Original Research

Cross-disciplinary variation in metadiscourse: A corpus-based analysis of Russian-authored research article abstracts

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The article deals with metadiscourse variation in academic texts across disciplinary boundaries. Its main focus is on the distribution of metadiscourse markers in Russian-authored academic prose in the field of applied linguistics and engineering. The study assumes that the distribution of metadiscourse devices is determined by disciplinary norms. The theoretical basis of the study is Hyland's taxonomy of metadiscourse markers. With the aim of investigating metadiscourse in English-medium research article (RA) abstracts by Russian authors, the present study adopted a combination of quantitative and qualitative methods. The results revealed that RA abstracts feature four types of metadiscourse markers whose distribution varies across two disciplines representing the humanities and hard sciences. The study also investigated the degree of familiarity of linguistics and engineering scholars from leading Russian universities with metadiscourse devices and their awareness of the need to use them in research articles. To achieve this goal, a survey was conducted to obtain data on knowledge of metadiscourse as a discursive strategy. The findings carry therefore pedagogical implications for academic writing course designers and instructors and can enhance non-native English writers' knowledge of academic writing conventions in the discipline.

KEYWORDS: *research article, abstract, academic discourse, academic genre, interactional metadiscourse markers, corpus*

1. INTRODUCTION

This paper deals with the insufficiently studied English-language academic prose by writers from Russia where English has been used as a language of scientific publication only for the last 20 years. To meet the requirements of international academia, Russian writers need to gain a good command of academic English for performing various academic tasks. Being familiar with rhetorical strategies, including metadiscourse markers in the discipline, empowers L2 writers to comply with the existing academic writing conventions (formal tone, convincing argumentation, objective analysis, a balance between authority and humility, lack of ambiguity, evidence-based critique and evaluation, consistent referencing, etc.).

Research article (RA) abstracts serve as a screening device (Huckin, 2006) that affects editor and reviewer decisions for accepting the article. In addition, a prop-

erly organised abstract helps attract more readers and increase citation count. Abstracts serve, therefore, as a vehicle for promoting the article (Hyland, 2009) and as a point of departure for the article to unfold.

To contribute to the literature on the genre of RA abstracts and their rhetorical organisation, in particular metadiscourse properties, this study aims to answer the following research questions.

1. What metadiscourse devices are used in English-medium RA abstracts by Russian authors from two disciplines – applied linguistics and engineering?

2. What is the frequency of occurrence of metadiscourse markers in RA abstracts across the two disciplines?

3. What is the degree of familiarity of expert academic writers with metadiscourse devices and awareness of the need to use them in their articles?

By addressing these questions, the study intends to give an insight into the body of knowledge about differences in metadiscourse patterns in RA abstracts by non-native English-speaking writers representing humanities and hard sciences. Notably, the findings can delineate the influential role of metadiscourse drawing the reader into the more detailed exposition.

2. MATERIAL AND METHODS
2.1. Corpus design

Since the RA abstracts collected were used as a repository of data, the approach employed in the present research to answer the research questions is corpus-based. The current study was conducted on a corpus of RA abstracts derived from six journals in the field of applied linguistics and from six journals in the field of engineering: *Journal of Politeness Research* (two issues per year), *Intercultural Pragmatics* (four issues per year), *ESP Today* (two issues per year), *Training, Language and Culture* (four issues per year), *Russian Journal of Linguistics* (four issues per year), *Cognitive Linguistics* (four issues per year), *Computer Optics* (six issues per year), *Sustainable Development of Mountain Territories* (four issues per year), *Renewable Engineering* (12 issues per year), *Materials Today Energy* (four issues per year), *Eurasian Mining* (two issues per year) and *Energies* (four issues per year). The focus on applied linguistics and engineering RAs is due to the author's membership in the linguistics discourse community and their experience in teaching EAP to engineering students. Knowledge of the academic writing norms in these disciplines helped thus helped the author identify and describe general metadiscourse trends.

146 abstracts were randomly selected from the recent issues of these journals and divided into two sub-corpora. The number of words in each sub-corpus was 23,786 and 19,167 respectively which makes up 42,853 words altogether. Each sub-corpus included 73 RA abstracts. The aim of this corpus-based approach was to examine the frequencies of occurrence of metadiscourse devices in the disciplines.

The examples quoted in this article are coded by indicating the number of the sub-corpus: '1' for the applied linguistics sub-corpus and '2' for the engineering sub-corpus.

2.2. Questionnaire

To achieve the third goal of the study, an online survey of the knowledge and use of metadiscourse was conducted among 49 scholars from four leading Russian universities. Participants were selected for their expertise and affiliation. Visiting professors affiliated with foreign universities were not involved in the survey. All selected scholars were contacted by email and volunteered to participate in the online survey. Since the survey was anonymous, no consent from the participants was required.

