositional meanings</td>
<td>namely; e.g.; such as; in other words</td>
</tr>
<tr>
<td>Interactional</td>
<td>Involve readers in the text</td>
<td>Examples</td>
</tr>
<tr>
<td>Hedges</td>
<td>withhold commitment and open dialogue</td>
<td>might; perhaps; possible; about</td>
</tr>
<tr>
<td>Boosters</td>
<td>emphasise certainty or close dialogue</td>
<td>in fact; definitely; it is clear that</td>
</tr>
<tr>
<td>Attitude markers</td>
<td>express writer’s attitude to the proposition</td>
<td>unfortunately; I agree; surprisingly</td>
</tr>
<tr>
<td>Self-mentions</td>
<td>refer explicitly to author(s)</td>
<td>I; we; my; me; our</td>
</tr>
<tr>
<td>Engagement markers</td>
<td>build an explicit relationship with reader</td>
<td>consider; note; you can see that</td>
</tr>
</tbody>
</table>

We found that researchers prefer not to analyse both dimensions but to select only one. We can likewise see that an overwhelming number of authors prefer to look into interactional categories to investigate rhetorical features of texts [Musa, Hussin, Ho, 2019; Hu, Cao, 2015; Afsari, 2017; Liu, Huang, 2017; Estaji, Vafaieimehr, 2015; Kashiha, Marandi, 2019; Can, Yuvayapan, 2018]. Rarely are both dimensions investigated [Farahani, 2017; Fatemeh, Gao, 2021; Siami, Abdi, 2012; Jin, Shang, 2015; Al-Shujairi, Ya’u, 2016], and the interactive dimension on its own seldom attracts the attention of researchers. A rare example is the research by Khedri, Heng and Ebrahimi [Heng & Ebrahimi, 2013], who explore how interactive metadiscourse markers are distributed in applied linguistics and economics research paper abstracts. Quite infrequently, we see a modified model of metadiscourse used, as in Yea, Othman and Wei [Othman & Wei, 2020], where the authors divide the interactional dimension into two
different dimensions — engagement and evaluation — and study disciplinary metadiscourse using eight Malaysian first-year ESL doctoral students’ research.

Most studies of MMs have been conducted as cross-disciplinary comparisons. They are based on the suggestion that different disciplinary communities may require their members to follow different textual conventions. Kashisha and Marandi [Kashisha & Marandi, 2019], for example, analyzed 40 rhetorical moves from the introductions of papers in applied linguistics and chemistry. They found discipline-specific functions for each of the two disciplines and they were distributed along introduction moves, which were defined according to the CaRS (Create a Research Space) model. Among inferences drawn from quantitative research, the authors propose the fundamental idea of existing variations between ‘hard’ and ‘soft’ discourse communities. Similarly, Mina and Biria [Biria, 2017] investigated variations in the use of MMs in the discussion sections of social science and medical science papers. They found preferences for using transitions and frame markers in social science articles and hedges and boosters in medical science articles over other kinds of metadiscourse markers [Mina & Biria, 2017, p. 28]. Discipline-specific functions are investigated not only in academic texts of different branches but also in ones of closely related disciplines, as in the research paper by Estaji and Vafaeimehr [Estaji & Vafaeimehr, 2015]. The authors’ aim is “to compare the use of metadiscourse markers in the introduction and conclusion sections of research articles in the two fields of mechanical and electrical engineering” [Estaji, Vafaeimehr, 44, 2015], and they found valid trends for the use of MMs in each discipline.

Cross-language or intercultural investigation of how different language communities use MMs across one academic genre stands apart and is represented in a wide range of languages. In his ‘Investigating metadiscourse markers in Asian Englishes: A corpus-based approach’ [Kobayashi, 2016] Kobayashi researched the distribution of metadiscourse markers according to their frequency counts in six languages (Chinese, Indonesian, Japanese, Korean, Taiwanese, and Thai). He shows a substantial difference in the use of metadiscourse markers “between East Asian groups (viz., Chinese, Japanese, Korean, and Taiwanese) and Southeast Asian groups (viz., Indonesian and Thai). Importantly, he underlines that we also have to look at co-occurrence patterns of MM to understand their maximum rhetorical effect [Kobayashi, 2016, p. 32].

