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Exploring Metadiscourse Markers of English Article Abstracts Written by Non-Native Writers of English: A Cross-Disciplinary Study

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Abstract:

The current study is an attempt to investigate and explore the role of metadiscourse markers in the abstracts of those articles related to English language teaching, computer science, and psychology. Abstracts are widely acknowledged since the clarity and authenticity of language in any piece helps the audience acquire the important points of the study in a quick and effective manner. Metadiscourse markers are significantly effective in academic writing instructions to organize and engage readers. To this end, a corpus of 30 research articles was randomly selected from English language teaching, computer science, and psychology articles published from 2015 to 2025 in online archives of reputable journals to identify the frequency and functional distribution of the markers. The selected corpora was explored and analyzed by using Hyland's (2005) model. The results revealed that English language teaching, psychology, and computer science abstract sections utilize metadiscourse markers and exhibit interactive features at markedly different rates and frequencies.

Introduction:

The dominance of the English language in academia has led researchers to disseminate their significant findings in international English-language databases (Flowerdew, 1999). This trend has led to a heightened demand for proficiency in article writing to effectively communicate findings. The significance of abstracts in academic articles is garnering heightened focus. The prevalence of abstract investigations across various disciplines and cultures indicates the established role of the abstract as a recognized genre in the negotiation of knowledge within academic texts. It facilitates the exchange of essential components of scholarly work through a combination of community-based practices. Researchers place great importance on abstracts because abstracts play an argumentative role in communicating research findings to scholars and researchers within the same field. Abstracts serve as a summary that helps others quickly understand the key points of the research, making it easier for interested parties to engage with the work.

Abstracts serve a significant role by succinctly presenting the research conducted and highlighting key findings. Scholars across various fields, including social sciences, basic sciences, and medical sciences, employ specialized terminology pertinent to their disciplines during lectures, presentations, and collaborative discussions at national and international scientific assemblies. This specialized language is also utilized in more focused contexts such as report writing, seminars, and the composition of credible scientific articles intended for publication in esteemed journals. Text composition and organization utilize various resources to enhance comprehension for the target audience. Hyland and Tse (2004) assert that writing is a communicative and social contribution. They describe metadiscourse as the linguistic resources employed by writers to organize a text, allowing them to convey their attitudes toward both the text and the reader. Researchers and corpus analysts utilize metadiscourse to trace patterns of cohesion and interaction within texts, according to Hyland and Tse (2004). Writers employ metadiscourse as an umbrella term that encompasses a diverse range of cohesive and interpersonal features to relate text to context. It aids readers in connecting, organizing, and interpreting content according to the writer's preferences.

Metadiscourse is a contemporary concept within discourse analysis that pertains to the methods by which speakers and writers engage and convey messages to their audience. It reflects the notion that writers and speakers must transcend the ideational dimension, or propositional content, of text and speech to convey their message effectively. Metadiscourse refers to textual resources that extend beyond the levels of individual sentences or pragmatics, as recognized by most practitioners in the field. Writers must consider their audience's expectations and needs, in addition to conveying their ideas and information through language, to engage them in the reading process and influence their understanding of the discourse presented. Various researchers have defined metadiscourse differently in the field of discourse.

Vande Kopple (1985) defines metadiscourse as “discourse that people [writers] utilize to expand referential material and help their readers connect, organize, interpret, evaluate, and develop attitudes towards that material” (p. 83). Metadiscourse serves two primary functions: the textual function, which structures discourse via topic transitions, idea connections, and sequence signaling, and the interpersonal function, which alters text elements and conveys the author's attitude through boosters, hedges, and self-references. Mur-Due˜nas (2011) posits that researchers choose discourse strategies to establish a connection between the author(s) and their colleagues within a certain discourse community. Consequently, both interactive and interactional metadiscourse elements address the interpersonal aspect of writing. Metadiscourse serves two primary functions: the textual function, which structures discourse via topic transitions, idea connections, and sequence signaling, and the interpersonal function, which alters text elements and conveys the author's attitude through boosters, hedges, and self-references. Metadiscourse awareness helps the writer to imagine himself as a reader or a "self-reflective linguistic material referring to the evolving text and to the writer and imagined reader of that text" (Hyland & Tse,

2004; p. 156). To rephrase, metadiscourse is "writing about the evolving text rather than referring to the subject matter" (Swales, 1990; p. 188). The person who writes is thereby compelled to structure his argument systematically, engage the reader, and appropriately convey his perspective (Hyland, 1998).