Before conducting the survey, the scholars were given three RA abstracts in their field containing interactional metadiscourse and asked to identify metadiscourse devices in sentences. Then the survey designed to gather some supporting data for the study was conducted. The scholars were asked three yes-no questions: (1) whether they had known before that metadiscourse was common in academic discourse, (2) whether they managed to identify metadiscourse devices used in the text, and (3) whether they thought that metadiscourse was an important aspect of academic prose.

2.3. Data analysis

The study used both qualitative and interpretative methods. The quantitative analysis supplemented with contextual analysis was applied to all instances of metadiscourse markers to examine the socio-pragmatic context in which linguistic units are used to identify whether they serve the metadiscourse purpose. At the first stage, metadiscourse markers were identified manually in 73 applied linguistics RA abstracts and in 73 engineering RA abstracts. At the second stage, the metadiscourse markers that appeared in the two sub-corpora were analysed in context. Using Hyland's (2005) taxonomy, the metadiscourse markers were di-

vided into four groups: hedges, boosters, attitude markers, and self-mentions. Engagement markers were not found in the corpus. Since the sizes of the two sub-corpora were not equal, the raw frequencies and normalised frequencies of occurrence of metadiscourse markers per 1,000 words were calculated to facilitate statistical comparison. The occurrences were processed with AntConc 3.4 which can ensure the accuracy of research results. At the third stage, scholars' responses for each item in the questionnaire were analysed and summarised in a table format.

3. THEORETICAL BACKGROUND
3.1. Previous research into RA abstracts

Previous studies on RA abstracts have attempted to reveal their rhetorical structure (e.g., Boginskaya, 2022b; Gessesse, 2016; Ji, 2015; Rochma et al., 2020; Saidi & Talebi, 2021; Tocalo, 2021), generic patterns (e.g., Cross & Oppeheim, 2006; Darabad, 2016), linguistic features (e.g., Kozubíková Šandová, 2021; Kuhi & Mousavi, 2015), cross-disciplinary and cross-cultural peculiarities (e.g., Alonso Almeida, 2014; Belyakova, 2017; Boginskaya, 2022a; Hu & Cao, 2011; Lorés Sanz, 2006; Martín, 2003; Muñoz, 2013; Perales-Escudero & Swales, 2011; Stotesbury, 2003; Van Bonn & Swales, 2007; Yang, 2013), interpersonal features (e.g., Lorés Sanz et al., 2010; Khedri et al., 2015; Kuhi & Mousavi, 2015), subjectivity, evaluation and engagement elements (e.g. Biber, 2006; Lyda & Warchal, 2014; Stotesbury, 2003; Wang & Pramoolsook, 2021; Bondi, 2014). Ji (2015), for example, made an attempt to find similarities and differences in the structure of abstracts written by native English speakers and Chinese English learners. The results obtained indicate that the Chinese learners focus too much on introduction move and have trouble using tenses properly. Saidi and Talebi (2021) have explored the constituent moves and move patterns of RA abstracts published in Iranian and international journals in the field of applied linguistics and revealed no significant difference in terms of the frequency of the moves in the abstracts. Kozubíková Šandová (2021) investigated RA abstracts from a different perspective. Her study has focused on variation in the use of metadiscourse markers in 96 RA abstracts from the field of applied linguistics published over the last 35 years. The study has revealed that the distribution of these linguistic means has undergone diachronic changes. Wang and Pramoolsook (2021) have examined the stance expression in terms of hedges, boosters, attitude markers, and self-mentions. Their findings have

revealed a genre-specific convention in using these categories of stance and discipline-specific variations of stance expression.

Previous studies have also shed light on RA abstracts written by members from different discourse communities: medicine (e.g., Salager-Meyer, 1992), applied linguistics e.g., (Lorés Sanz, 2004; Hu & Cao, 2011), engineering (e.g., Abarghooeinezhad & Simin, 2015; Belyakova, 2017), law (e.g., Alonso-Almeida, 2014), etc. Alonso-Almeida (2014), for example, explored the categories of evidentiality in a corpus of English and Spanish abstracts in the fields of medicine, computing, and law. Abarghooeinezhad and Simin (2015) made an attempt to analyse RA abstracts by native English speakers and Iranian speakers in the field of electronic engineering, focusing on the rhetorical structure. It was also found that there were some variations between the sub-corpora. Belyakova's (2017) study aimed to conduct a cross-linguistic comparison of abstracts written in English by Russian novice researchers and native English-speaking experts in geoscience. The results allowed for hypotheses on some distinctive features of abstracts written by Russian geoscientists.

While these studies are valuable, there is still a complementary contribution to be made by corpus-based studies that compare metadiscourse in RA abstracts from different disciplines and reveal discipline-specific features. Writing RA abstracts in each particular discipline deserves a more detailed examination.