However, most studies concentrate on the comparative research of MMs in L1 English academic texts and L2 texts produced by speakers of different languages. Kashiha [Kashiha, 2020], for example, explores metadiscourse markers in Asian Englishes: A corpus-based approach [Kobayashi, 2016].

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discourse usage by analyzing the use of MMs in the Malay-speaking students’ community from the perspective of how they serve as mechanisms to create a cohesive and coherent text. Even though the paper does not contain an overt comparison of L1 and L2 texts, phrases such as “a challenging task” for ESL (English as a Second Language) students or “non-native speakers of English commonly face difficulties” [Kashisha, 2020, p. 194] show that we are always presented with an intuitive comparison of L1 and L2 discourse. Similarly, research into MMs without looking into the whole system of interactive or interactional dimensions by Can and Yuvayapan [Yuvayapan, 2018] compares how interactional metadiscourse features are employed by native academic authors of English and Turkish-speaking academic authors of English for the construal of their stance in their doctoral dissertations. They find significant underuse of MMs in Turkish dissertations.

Not including L1 metadiscourse features in the research, Mussa, Hussin and Ho [Mussa et al, 2019] analyse Yemeni L2 writing in the field of applied linguistics. They conclude that the ‘most salient interactional strategies in Yemeni Arab L2 writing are making the bare assertion as well as marking certainty of claims.” (Musa et al, 2019, p. 29). Importantly, these authors propose further ethnographic analysis by taking into account the perceptions of L2 writers using text-based interviews to investigate the functions of interactional metadiscourse. Moreover, and quite predictably, they propose to “compare the extent to which Arab L2 writers employ interactional metadiscourse strategies in comparison to Anglo-American L1 writers.” (Musa et al, 2019, p. 29).

Shafqat, Arain and Dahraj [Shafqat et al, 2020] do analogous research for the Pakistani context, analyzing the ratio of interactive and interactional MMs in undergraduate students’ works. They find that students use more interactive than interactional MMs and stress the importance of metadiscourse devices in learning and teaching writing skills in an English Language Teaching (ELT) context [Shafqat et al, 2020, p. 349].

A significant number of studies use English academic texts written by Chinese L1 speakers to investigate the distribution of MMs across different disciplines and genres. For example, Ho and Li [Ho & Li, 2018], in The use of metadiscourse and persuasion: An analysis of first-year university students’ timed argumentative essays concentrate on only one function of Metadiscourse — that of persuasion. Thethe authors postulate that persuasion in academic discourse can be achieved “by making the logical relationship between clauses explicit and signposting the development of the text with interactive metadiscourse in various academic genres” [Ho et al, p. 54]. They also point out that the inefficient use of MMs by the target
group of students may be attributed to the insufficient priority of teaching metadiscourse to novice academic writers.

Presenting a different approach, *A study of interactional metadiscourse in English abstracts of Chinese economics research articles* [Liu & Huang, 2017] is unique. The authors, in principle, adopt Hyland’s interpersonal model to provide a diachronic analysis of the abstracts. And they agree that researchers from different disciplinary communities may follow different conventions [Liu & Huang, 2017, p. 25]. However, they stress that there exists a “scant reflexion” about the reasons underlying the differences in the use of MMs in Chinese and English academic traditions. They show that in the field of MMs, Chinese researchers rely more on boosters than hedging devices, and this is heavily rooted in Confucian and Taoist tradition, which dictates that researchers provide more empirical support for their findings. Thus, the authors argue that Chinese scholars feel less obliged to argue with their readers and hence are not fully engaged in a reader-oriented approach to academic research. This brings us to the “need for EAP writing instruction to support multilingual writers and heighten their awareness of writing across languages and genres” [McIntosh & Connor, 2019, p. 14]. Another important issue is to revise the understanding of translingual concepts and notions that are currently developing in the field of English as a lingua franca (ELF) when doing cross-cultural comparisons of academic texts provided by scholars with different cultural backgrounds.