Literature Review:

Following the advent of metadiscourse elements, linguists have closely examined the social interaction between writers and readers of a work, rather than just focusing on language for meaning transmission. Zellig Harris's work initiated this field, and the notion of metadiscourse was further developed by Hyland (1998) as quoted in (Vande Kopple, 2002). As a result, many metadiscourse taxonomies, including those by Crismore et al. (1993), Hyland (1998, 1999), Vande Kopple (2002), and Hyland (2004), have been established to analyze diverse texts.

Hyland (1998) conducted a study on research articles, examining four academic fields to demonstrate that the effective use of metadiscourse is fundamentally dependent on the rhetorical situation. The results indicated that there is a way to categorize metadiscourse elements, showing that metadiscourse helps explain how context and language work together, allowing readers to understand important meanings. Additionally, metadiscourse provides authors with a mechanism to establish appropriate contexts and reference a shared disciplinary hypothesis. Hyland (1999) examined the potential role of college textbooks in students' development of specific disciplinary literacy. The results indicated significant variations in how textbook writers present themselves, organize their arguments, and convey their perspectives in relation to their assertions and their audience across the two corpora. Fuertes-Olivera et al. (2001) assessed the metadiscourse devices utilized by authors to construct mottos and headings in selected women's magazines. The findings suggest that both textual and interpersonal metadiscourse enable authors to convey a significant message while appearing educational.

Ozdemir and Longo (2014) examined cultural differences in metadiscourse utilization between postgraduate students from the USA and Turkey in English abstracts of MA theses. The study analyzed a corpus of 52 thesis abstracts written in English, consisting of 26 from Turkish students and 26 from students in the USA, all sourced from the Department of English Language Teaching. The study showed that Turkish students used fewer endophorics, evidential markers, boosters, code glosses, self-mentions, and attitude markers in their master's thesis abstracts. Turkish students utilized frame markers, hedges, and transitions more frequently than their USA counterparts. Garcia-Calvo (2002) conducted an analysis of 400 abstracts from the fields of linguistics and bioscience. These abstracts were randomly selected from twelve books of abstracts of scientific conferences and congresses authored by Spanish and English writers, following the classification established by Crismore et al. (1993). The categories of interpersonal metadiscourse include (a) hedges, (b) certainty markers, (c) attributors, (d) attitudinal markers, and (e) commentaries. The analysis of the corpus focused on the writers' utilization of interpersonal metadiscourse. The findings indicated that each writer employed at least one form of interpersonal metadiscourse. The analysis revealed that English writers employed a greater number of metadiscourse markers compared to their Spanish counterparts in the texts from each area.

Numerous studies within the metadiscourse field have been carried out in the Iranian context. Abdollahzadeh (2003) examined the discussion and conclusion chapters of 65 papers, comprising 32 authored by native English speakers and 33 by Iranian scholars writing in English, published between 2000 and 2002 in the field of English Language Teaching (ELT). The data indicated a statistically significant difference between native and non-native authors in their use of interpersonal metadiscourse. Anglo-American authors utilize certainty and attitude markers more frequently than their Iranian counterparts. Marandi (2003) assessed the introduction and discussion chapters of 30 master's theses written post-1990 by graduate students from English-speaking and Persian-speaking backgrounds. An analysis of the initial

1000 words in each chapter revealed a significant application of textual metadiscourse in the introductions, whereas interpersonal metadiscourse was more prevalent in the discussion chapters. The data revealed that Persian native speakers utilized text/logical connectors more frequently than any other group, while native English speakers employed them the least (Crismore & Abdollahzadeh, 2010).

Akbas (2012) examined metadiscourse markers in the abstract sections of master's theses from three groups: native Turkish speakers, native English speakers, and Turkish speakers of English in the social sciences. Akbas (2012) investigated the use of metadiscourse markers by thesis writers and examined whether student writers from the same cultural background exhibit a tendency to utilize rhetorical features akin to their mother tongue or align with the language in which they are composing. Utilizing the metadiscourse classification established by Hyland and Tse (2004), Akbas (2012) conducted an analysis of ninety randomly selected master's theses within the social sciences, with thirty theses per group. The results of Akbas's study showed that there were important differences in how often the three groups of theses used interactional metadiscourse markers, but there was no important difference in the use of interactive metadiscourse.