3.2. Metadiscourse and metadiscourse devices

As a product of social communication, academic prose contains various metadiscourse devices 'used to negotiate interactional meanings in a text, assisting the writer (or speaker) to express a viewpoint and engage with readers as members of a particular community' (Hyland, 2005, p. 37). These devices 'help relate a text to its context by assisting readers to connect, organise, and interpret material in a way preferred by the writer and with regard to the understandings and values of a particular discourse community' (Hyland & Tse, 2004, p. 157).

In recent decades, several taxonomies of metadiscourse elements have been proposed (e.g., Beauvais, 1989; Crismore, 1984; Hyland, 2004, 2005; Hyland & Zou, 2021; Hyland et al., 2021; Vande Kopple, 1985). Most of them divide metadiscourse markers into textual and interpersonal. According to Vande Kopple's (1985, p. 87) taxonomy, for example, textual markers include illocution markers, attitude markers and commentaries.

Interpersonal markers include text connectives, code glosses, validity markers, and narrators. While the former show *'how we link and relate individual propositions so that they form a cohesive and coherent text and how individual elements of those propositions make sense in conjunction with other elements of the text'*, the latter *'help us express our personalities and our reactions to the propositional content of our texts and characterise the interaction we would like to have with our readers about that content'* (Vande Kopple, 1985, p. 87).

Twenty years later, Hyland (2005) developed a taxonomy of metadiscourse that encompasses the interactional aspect of discourse based on external and internal relations. As Hyland (2005, p. 45) put it, an internal relation *'connects events in the account and is solely communicative, while an external relation refers to those situations themselves'*. In other words, while external relations refer to the propositional content, internal ones – to metadiscourse.

Hyland (2005) distinguished between five types of metadiscourse markers: hedges, boosters, attitude markers, self-mentions, and engagement markers. Hedges were conceptualised by Hyland (2005) as linguistic devices indicating the writer's decision to recognise alternative viewpoints, withhold complete commitment to a proposition, indicate that a statement is based on the writer's plausible reasoning rather than certain knowledge. Boosters are words which allow writers to *'suppress alternatives, presenting the proposition with conviction while marking involvement, solidarity and engagement with readers'* (Hyland, 2005, p. 145) and

strengthen an argument by suggesting the reader draw the same conclusions as the writer. Attitude markers are linguistic resources used to express the information affected by the presence of attitude verbs, adverbs, and adjectives. They demonstrate importance, surprise, agreement, frustration, obligation and help the writer create a convincing discourse and establish disciplinary competence. Self-mentions are devices that refer to the degree of explicit author presence in the text and send *'a clear indication to the reader of the perspective from which their statements should be interpreted, distinguishing their own work from that of others'* (Hyland, 2005, p. 148).

The degree of authorial presence in the text is signalled explicitly by the first person singular or plural pronouns and corresponding possessives. Finally, engagement markers are devices that are used to focus readers' attention or include them as discourse participants (Hyland, 2005, p. 53). They can also involve rhetorical positioning of readers, guiding them to interpretations. These are reader pronouns (*you* and *your*), personal asides questions, and directives.

4. STUDY AND RESULTS
4.1. Qualitative and quantitative analyses of metadiscourse

Using Hyland's (2005) taxonomy of metadiscourse markers, interactional metadiscourse markers that appeared in the corpus were distributed between four groups presented in Table 1. The table summarises the raw and normalised frequencies of interactional metadiscourse in two sub-corpora.

Table 1

Raw and normalised frequencies of metadiscourse in the corpus

METADISCOURSE MARKERS	SUB-CORPUS 1		SUB-CORPUS 2	
	Raw frequency	Normalised frequency	Raw frequency	Normalised frequency
Hedges	373	16.2	32	1.7
Boosters	165	7.17	107	5.6
Attitude markers	202	10.4	61	3.2
Self-mentions	182	8.8	22	1.1
Total	922	40	222	11.7

The raw and normalised frequencies were different across the two sub-corpora. The normalised frequencies demonstrate that in applied linguistics, the number of metadiscourse devices is 4.2 times more than in engineering. We can assume that linguists are more careful in making claims, anticipating, acknowledging, challenging and suppressing alternatives. The most striking aspect is the dominance of self-mention markers in the applied linguistics sub-corpus and its low frequency in the engineering RA abstracts. The reason is writing conventions developed by the hard sciences discourse community that advises its members to avoid personal pronouns in academic prose. In the humanities the prohibition of the use of personal pronouns is considered to hurt the authors' ability to distinguish their views from other authors' perspectives.

In applied linguistics, the most frequent metadiscourse markers were hedges accounting for 16.2 in every 1000 words. In engineering, boosters were employed more frequently than other types (5.6 in 1,000 words). Attitude markers were found more frequently in applied linguistics RA abstracts where they emphasised crucial or debatable findings as well as the novelty and usefulness of the studies presented.

4.1.1. Hedges

Regarding the distribution of hedges across disciplines, the number of instances in 1,000 words in each of the sub-corpora was different: 16.2 in applied linguistics and 1.7 in engineering. As can be seen from these figures, the difference is striking – more than nine times. This difference might be explained by the ability of hedges to weaken the authorial claim and reduce the degree of reliability for the authorial statement which is not welcome in the hard sciences. Here are some examples of hedging devices derived from the corpus.