Unfortunately, diachronic research on MMs is not frequent, with Hyland and Jiang (2018) providing the most detailed analysis. The authors analyzed changes in four disciplines over a period of 50 years and found a tendency toward “a significant increase in interactive features and a significant decrease in the interactional” [Hyland & Jiang, 2018, p. 23]. They interpret their results as suggesting that researchers are more interested in the cohesive characteristics of texts than in direct communication with the readers. The diachronic research of Deng, Fatemeh and Gao [Deng et al, 2021] was aimed at examining the important textual features and a model of the evolution of MM for a 50-year time span. They explored 180 doctoral dissertations in the humanities, social sciences and engineering and found that “academic genres across hard and soft disciplines are changing in diverse directions” [Deng et al, 2021, p. 27]. They show a big difference in the tendencies of metadiscourse use: “while academic texts in the humanities and social sciences are evolving toward audience-responsible texts that are formal and objective, the sciences and engineering show more informality and subjectivity” [Deng et al, 2021, p. 7249].
Cross-cultural research on metadiscourse markers in academic texts written in two different languages are hard to find, yet they do exist. As an example, Bal-Gezegin [Bal-Gezegin, 2016] aimed to explore how interpersonal metadiscourse was used in Turkish and English book reviews. Of 120 expressions identified as interpersonal MMs by Hyland [Hyland, 2005], twenty-nine were chosen to be searched for. Apparently, further investigation into the technique of comparing is necessary because “the study was limited to Turkish translation of hedging devices which were found to be the most frequent ones in English.” [Bal-Gezegin, 2016, p. 717].

Differences in rhetorical strategies are often studied in the field of English for academic purposes and rarely in media texts. Most research in metadiscourse of news reports follows Hyland’s model [Hyland, 2005] showing that it plays an important role in the genre and calculating the balance between interactive and interactional dimensions [Hashemi & Golparvar, 2012]. A very illustrative example is Interactional metadiscourse markers in sports news in newspapers: A cross-cultural study of American and Iranian columnists [Tavanpour et al, 2016] which shows that Iranian and American news is different in the use of attitude markers, boosters, and hedges [Tavanpour et al, 2016, p. 1]. The Metadiscourse Features in English News Writing among English Native and Iranian Writers: A Comparative Corpus-based Inquiry by Farahani and Sabetifard (2017) also compares the use of interactive and interactional MMs in English language news written by L1 (British and American) and L2 (Persian) speakers. Surprisingly, they found that although interactional or intertextual features (transitions and endophoric markers) are underused in native speaker’s texts, Persian news texts contain many more hedges, boosters and attitude markers. Interestingly, we see an investigation into contrastive rhetoric in news headlines [Laongpol, 2021] that follows the idea about rhetoric that feels very close to that of metadiscourse and thus is to be investigated (compare: “Rhetoric refers to persuasive writing or speaking used by people to manipulate the audience into agreeing with an idea…” as cited by Laongpol [Laongpol, 2021] from Shams [Shams, 2013, p. 146].

Although metadiscourse markers already have a long history of cross-cultural and cross-genre research, mastering them in academic writing requires more precise information on the particular disciplinary and language conventions of a particular disciplinary and language community. This review of the existing literature explicitly demonstrates the need to continue the research for different languages, considering the direct relation of such studies with effective language pedagogy in the academic environment. It also gives an approximate picture of the misbalance in the research of different languages. For example, we did not find any compre-
hensive cross-cultural research on the use of MMs in Russian and English academic texts, although different cross-cultural investigations into Russian and English research papers show significant differences in the distribution of language features across the two languages (see, for example, *Comparative analysis of politeness strategies in Russian and English dentistry texts*: Grigoriev, Rubtsova, 2021).