Ebadi, Rawdhan Salman, and Ebrahimi (2015) conducted a study on the use of metadiscourse markers in Persian and English academic papers within the field of geology. This study analyzed a corpus of 30 papers, comprising 15 English articles authored by Native Persian (NP) geology researchers and 15 English articles authored by Native English (NE) geology researchers. The study showed that native Persian writers used more interactive metadiscourse devices than interactional ones in the argumentative parts of their research articles. Native English writers used more interactional metadiscourse markers than interactive metadiscourse features in the discussion and conclusion parts of their research articles.

Wu and Yang (2022) conducted a comparison of the use of interactive metadiscourse markers by native English for academic purposes (EAP) teachers in the UK and non-native teachers in China. The corpus consisted of two sub-corpora, which included instructors' contributions to classroom discourse from eight sessions of EAP lessons in both contexts. The researchers used a way of looking at metadiscourse to study how similar or different the use of interactive metadiscourse was between the two groups of teachers. The results indicated a significant utilization of transition markers and frame markers in both contexts for the organization of teachers' lessons. The authors concluded that these differences may have resulted from factors such as logical preferences, the order of acquisition, discourse community, and speech community.

Mu, Zhang, Ehrich, and Hong (2015) identified in their research article that English RAs employed metadiscourse features differently than Chinese RAs. Hedges were favored in English research articles to qualify claims when drawing inferences. Chinese RAs demonstrated a greater reliance on evidential support and exhibited a strong emphasis on resource citation in academic writing. Chinese RAs demonstrated a preference for utilizing boosters and self-mentions.

Li and Wharton (2012) discovered that within similar disciplines, context significantly influences students' use of metadiscourse. The authors contended that students in the UK utilize metadiscourse more often than writers from China. UK students utilize fewer transition markers compared to their Chinese counterparts. Self-mentions are nearly absent in the Chinese writing corpus, whereas they are prevalent in the essays of UK students. This study's results indicate that Chinese writers employ strong assertions in their rhetoric, utilizing expressions such as "we must" and "you should" to engage readers. Students in the UK employ a greater number of hedges, suggesting a tendency to reduce their commitment to propositions. Writers in the UK demonstrate a marginally lower frequency of unquoted evidence compared to their Chinese counterparts. Li (2011) compiled a corpus of article abstracts, demonstrating that these abstracts reflect variations in the authors' disciplinary and linguistic backgrounds. While reviewing past studies, the researcher discovered that there is an academic gap when studying this type of issue in

academic writing. While numerous studies compare metadiscourse usage between groups, there is a scarcity of longitudinal research that investigates how metadiscourse skill evolves over time within individual authors or throughout academic stages. Understanding the changes in metadiscourse use in various contemporary forms might provide light on how authors alter their rhetorical methods in response to changing communication norms.

Research Questions:

The main objective of the current study is to investigate metadiscourse markers in English article abstracts written by Kurdish academics across disciplines, namely English language teaching, psychology, and computer science. For this reason, the researcher seeks to address the following questions:

RQ1: To what extent does the amount of metadiscourse markers used in English language teaching, psychology, and computer science research abstracts by Kurdish academic writers?

RQ2: In what ways do metadiscourse markers vary among research articles across the fields of English language teaching, psychology, and computer science?

Methodology:

Corpus of the study:

The corpora of the current study featured a total of 30 research article abstracts. For per discipline 10 abstracts were taken in the fields of English language teaching, 10 abstracts in the field of psychology, and 10 abstracts in the field computer science written in English by Kurdish scholars. The articles were selected through random sampling, enabling the researcher to mitigate the issue of variability in writers' styles. The articles were chosen from reputable and recently published journal issues between 2015 up to 2025 in online archives. The researcher aimed to select articles representing a diverse array of subjects to enhance the external validity of the results. Abstracts are selected for analysis due to their concise length and succinct presentation of arguments, primarily because abstracts are a high-stakes genre necessitating that authors emphasize both the principal assertions of the article and their significance.