*Improving the performance, increasing productivity, reducing the metal consumption of grinding equipment and other mining machines is **usually** a very expensive process.* (2)

*These explanatory strategies – definition, description, exemplification, and metaphorization – are **typically** employed with the aim of improving the comprehensibility of jury instructions.* (1)

The hedges employed by the authors express willingness to convey respect for alternative views. In the example below, hedging expresses distance from the authorial claim:

*Our results suggest that politeness is based on different communicative styles and expressive traditions, which **appear** to vary across cultures.* (1)

The following examples illustrate the case when hedging basically weakens the propositional content by reducing the degree of certainty for the authorial statements:

*A statistical trend is found in which a smaller curvature would **typically** lead to a higher charge rate of negative charges after CE.* (2)

*It plays a key role in the 'theory of possible worlds' which was initiated by G.W. Leibniz, restarted in the 1950's and is still **fairly** popular in formal logic, in philosophy of mind, and in cognitive semantics.* (1)

In these examples, the purpose of using hedges *mostly* and *fairly* is to make the authorial claims less certain.

The corpus-based analysis revealed that hedges are mainly expressed by the modals *can, may, might*, the adjective *possible,* the verb *to seem*, the adverbs *possibly, probably,* and *rather*.

The frequency of occurrence of the most frequent linguistic means used for hedging is presented below in Table 2.

Table 2
Normalised per 1,000 words frequency of occurrence of linguistic means used for hedging in the corpus

LINGUISTIC MEANS	APPLIED LINGUISTICS	ENGINEERING
may	7.1	0.5
possible	3.4	0.3
can	2.0	0.5
rather	0.9	0.1
probably, possibly	0.6	0.1

4.1.2. Boosters

The study revealed that boosters were less frequent in applied linguistics RA abstracts. In both sub-corpora, the Russian writers used boosters to emphasise their assertions and produce persuasive arguments. The difference in the frequency of occurrence of boosting devices might be attributed to the discipline-specific rhetorical conventions of argumentation. The engineering discourse community believes that truth is self-evident without the need for argument and tends to rely on experiential knowledge in reasoning giving less attention to possible counterarguments. The following examples illustrate the case.

*Optical sensors are **widely** used in the biomedical, chemical and food industries. (2)*

*The sensitivity of the sensor is **highly** dependent on its material and structure. (2)*

In the following example derived from the applied linguistics sub-corpus, the adverbial expression *of great theoretical interest* assists the writer in leading the readers to the same reasonable inferences (Hyland, 1998).

*The consideration of the nature and peculiar features of the speech act as a unit of normative sociospeech behaviour is **of great theoretical interest** as it helps examine the mechanisms of speech and identify specific trends and practical significance, for example, for the adequate identification and description of discursive strategies to the full extent. (1)*

In the example below, the author anticipates possible responses from the reader but chooses to prevent them suppressing thereby any alternative views.

*The results **show** that despite reviewers' individual styles there are some culture-specific traits in the styles of reviews. (2)*

The boosting device *show* is used here to express the conviction with which the authors communicate their research results and construct *'rapport by marking involvement with the topic and solidarity with an audience, taking a joint position against their voices'* (Hyland, 2005, p. 53). The study revealed that the most frequent boosting device in both sub-corpora was the verb *to show* (Table 3).

Table 3

Normalised per 1,000 words frequency of occurrence of linguistic means used for boosting in the corpus

BOOSTING DEVICE	APPLIED LINGUISTICS	ENGINEERING
to show	2.5	1.4
to demonstrate	1.7	1.1
in particular	1.2	0.7
in general	1.1	0.2
mainly	0.9	0.1
definitely	0.6	0.3

4.1.3. Attitude markers

The attitude markers rank second in both sub-corpora. Here is an example from the corpus.

*This method, combined with methods of spectral-phase Fourier transforms and statistical tests, is the most effective way to obtain **reliable** quantitative results for solving engineering problems of atmospheric wave optics. (2)*

In the example above, attitude is signalled by the adjective *reliable* conveying positive evaluation of the results which can be obtained by the authors. In the example provided below, the attitude marker *important* emphasises the significance of the study conducted by the authors.

*The analysis of the speech act of agreement, as one of the most **important** for dialogic communication, made it possible to single out a variety of communicative units involved in its implementation, as well as to reveal the diversity of the modal characteristics transmitted by them. (SC1)*

In the following examples, the attitude markers create a rhetorical effect which constructs a problematic issue worthy of research.