**Methods and data**

Our research, which may be of great pedagogical significance, our research is aimed at filling a gap in cross-cultural metadiscourse studies in the field of English medical research papers written by L2 Russian speakers who have a 'functional nativeness' proved by their ability to be published in peer-review research journals with a high impact-index. Since writing academic texts is always a challenging task, we chose English as a language for comparison due to its predominant position in academic research. We hypothesized that Russian and English writers use different strategies to communicate with their readers, which results from different linguocultural approaches adopted in the disciplines. In order to solve the problem even partially, we chose abstracts as the most sought-after genre. To do this, we had to answer two research questions:

What are the interactional and interactive metadiscourse strategies employed in English medical paper abstracts by Russian L2 writers?

How do Russian L2 medical writers use interactional metadiscourse strategies to achieve persuasive goals across abstracts?

We created four corpora to analyze the distribution of metadiscourse markers, two representing medical cardiology texts written in English by L2 Russian researchers (abstract and discussion section corpora) and two representing medical texts written in English by presumably L1 English researchers from the *Journal of The American Heart Association* (abstract and discussion section corpora). This is a journal with a very high impact factor and is indexed in the Q1 Scopus abstract and citation database. For Russian corpora, we selected *The Russian cardiology journal* — a peer-reviewed journal of the Russian Society of Cardiology (RSC). The information about the authors we received from their bio-data. These journals have high prestige in domestic and international professional communities. We selected the *Russian Cardiology Journal*, based on a preliminary survey of its authors’ use of rhetorical strategies and the linguistic features in the English versions of their papers originally written in Russian. Our corpora include four corpora of abstract and discussion sections, which we selected by means of random
sampling from around 20 papers. We limited our selection to one sub-discipline within medicine: cardiology.

We calculated metadiscourse markers in four corpora and then analysed the results qualitatively to eliminate those cases when the same language elements did not have a metadiscoursal function, as what might be metadiscourse in one rhetorical context may be expressing propositional material in another. For the purpose of analyzing frequency and functions of metadiscourse markers used in abstract and discussion sections of medical research papers, we used Hyland's [Hyland, 2005] well-known model of interactive and interactional dimensions.

First, we collected the data and analyzed it top-down. We analysed the functions of metadiscourse markers by investigating the context in which each marker occurred. Then we determined the main function of each MM. We assessed the inter-rater reliability based on the second-rater.

Results

The results suggest that Russian L2 medical researchers use more interactive devices than interactional ones. Thus, Russian writers appear to be aware of the idea of a potential reader but are less concerned about the readers themselves than their English counterparts. Below we present the most significant results of cross-cultural research.

Analysis indicates that transitions are the most commonly employed interactional markers, of which additives (in addition, etc.) are preferential for Russian writers (I) and contrastives (but, etc.), for English writers (II). This is true for abstracts and also for Russian (III) and English (IV) discussion sections:

- In addition, the concentration of LDL-C corrected for Lp(a)-cholesterol (LDL-Ccorr) was calculated (RA-6).
- Job strain was not independently associated with CHD risk, but we observed a statistically significant interaction between job strain and social strain (P=0.04)... (EA-12).
- It should also be noted that data appears in the literature that explain the clinical nervous system manifestations from a morphological point of view (RD-1).
- Patients with higher hsCRP levels are also at a higher risk of having a cardiovascular event (ED-1).

The conjunctive adverb however is twice as prevalent in the English corpus for abstracts and discussion sections than in the Russian corpus:

- (V) We did, however, find that male sex was strongly associated with the incidence of MI and MINOCA (ED-2).
However, a systematic review by Milevski M, et al. highlights a number of shortcomings in the use of remote BP monitoring (RD-11).

We find only a few frame markers in the Russian corpus, with a totally different picture in the English corpus. Among the most frequent frame markers are sequence markers. We find a majority of sequence markers in the discussion sections (VIII) compared to the abstract genre (the latter shows half as many markers as the discussion sections) (VII).

Finally, nitrite generation-to-depletion ratios of gene abundances were created from the above summary scores. (EA-22)

Some observations, discussed next, related to the reported performance estimates might be of clinical interest. (ED-4)

The Russian corpus contains only one occurrence of firstly (IX), which is not found in the English corpus.