Data collection procedure:

The data-gathering process required around twenty days to gather the data required for the present study. To elucidate the discursive impact of metadiscourse marker distribution in research article abstracts, a manual corpus analysis was initially conducted to provide a qualitative and detailed depiction of metadiscourse marker utilization within the specific genre of academic writing by Kurdish scholars writing in English. To this end, the corpus was searched for all instances of metadiscourse markers listed by Hyland's (2005) model. According to Hyland's (2005) model, the researcher classified the metadiscourse elements in the English language teaching, psychology, and computer science abstracts into two classes: interactive metadiscourse markers and interactional metadiscourse markers.

The Model of the study

For this work, taxonomy of metadiscourse model proposed by Hyland (2005) used as an analytical method. Hyland's (2005) model is categorized at two main levels: interactive metadiscourse markers and interactional metadiscourse markers.

A. *Interactive metadiscourse markers:* are markers that help scholars and writers to arrange propositional knowledge. There are five items of interactive metadiscourse which listed in (Table 1).

Table (1) Interactive metadiscourse markers

Interactive Items	Used For	Example
Code Glosses	It is used to rephrase or clarify	*That is to say, called, in terms of, subsequent,*

		defined as, in other words, specifically,
Endophoric Markers	It is used to guide readers to the other parts of the same text.	*(in) (this) Chapter; Figure X, page X, see Section X, as noted earlier*
Frame Markers	They order textual elements or arguments.	*(in) Chapter next, lastly, I begin with, , at this point, all in all, in conclusion, on the whole, in conclusion*
Transition Markers	Conjunctions and conjunctives help readers understand reasonable links between propositions.	*therefore, as a result, similarly, moreover, for example ,first, second, next, then, finally, however, nevertheless*
Evidentials	It is used to indicate the source of information	*According to , results indicate, it is known that, interviews revealed*

B. *Interactional metadiscourse markers:* are those markers help scholars and writers Guide the reader towards the discussion and provide them with the chance to engage and respond by informing them of the writer's perspective on propositional material, as well as the direction and aim about the reader's involvement. There are five interactional items as listed below in Table (2).

Table (2) Interactional metadiscourse markers

Interactional Items	Used For	Example
Attitude markers	They express the writer's opinion.	*I agree, admittedly, unfortunately, correctly, , hopefully, appropriate*
Self-mention	Explicitly refer to the author.	*the author, I, we*
Engagement markers	Explicitly make the connection with the reader.	*imperative mood, we, our*
Hedges	They show the writer's willingness to share alternative perspectives and possibilities with the reader.	*apparently, doubt, assume, estimate, from my perspective, in most cases, in my opinion, probably, suggests*
Boosters	They highlight certainty and close dialogue.	*It is an established fact,* it is clear that, *beyond doubt, clearly, definitely, we proved we found.*

Data analysis and Results:

Before examining the individual groups of abstract sections and the various metadiscourse resources, Table (3) illustrates sub-corpus , total number of words , and total number of used metadiscourse markers across different disciplines, specifically English language teaching, psychology, and computer science.

Table 3. The size of sub-corpora and metadiscourse items

Sub-corpus	*Total number of words*	*Total number of metadiscourse*
ENG	1570	157 ITEMS
PSY	1648	97 ITEMS
COMS	1999	170 ITEMS

There was a disparity in the quantity of words included inside each sub-corpus, as seen in table (3). To facilitate a direct comparison of frequencies, the occurrences of the subcategories of metadiscourse were equalized (per 100 words) to accommodate the comparison. 164.8 is the average number of words that are included in ten abstracts for research in computer science. In addition, the general word count for ten abstracts in the field of psychology research is 199.9 words on average. This value is in contrast to the fact that the average number of words for ten abstracts in the field of English language teaching research is 157. When looking at abstracts from different subjects like English language teaching, psychology, and computer science, the number of interactive metadiscourse elements and how often they were used varied. The table below illustrates the number and frequency of interactive metadiscourse markers used by Kurdish researchers writing in English across various disciplines.