*Besides, some light will be thrown on the advancements and **debatable** questions arising within discourse theory as reflected in its methodology.* (1)

*The prefrontal anterior cingulate cortex (ACC) responds to visual stimuli, yet **little** is known about if and how visual experience modifies ACC circuits.* (2)

The statements with attitudinal markers were more frequently found in the applied linguistics abstracts rather than in the engineering sub-corpus (cf., 10.4 attitude markers per 1,000 words in the applied linguistics sub-corpus vs 3.2 attitude markers per 1,000 words in

the engineering sub-corpus). Following Hyland (2005), it may be assumed that humanities writers are less able to rely on the quantitative methods to establish their claims, and this enhances the need for more explicit evaluation with attitude markers.

In the corpus, attitude markers were expressed by adjectives or adverbs showing the author's attitudes and encoding positive or negative values: *important, efficient, interesting, little, useful, effective, correctly, problematically*. The adjectives *important* and *efficient* were the most frequent attitude markers in the applied linguistics sub-corpus. The adverb *correctly* and the adjectives *efficient* and *effective* were most frequently used in the engineering RA abstracts (Table 4).

Table 4

Normalised per 1,000 words frequency of occurrence of linguistic means used for expressing attitudes in the corpus

ATTITUDE MARKER	APPLIED LINGUISTICS	ENGINEERING
important	3.1	0.7
efficient	3.0	0.9
effective	1.1	1.1
useful	0.9	0.6
debatable	0.3	0.1
accurately	0	0.3

4.1.4. Self-mentions

Table 2 shows that the distribution of this group of interactional metadiscourse markers across the two disciplines is uneven. The largest number of all cases of self-mention were in the applied linguistics RA abstracts, with 8.8 per 1,000 words compared with only 1.1 per 1,000 words in the engineering sub-corpus. Writers in the field of engineering prefer to downplay their personal role in the research to highlight the phenomena under study. By choosing an impersonal style, they suggest that research findings are unaffected by individuals, which strengthens the objectivity of results. In contrast, in the humanities, the first person singular and plural pronouns help writers take a personal stance and demarcate their own studies from those of other writers. The differences may be attributed to the influential role of the engineering scientific paradigm advising avoidance of personality in academic

prose, a trend towards an objective, impersonal way of writing established in the field of engineering. The differences force us to consider the practice of academic writing as a social act. As Berkenkotter and Huckin (2016) put it, academic writers are social actors who are familiar with disciplinary norms. In the same vein, Hyland (1998) argued that academic writers need to ratify their claims to obtain collective agreement that their data represent facts rather than opinions. Similarly, Varttala (2001) claimed that the different uses of metadiscourse devices are a manifestation of writers' adherence to the disciplinarily accepted rules of academic interactions. According to Takimoto (2015, p. 103), the rhetorical choices made by academic writers *'seem to be constrained by the discourse norms and rhetorical styles of each discipline'*. The compliance with discipline norms is required for authorial claims to be accepted by the disciplinary community.

In the corpus, self-mentions were signalled by the use of the first person singular and plural personal pronouns *I* and *we*, and the corresponding possessive forms *my* and *our*.

*In this essay, **I** report what **I** had to do to carry out this complex and ambitious project, what forms and kinds of linguistic and cultural competence **I** had to acquire … (1).*

Our *results demonstrate that simple sensory stimuli can be used to reveal how experience functionally (or dysfunctionally) modifies higher-order prefrontal circuits and suggest a divergence in how ACC and V1 encode familiarity. (2)*

The self-mention markers used in these excerpts highlight the authors' contributions, help their authorial selves.

In the engineering RA abstracts, no occurrences of the first person singular pronouns were found (Table 5). In the applied linguistics sub-corpus, the first-person plural pronouns were more frequent (6.9 per 1,000 words) and used even in single-authored RA abstracts, which is typical of the Russian academic writing style influenced by the mentality of collectivism and sociocentrism (Krapivkina, 2014).

In Russian academic discourse, the employment of the first person plural pronouns instead of singular pronouns is usually motivated by the desire to present an author's own opinion as the opinion of a discourse community thus enhancing the significance of the research (Krapivkina, 2017). In their English-language RA abstracts, Russian authors follow the writing conventions prevailing in Russian academia.

Table 5

Normalised per 1,000 words frequency of occurrence of self-mentions in the corpus

SELF-MENTION MARKER	APPLIED LINGUISTICS	ENGINEERING
I	0.9	0
we	4.8	0.9
my	0.2	0
our	1.9	0.2
us	0.2	0.1
me	0	0

4.2. Metadiscourse survey results

As metadiscourse is an element of pragmatic competence, teaching how to use metadiscourse devices is crucial for EAP instructors. Despite the significance of metadiscourse in academic prose, it is not often taught in EAP classes, and it is difficult and time-consuming for non-native speaker academic writers to be able to use metadiscourse efficiently. At the same time, teaching how to use metadiscourse devices can be beneficial for non-native English writers' publications to be accepted and published in prestigious international journals.