Nevertheless, according to ESC colleagues, noninvasive tests, firstly, are quite safe for patients, and secondly, they provide an accurate assessment of cardiovascular functional status. [RD-8]

Frame markers announcing goals are common for abstracts in the English corpus, with 12 occurrences for the whole corpus (X), but they cannot be found in the discussion sections of the Russian corpus. The discussion sections of the English corpus do not contain any occurrences of goal markers, whereas those in the Russian corpus contain (XI) four examples with the verbs aim and focus.

We aimed to compare for the first-time early outcomes of Sapien-3 transcatheter heart valve (THV) with the balloon-expandable Myval device. (EA-26)

This study focused on collecting anamnesis, symptoms and feelings of the patients themselves...(RD-1)

Endophoric markers can be seen only in the English corpus discussion sections (XII), with zero occurrences in the Russian corpus.

Although not statistically significant, the survival curves for Reint-CoA in men and women followed a similar pattern as those previously described for CE. [ED-7]

Evidentials, which are defined as the markers that help distinguish outsourced content, traditionally include reporting verbs or propositional attitude verbs. They are much less common in Russian papers than in English papers, with ‘to show’ dominating in the texts of abstracts (XIII) and discussion sections.
Assessment of the contribution of vascular risk factors to vascular aging showed that the leading positions are occupied by hypertension... [RA-20]

Similar studies in other countries show that the annual HF costs range from $908 to $40,971 per patient. [RD-5]

The English corpus demonstrates greater variety in the use of reporting verbs (hypothesize, demonstrate etc.).

Although we hypothesized that self-referred patients would be more adherent to lifestyle and medication recommendations... [ED-3]

The findings herein (N=206) demonstrate that our experience has been similar... [ED-14]

Study investigators reported that methamphetamine users had a higher prevalence of heart failure than the nonuser hospitalized population. [ED-4]

Interactional markers include hedges, boosters, attitude markers, self-mentions, and engagement markers. Results indicate that hedges and self-mentions are the most frequent markers in interactional metadiscourse.

One more distinction is the use of the epistemic verbs may and might in the English corpus of abstracts and discussion sections and its absence in Russian abstracts.

Some observations, discussed next, related to the reported performance estimates might be of clinical interest. (ED-4)

CAN and possibly other SGLT2 inhibitors might be useful for preventing AF and suppressing the promotion of atrial remodeling as an AF substrate. [EA-5]

There are significant differences in the use of self-mentions that ‘indicate the degree of explicit authorial visibility’ (Liu, Huang, p. 26, 2017) in the Russian and English corpora. The Russian corpus of abstracts demonstrates one fourth as many instances of ‘I’ compared to English abstracts.

We utilized data from the ‘Functional Impact of GLP 1 for Heart Failure Treatment’ (FIGHT) study to address these knowledge gaps. (RA-22)

We used different viral titers to examine possible dose-response relationship and assessed viral loads in various fetal organs. [EC-8]

We find an even bigger difference in the use of self-mentions in discussion sections, with 4.3 times as many uses of ‘I’ and 4.6 times as many uses of “our” in the English corpus than in the Russian corpus.
We find seven times as many uses of epistemic verbs (\textit{may}, \textit{might}) in the English corpus abstracts (XX) compared to the Russian corpus abstracts and twice as many uses in the discussion sections.

\textbf{(XX)} \textit{Nitrite depletion by oral bacteria may also be important for determining the net nitrite available systemically.} [EA-21]

Other hedges include \textit{likely}, \textit{seem}, and \textit{appear}, with \textit{likely} being preferential for the English corpus and no preferential use of either epistemic expressions or probability adverbs in the Russian corpus.

\textbf{(XXI)} \textit{Women were independently less likely to be admitted when presenting with CP.} [EA-24].

Self-mentions are universally considered to be a tool to eliminate excess assertiveness and thus to avoid criticism on the part of the disciplinary community. Russian writers show a trend to use fewer self-mentions in the form of the inclusive pronoun ‘we’ and possessive ‘our’.