Table 4. Number and frequency of interactive metadiscourse items

	English language		**Psychology**		**Computer science**	
Interactive Markers	*Number*	*Frequency*	*Number*	*Frequency*	*Number*	*Frequency*
Code glosses	14	8.81%	3	1.5%	15	9.1%
Endorphics	0	0.00%	0	0.00%	1	0.6%
Evidentials	1	0.63%	1	0.5%	4	2.42%
Frame markers	37	23.56%	30	15%	29	17.59%
Transitions	51	32.48%	20	10%	34	20.63%

Each subject of study has its laws that govern how information is created and disseminated. For instance, while teaching English, you should make sure your arguments are clear and make sense. Using transitions and frame markers all the time makes this easy. This demonstrates that the teacher's primary purpose is to assist pupils in learning challenging ideas. Using interactive metadiscourse, particularly transitions, makes it simpler to read since it makes it easier to follow the text. This is highly crucial for teaching English since the purpose is usually to help pupils learn. Psychology abstracts may favor simplicity more to make them simpler to read. These findings might imply that metadiscourse markers are utilized less frequently. Different locations have different methods of knowledge, which changes how people write. Psychology relies on empirical studies, which means that the results should be easy to understand. This might be why people don't utilize interactive metadiscourse very frequently. This tendency aligns with the practice of succinctly reporting results and methods that prioritize clarity over rhetorical complexity.

In computer science, the heavy reliance on evidentials (citations) emphasizes how vital it is to support claims with well-known literature. This illustrates that we all have the same way of knowing things, where technical authority is the most significant. Because of this, concepts and processes need to be more explicitly linked to their sources. Using transitions and frame markers moderately in this area illustrates

that you may be technically accurate and yet aids the reader. The audience's needs vary: different disciplines assist individuals with diverse requirements. Abstracts on English language teaching may cater to instructors and students who prefer clear and organized explanations for learning. Conversely, abstracts in psychology and computer science typically cater to a more specialized audience, who may prefer concise and accurate writing. Consider the various ways individuals employ metadiscourse as rhetorical tools to achieve specific communication goals. In English language teaching abstract sections, you need to use a lot of interactive metadiscourse to both convince and teach. Psychology abstracts, on the other hand, may place more focus on demonstrating facts and outcomes than on using attractive language.

Table 5. *Number and frequency of interactional metadiscourse items*

	English language		**Psychology**		**Computer science**	
Interactional Markers	*Number*	*Frequency*	*Number*	*Frequency*	*Number*	*Frequency*
Attitudes	6	3.82%	1	0.5%	17	10.31%
Self- mentions	0	0.00%	0	0.00%	12	7.28%
Engagements	1	0.63%	0	0.00%	3	1.82%
Hedges	17	10.82%	13	6.5%	27	16.38%
Boosters	30	19.10%	29	14.5%	28	16.99%

The above table shows statistics on various interactional markers used in the fields of computer science, psychology, and English language teaching. Characteristics such as attitude, self-mentions, engagement, hedges, and boosters are used to classify these items. In each grouping, you can see the total number of occurrences and the percentage of markers that fall into that grouping.

Attitudes are most frequent in computer science (10.31%), whereas they are far less common in English and psychology (3.82% and 0.5%, respectively). The fact that this happens more often in the area of computer science suggests that it is culturally acceptable to say what you think or feel in words. This might be because the area values fresh ideas and open, respectful debate from diverse points of view. On the other hand, academic writing in areas like English and psychology tends to downplay the author's own opinions.

In English and psychology, self-mentions are absent, while they constitute 7.28% in computer science. The fact that people are talking about themselves in computer science shows that the academic debate is becoming more personal. This might be because people in IT areas typically work together and think about what they did. On the other hand, not having English and psychology may mean that the approach is more conventional, putting group knowledge above individual identity. There are very few engagement indicators across all professions, but computer science has the most at 1.82%. The fact that there aren't many engagement indicators in these domains shows that academics prefer to write in a more formal way, concentrating on the topic instead of how involved the reader is. This might show a wider tendency in academic writing that values authority and knowledge more than participatory discourse. There are very few engagement indicators across all professions, but computer science has the most at 1.82%.