To achieve the third goal of the present study, an online survey was conducted among 49 Russian scholars from four leading Russian universities with the in-

tention to reveal the degree of Russian expert academic writers' knowledge of metadiscourse devices. Participants were selected according to their author's expertise and affiliation. Novice academic writers or visiting professors affiliated with foreign universities were not involved in the survey. The survey included three questions (Figure 1).

Table 6 presents the percentage of 'yes' and 'no' answers to each of these questions. The percentage was calculated in Percentage Calculator, an online tool designed to calculate percentages.

Through the analysis of these answers, it was revealed that most of the participants (68%) stated that they had not known that metadiscourse was a common feature in academic prose and 73% of them had never

thought about the important role of metadiscourse devices in their research articles. Only 8% of the participants managed to recognise more than 70% of the metadiscourse devices employed in the academic texts

given to them for analysis. For the most part, these were epistemic modals such as *can, may, could,* adverbs *usually, probably, almost, particularly* and personal pronouns *we* and *our*.

Metadiscourse in academic prose

1* Do you know that metadiscourse is common in academic discourse?
○ Да ○ Нет

2* Did you managed to identify more than 70% of the metadiscourse devices used in the text?
○ Да ○ Нет

3* Do you think that metadiscourse is an important aspect of academic prose?
○ Да ○ Нет

Figure 1. Metadiscourse survey's questions

Table 6
Metadiscourse survey's results

QUESTIONS	PERCENTAGE OF 'YES' ANSWERS	PERCENTAGE OF 'NO' ANSWERS
Question 1	32	68
Question 2	8	92
Question 3	27	73

5. DISCUSSION

The assumption about the uneven distribution of interactional metadiscourse devices in applied linguistics and engineering RA abstracts made in the abstract was confirmed by the research results obtained in the study. Through the cross-disciplinary analysis of the two sub-corpora, disciplinary variation in the frequency of metadiscourse markers was revealed. Russian linguists took far more explicitly involved positions than writers in the field of engineering.

Regarding Research Question 1, the study found that both applied linguistics and engineering researchers made use of the four types of metadiscourse (hedges, boosters, attitude markers, and self-mentions). Engagement markers were not found in both sub-corpora.

In answering Research Question 2, the analysis revealed that in the applied linguistics RA abstracts the number of metadiscourse markers was four and a half

times more than in the engineering sub-corpus since linguists were much more careful in making claims and in anticipating, acknowledging, challenging and suppressing alternatives.

The study also identified the dominance of self-mention markers in applied linguistics and their lower frequency in the engineering texts, since the engineering discourse community advises its members to avoid any personal pronouns in their papers. In the humanities, including linguistics, personal pronouns are employed to distinguish authorial views from other people's perspectives. It was also revealed that in applied linguistics the most frequent metadiscourse markers were hedges, while in engineering, boosters were more frequent than other categories.

Attitude markers were found more frequently in the humanities, since in these sciences research novelty and usefulness are less evident than in the hard sciences. The differences in the use of metadiscourse

markers by Russian writers from applied linguistics and engineering may be attributed to the existence of cross-disciplinary writing conventions.

Regarding Research Question 3, the study found that the high share of the participants had not known that metadiscourse was a common feature in academic prose and had never thought about the role of metadiscourse in academic prose. This extremely low degree of familiarity with this rhetorical feature indicates the need to teach metadiscourse to novice academic writers for them to gain a good command of academic language for presenting their research results in the international arena. Knowledge of conventional metadiscourse markers used in research articles in the field empowers novice writers to comply with the existing writing conventions. This supports the findings of previous studies which indicated that the teaching of metadiscourse could help raise academic writers' awareness of metadiscourse (Hinkel, 1997; Hyland, 1998, 2005).

The study has some other pedagogical implications. Firstly, when teaching metadiscourse, EAP teachers should use common metadiscourse devices, such as those from Hyland's (2005) list. Secondly, more examples of how to use metadiscourse markers in research articles should be introduced by EAP teachers. They should be taken from academic prose by native academic writers in the field. Thirdly, although there are some textbooks, which offer guidelines on the use of metadiscourse devices, they are rather general and do not focus on RA abstracts, which is a separate academic genre different from the RA. It seems that explicit teaching of metadiscourse in RA abstracts can help raise awareness of the interactional aspect of this genre among L2 writers and increase their ability to interact with readers and make their claims more persuasive.

6. CONCLUSION

This paper explored metadiscourse in English-medium RA abstracts written by Russian authors from a cross-disciplinary perspective which previously did not attract the attention of discourse analysts. Despite the emergence of studies on RA abstracts and their rhetorical structures, their focus has been on a comparison of research articles written by L1 and L2 English writers. This paper dealt with cross-disciplinary differences in the distribution of interactional metadiscourse markers and how Russian writers in the two fields express their attitudes towards the reader and present the content in English-medium academic prose.

Admittedly, the research results presented here are limited due to the small size of the corpus and should be understood as trends in the two disciplines which can be confirmed or disproved by large-scale research into the ways metadiscourse is used by different disciplines.