\textbf{(XXII)} \textit{We hypothesized CVB3 can precipitate congenital heart defects when fetal infection occurs during critical window of gestation.} [EA-8]

Engagement markers are considered to form a relationship with the reader. This is normally achieved, as seen in the English corpus, through the use of the second person pronoun ‘you’, ‘your’ and ‘yourself’, the modal verb ‘should’, and also a number of engaging verbs or verbal phrases: \textit{be done, noticed, expected, kept in mind}. These attitude markers and engagement markers are the least used metadiscourse and can be found only in the English corpus.

\textbf{(XXIII)} \textit{It should be noted that the study design described by Zhao et al. allowed for exclusion of patients with known interstitial lung disease, HIV coinfection…} [ED-2]

The overall findings show that interactive metadiscourse markers for sequencing, announcing goals and indicating the nature of a given statement (evidentials) were more frequent in both English abstracts and discussion sections than in their Russian counterparts. The results also reveal that the use of transition markers for addition and comparison is almost the same in the English and Russian corpora for abstracts and discussion sections.

In interactional metadiscourse corpora, the overall findings indicate that English writers in both abstracts and discussion sections use
Conclusion

We understand that the Russian lingua-cultural academic community has in mind traditional rhetorical norms that they extend to the English versions of the results of their academic publishing process, but Russian authors are now beginning to adopt English disciplinary rhetorical conventions. However, our research demonstrates that Russian academic texts show a scarcity of metadiscourse resources, so we have before us the pedagogical task of explaining the role of metadiscourse in the interaction between the writer and the reader. Moreover, we find that Russian writers pursue a less dialogic and more impersonal style in their papers, and they have a different balance between informality and objectivity. All these factors require thorough attention in order to provide expert advice in classes or consultations aimed at enhancing interpersonal consciousness in Russian academic discourse.

Thus, the findings of this study have some pedagogical implications, especially for classes in English for Specific Purposes, English for Academic Purposes, and English for Research Purposes. We also hypothesize that the proficiency level and correct use of MMs can serve as a testing index for academic correctness. This is especially true for what we consider the most important rhetorical trend not to express caution in academic genres, something that we do not see in the academic and research writing of novice Russian researchers. To assist those who have not yet reached a high level of proficiency in English, we should teach metadiscourse markers in our classrooms, stressing their role in the interaction between the writer and the reader. Of special importance here is the balance between informality and objectivity. As it follows from the corpus analysis, there are specific aspects of interaction in Russian written academic discourse that need to be taught at the first stage of the teaching process. To build solidarity with the audience and achieve sufficient similarity to academic text written according to Anglo-Saxon writing conventions, Russian medical writers have to learn how to apply various rhetorical devices. They are the following: the use of first-person pronouns to avoid an impersonal and less dialogic style in academic writing; the use of frame markers to show sequencing and announce goals; and the use of evidentials. They also have to expand the repertoire of verbs denoting the author's commitment to a proposition (for example, show, report, hypothesize, suggest, propose).
Regarding the use of interactional resources, the first stage of the correct use of MMs should include epistemic verbs, probability adverbs, along with both epistemic expressions and epistemic markers, which are not found in the Russian corpus.

**Discussion and limitations**

The present study experienced certain limitations in terms of sampling, the scope of the data, methodology and generalizability. Sample texts selected for Russian and English corpora represented a single discipline, cardiology, so our cross-cultural research should be extended to other fields of knowledge. We will probably find quite a different picture for the disciplines where the researchers are closer to Anglo-Saxon written traditions.

It also should be considered that the textual materials under analysis are the materials transferred from a native language (Russian) into one that is non-native. We may suggest that the transference shift to some extent to metadiscourse features of source texts that should also be analyzed to see the real cross-cultural differences and values of a particular discourse community. However, we should understand that though Russian writers are moving towards greater tentativeness in assessing the results of their research, more investigation is needed into the practical part of translanguaging theory and the ways and methods of overcoming the socially constructed language systems.

**References**


Dalili, M. V., Dastjerdi, H. V. (2013). A contrastive corpus-based analysis of the frequency of discourse markers in NE and NNE media discourse: Implications for