Computer Science has the most hedges (16.38%), followed by English (10.82%) and Psychology (6.5%). The fact that there are so many hedges in computer science might mean that people are careful about making assertions since the area is so complicated and changes so quickly. Researchers typically have to deal with ambiguity in technical situations, which is why they use cautious terminology like hedges. This is different from psychology, where it is used less, which may show that people are more aggressive in theoretical arguments. English has the most boosters (19.10%), followed by psychology (14.5%) and computer science (16.99%). The fact that boosters are so common in English shows that there is a significant focus on making

claims and establishing authority, which is important for literary analysis and critical writing. Computer science likewise employs boosters a lot, although not as much as other fields. This implies a potential equilibrium between assertiveness and caution, as assertions necessitate concrete evidence.

Discussion:

Looking at the usage of metadiscourse in abstracts from English language teaching, psychology, and computer science shows that the three fields utilize it and have interactive features at quite different rates. This is because each sector has its own rules and standards for its audience. The average word counts show that psychology abstracts are often the longest. This shows that people prefer it when reports are complete and easy to understand. On the other side, computer science abstracts are shorter and contain fewer words on average. Psychology may care more about completeness in empirical reporting than computer science does. Computer science values brevity and accuracy more and generally depends significantly on facts to back up its assertions. English language teaching abstracts, on the other hand, use interactive metadiscourse more often. They employ transitions and frame markers to help pupils comprehend difficult ideas and make things clearer. This shows that the major purpose of teaching is to help students and that the content has to be clear and well organized. Also, the way individuals in various industries use language reveals that they have different goals. For instance, English abstracts aim to teach and get people interested, psychology abstracts try to make conclusions clear, and Computer science abstracts often emphasize technical accuracy and authority. In contrast, different fields utilize metadiscourse in various ways, reflecting distinct perspectives and aligning with the specific communication goals tailored to their respective audiences.

The analysis of interactional markers across disciplines reveals distinct patterns in the use of attitudes, self-mentions, engagement items, hedges, and boosters, reflecting the cultural and communicative norms inherent in each field. Notably, attitudes are most prevalent in computer science (10.31%), indicating a cultural acceptance of expressing personal views, which may foster open debate and innovation. In contrast, the minimal presence of attitudes in English (3.82%) and psychology (0.5%) suggests a more traditional approach that prioritizes objectivity over individual opinion. Similarly, self-mentions are absent in English and psychology, while they account for 7.28% in computer science, highlighting a shift toward personal engagement in academic discourse within technical fields. The low frequency of engagement indicators across all disciplines, with computer science leading at 1.82%, suggests a preference for formal writing that emphasizes authority rather than reader interaction. Additionally, the high use of hedges in computer science (16.38%) shows that people in this field are careful with their claims because the subject is complex and changes quickly, while psychology uses fewer hedges, indicating a more confident approach to theories. Lastly, the high frequency of boosters in English (19.10%) demonstrates the value of assertiveness and authority in literary analysis, while computer science's use of boosters (16.99%) indicates a balance between assertiveness and the need for empirical support. Overall, these patterns illustrate how different academic cultures shape the use of metadiscourse, influencing how knowledge is constructed and communicated across disciplines.

Conclusion:

Looking at how metadiscourse is used in abstracts from English language teaching, psychology, and computer science shows that these fields use it differently and have different levels of interaction. This variability is due to the fact that each field of study has distinct regulations and criteria for its audience. The average word counts indicate that psychology abstracts are often the most extensive. Such behavior indicates that individuals like reports that are comprehensive and comprehensible. Conversely, computer science abstracts are more concise and often comprise fewer words. Psychology may prioritize thoroughness in empirical reporting more than computer science does. Computer science prioritizes

conciseness and precision, relying heavily on factual evidence to support its claims. Conversely, abstracts in English language teaching use participatory metadiscourse with more frequency. They use transitions and frame markers to facilitate students' understanding of complex concepts and enhance clarity. This evidence indicates that the primary objective of education is to assist pupils, necessitating that the material be clear and systematically arranged. The linguistic use by individuals across several sectors indicates distinct objectives. For example, English abstracts seek to educate and engage readers, psychology abstracts endeavor to clarify findings, and computer science abstracts strive to demonstrate technical accuracy and authority. Individuals across many disciplines use metadiscourse in several ways. These strategies not only provide many perspectives but also align with the communication goals established for each audience.