By identifying the metadiscourse preferences of academic writers from different disciplines, we can learn more about conventional rhetorical practices which would help novice writers learn stylistic features typical of discourses in the field.

More metadiscourse studies should be done with different academic genres to determine their interactional features.

Diachronic variation in the use of metadiscourse markers in RA abstracts could be also of interest. Comprehensive research that results in instruction for teaching metadiscourse skills would be of interest to EAP teachers and course designers. Metadiscourse in research articles is a promising field of research which can help us see how different disciplinary contexts affect rhetorical choices.

References

Abarghooeinezhad, M., & Simin, S. (2015). Analyses of verb tense and voice of research article abstracts in engineering journals. *International Letters of Social and Humanistic Sciences, 4*, 139-152. https://doi.org/10.18052/www.scipress.com/ILSHS.47.139

Alonso-Almeida, F. (2014). Evidential and epistemic devices in English and Spanish medical, computing and legal scientific abstracts: A contrastive study. In M. Bondi & R. Lorés Sanz (Eds.), *Abstracts in academic discourse: Variation and change* (pp. 21-42). Peter Lang.

Beauvais, P. J. (1989). A speech act theory of metadiscourse. *Written communication, 6*(1), 11-30. http://doi.org/10.1177/0741088389006001002

Belyakova, M. (2017). English-Russian cross-linguistic comparison of research article abstracts in geoscience. *Estudios de Lingüística Universidad de Alicante, 31*, 27-45. https://doi.org/10.14198/ELUA2017.31.02

Berkenkotter, C., & Huckin, T. N. (2016). Genre knowledge in disciplinary communication: Cognition, culture, power. Routledge. https://doi.org/10.4324/9781315538747

Biber, D. (2006). Stance in spoken and written university registers. *Journal of English for Academic Purposes, 5*(2), 97-116. https://doi.org/10.1016/j.jeap.2006.05.001

Boginskaya, O. (2022a). Creating an authorial presence in English-medium research articles abstracts by academic writers from different cultural backgrounds. *International Journal of Language Studies, 16*(2), 49-70.

Boginskaya, O. (2022b). Functional categories of hedges: A diachronic study of Russian-medium research article abstracts. *Russian Journal of Linguistics, 26*(3) (in press). https://dx.doi.org/10.22363/2687-0088-30017

Bondi, M. (2014). Changing voices: Authorial voice in abstracts. In M. Bondi & R. Lorés Sanz (Eds.), *Abstracts in academic discourse: Variation and change* (pp. 243-270). Peter Lang. https://doi.org/10.3726/978-3-0351-0701-2/11

Crismore, A. (1984). The rhetoric of textbooks: Metadiscourse. *Journal of Curriculum Studies, 16*(3), 279-296. https://dx.doi.org/10.1080/0022027840160306

Cross, C., & Oppenheim, Ch. (2006). A genre analysis of scientific abstracts. *Journal of Documentation, 62*(4), 428-446. https://dx.doi.org/10.1108/00220410610700953

Darabad, A. M. (2016). Move analysis of research article abstracts: A cross-disciplinary study. *International Journal of Linguistics, 8*(2), 125-140. https://doi.org/10.5296/ijl.v8i2.9379

Gessesse, C. M. (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. https://doi.org/10.29333/ojcmt/2534

Hinkel, E. (1997). Indirectness in L1 and L2 academic writing. *Journal of Pragmatics, 27*(3), 361-386. https://dx.doi.org/10.1016/S0378-2166(96)00040-9

Hu, G., & Cao, F. (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. https://dx.doi.org/10.1016/j.pragma.2011.04.007

Hyland, K. (1998). *Hedging in scientific research articles*. John Benjamins. https://doi.org/10.1075/pbns.54

Hyland, K. (2004). *Disciplinary discourses: Social interactions in academic writing*. University of Michigan Press. https://dx.doi.org/10.3998/mpub.6719

Hyland, K. (2005). *Metadiscourse: Exploring interaction in writing*. Continuum.

Hyland, K. (2009). *Academic discourse: English in a global context*. A & C Black.

Hyland, K., & Tse, P. (2004). Metadiscourse in academic writing: A reappraisal. *Applied Linguistics, 25*(2), 156-177. https://doi.org/10.1093/applin/25.2.156

Hyland, K., Wang, W. & Jiang, F. (2021). Metadiscourse across languages and genres: An overview. *Lingua, 265,* Article 103205. https://dx.doi.org/10.1016/j.lingua.2021.103205

Hyland, K., & Zou, H. (2021). 'I believe the findings are fascinating': Stance in three-minute these. *Journal of English for Academic Purposes, 50,* Article 100973. https://dx.doi.org/10.1016/j.jeap.2021.100973

Huckin, T. (2006). Abstracting from abstracts. In M. Hewings (Ed.), *Academic writing in context* (pp. 93-103). Continuum.

Ji, X. (2015). Comparison of abstracts written by native speakers and second language learners. *Open Journal of Modern Linguistics, 5,* 470-474. https://doi.org/10.4236/ojml.2015.55041

Khedri, M., Chan, S. H., & Tan, H. (2015). Interpersonal-driven features in research article abstracts: Cross-disciplinary metadiscoursal perspective. *Pertanika Journal of Social Sciences & Humanities, 23*(2), 303-314.

Kozubíková Šandová, J. (2021). Interpersonality in research article abstracts: a diachronic case study. *Discourse and Interaction, 14*(1), 77-99. https://doi.org/10.5817/di2021-1-77

Krapivkina, O. A. (2014). Pronominal choice in academic discourse. *Middle East Journal of Scientific Research, 20*(7), 833-843.

Krapivkina, O. A. (2017). Linguosemiotic analysis of the correlation of concept and notion (case study of scientific and popular scientific discourse). *Novosibirsk State Pedagogical University Bulletin, 7*(4), 209-222.

Kuhi, D., & Mousavi, Z. (2015). A diachronic study of interpersonality in research articles' discussion section: The field of applied linguistics. *International Journal of Research in Humanities and Social Studies, 2*(4), 6-13.

Lorés Sanz, R. (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.

Lorés Sanz, R. (2004). On RA abstracts: From rhetorical structure to thematic organisation. *English for Specific Purposes, 23*(3), 280-302. https://doi.org/10.1016/j.esp.2003.06.001

Lorés Sanz, R., Mur-Dueñas, P., & Lafuente-Millán, E. (2010). *Constructing interpersonality. Multiple perspectives on written academic genres*. Cambridge Scholars Publishing.

Lyda, A., & Warchal, K. (2014). Gender and academicity: Insights from research article abstracts. In M. Bondi & and R. Lorés Sanz (Eds.), *Abstracts in academic discourse: Variation and change* (pp. 111-130). Peter Lang. https://dx.doi.org/10.3726/978-3-0351-0701-2/11

Martín, P. M. (2003). A genre analysis of English and Spanish research paper abstracts in experimental social sciences. *English for Specific Purposes, 22*(1), 25-43. https://dx.doi.org/10.1016/S0889-4906(01)00033-3

Muñoz, C. M. (2013). The 'I' in interaction: Authorial presence in academic writing. *Revista De Lingüística y Lenguas Aplicadas, 8*(1), 49-58. https://doi.org/10.4995/rlyla.2013.1162

Perales-Escudero, M., & Swales, J. M. (2011). Tracing convergence and divergence in pairs of Spanish and English research article abstracts: The case of Ibérica. *Ibérica, 21,* 49-70.

Rochma, A. F., Ariastuti, A., & Ashadi, A. (2020). Rhetorical styles of introduction in English language teaching (ELT) research articles. *Indonesian Journal of Applied Linguistics, 10*(2), 304-314. https://dx.doi.org/10.17509/ijal.v10i2.28593

Saidi, M., & Talebi, S. (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, 1,* Article 3578179.

Salager-Meyer, F. (1992). A text-type and move analysis study of verb tense and modality distribution in medical English abstracts. *English for Specific Purposes, 11*(2), 93-113. https://dx.doi.org/10.1016/S0889-4906(05)80002-X

Stotesbury, H. (2003). Evaluation in research article abstracts in the narrative and hard sciences. *Journal of English for Academic Purposes, 2*(4), 327-341. https://dx.doi.org/10.1016/S1475-1585(03)00049-3

Takimoto, M. (2015). A corpus-based analysis of hedges and boosters in English academic articles. *Indonesian Journal of Applied Linguistics, 5*(1), 95-105. https://dx.doi.org/10.17509/ijal.v5i1.836

Tocalo, A. W. I. (2021). Move structures and their rhetorical verbs of research article abstracts across Englishes. *Indonesian Journal of Applied Linguistics, 11*(1), Article 34593. https://doi.org/10.17509/ijal.v11i1.34593

Van Bonn, S., & Swales, J. M. (2007). English and French journal abstracts in the language sciences: Three exploratory studies. *Journal of English for Academic Purposes, 6*(2), 93-108. https://doi.org/10.1016/j.jeap.2007.04.001

Vande Kopple, W. (1985). Some exploratory discourse on metadiscourse. *College Composition and Communication, 36*(1), 82-93. https://doi.org/10.2307/357609

Varttala, T. (2001). *Hedging in scientifically oriented discourse: Exploring variation*. University of Tampere Press.

Wang, F., & Pramoolsook, I. (2021). Attitude in abstracts: stance expression in translation practice reports and interpretation practice reports by Chinese students. *Discourse and Interaction, 14*(1), 100-123. http://dx.doi.org/10.5817/DI2021-1-100

Yang, Y. (2013). Exploring linguistic and cultural variations in the use of hedges in English and Chinese scientific discourse. *Journal of Pragmatics, 50*(1), 23-36.

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