Reference:

1. Abdollahzadeh, E. (2003). Interpersonal Metadiscourse in ELT Papers by Iranian and Anglo-American Academic Writers. In International conference on multiculturalism in ELT practice at Baskent University, Turkey.
2. Akbas, E. (2012). Exploring Metadiscourse in Master's Dissertation Abstracts: Cultural and linguistic variations across postgraduate writers. *International Journal of Applied Linguistics & English Literature, 1*(1), 12-26.
3. Crismore, A., Markkanen, R., & Steffensen, M. S. (1993). Metadiscourse in Persuasive Writing: A Study of Texts Written by American and Finnish University Students. Written Communication, 10(1), 39-71.
4. Ebadi, S., Rawdhan, A. S., & Marjal, B. E. (2015). A Comparative Study of the Use of Metadiscourse Markers in Persian and English Academic Papers. *Journal of Applied Linguistics and Language Research, 2*(4), 28-41.
5. Flowerdew, J. (1999). Problems in Writing for Scholarly Publication in English: The Case of Hong Kong. *Journal of Second Language Writing*, 17, 243-364.
6. Fuertes-Olivera, P. A., Velasco-Sacristán, M., Arribas-Baño, A., & Samaniego-Fernández, E. (2001). Persuasion and Advertising English: Metadiscourse in Slogans and Headlines. *Journal of Pragmatics, 33*(8), 1291-1307.
7. García-Calvo, J. (2002). Uses Of Metadiscourse in Research Abstracts for Scientific Events. REL, 57. doi:10.5380/rel.v57i0.18395
8. Hyland, K. (1998). Exploring corporate rhetoric: Metadiscourse in the CEO's letter. *Journal of Business Communication, 35*(2), 224–245.
9. Hyland, K. (1998a). *Hedging in Scientific Research Articles*. Amsterdam: John Benjamins.
10. Hyland, K. (1999). Academic attribution: Citation And The Construction of Disciplinary Knowledge. *Applied Linguistics, 20*(3), 341–367.
11. Hyland, K. (2004). Disciplinary Interactions: Metadiscourse in L2 Postgraduate Writing. *Journal of Second Language Writing, 13*, 133-151.
12. Hyland, K. (2005). Metadiscourse: Exploring Interaction in Writing. London: Continuum.
13. Hyland, K., & Tse, P. (2004). Metadiscourse in Academic Writing: A reappraisal. *Applied Linguistics, 25*(2), 156–177.
14. Leki, I. (2002). Second Language Writing. In R. B. Kaplan (Ed.), The Oxford Handbook of Applied Linguistics (pp. 60-).
15. Li, T., & Wharton, S. (2012). Metadiscourse repertoire of L1 Mandarin Undergraduates Writing in English: A Cross-Contextual, cCoss-Disciplinary Study. *Journal of English for Academic Purposes, 11*, 345-356.
16. Li, Y. (2011). A Genre Analysis of English and Chinese Research Article Abstracts in Linguistics and Chemistry [Master's thesis, University of San Diego].
17. Marandi, S. (2003). Metadiscourse in Persian/English master's theses: A Contrastive Study.
18. Mur-Dueñas, P. (2011). An Intercultural Analysis of Metadiscourse Features in Research Articles Written in English and Spanish. *Journal of Pragmatics, 43*, 3068–3079.
19. Mu, C., Zhang, L. J., Ehrich, J., & Hong, H. (2015). The Use of Metadiscourse for Knowledge Construction in Chinese and English Research Articles. *Journal of English for Academic Purposes, 20*(4), 135-148.
20. Ozdemir, N. O., & Longo, B. (2014). Metadiscourse Use in Thesis Abstracts: A Cross-Cultural Study. *Procedia-Social and Behavioral Sciences, 141*, 59-63.
21. Swales, J. (1990). Genre Analysis: English in Academic and Research Settings. Cambridge: Cambridge University Press.
22. Vande Kopple, W. J. (1985). Discourse about Discourse. College Composition and Communication, 36, 82–93.
23. Wu, X., & Yang, H. (2022). A Comparative Analysis of English for Academic Purposes Teachers' Interactive Metadiscourse across the British and Chinese Contexts. *Frontiers in Psychology, 13*, 879713.