



Interactional Metadiscourse Markers in the Discussion and Conclusion Sections of Research Papers in Political Science and Religious Studies¹

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Received: 04/07/2023

Accepted: 14/11/2023

Abstract

Metadiscourse is an essential component of academic writing, as it helps authors better communicate their ideas and engage their readers. It is through the analysis of the text's metadiscourse that one can explore academic writing and compare the rhetorical traits and preferences of various discourse communities (Hyland, 2005). To this end, this study examined the differences in the use, type, and frequency of interactional metadiscourse markers in the discussion and conclusion sections of political science and religious studies articles written in English language. The corpus of this study consisted of 45032 words extracted from fifty research articles, twenty-five articles in the field of political science, and twenty-five articles in the field of religious studies published between 2019 and 2023 in the top one high-impact factor and peer-reviewed international journals.

To analyze the data, one Eta and two Chi-square tests were run. Considering the interactional resources of Hyland's (2005) metadiscourse model, the researchers

¹ DOI: 10.22051/jlr.2023.44272.2314

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uncovered that despite some subtle differences in the use, frequency, and types of these metadiscourse markers, “hedgies” were the most and attitude markers were the least frequently used metadiscourse markers employed in both political science and religious studies disciplines. The findings have some educational implications that shed light on the need to encourage English language teachers, university professors, and publishers in the fields of TEFL and ESP to provide EFL learners with appropriate sources and settings to increase their familiarity with various metadiscourse markers, especially the category of interactional MDMs that aids them write coherently and establish genuine interaction with audiences.

Keywords: metadiscourse markers, interactional features, academic writing, religious studies, political science

1. Introduction

Metadiscourse (MD) constitutes an essential element in academic writing, given its capacity to enhance authors’ communication of their ideas and foster reader engagement. Writers can use metadiscourse to explain their arguments, emphasize important points, and elucidate complicated concepts to the reader resulting in the creation of academic texts that are well-written and persuasive (Hyland, 2005).

Metadiscourse has been defined by a number of researchers. In Williams (1981), metadiscourse is considered “writing about writing, whatever does not refer to the subject matter being addressed” (p. 212). In addition, Vande Kopple (1985) delineates it as “the linguistic element which does not add propositional content, but rather signals the presence of the author in the text” (p. 83). Hyland (2005) gives a comprehensive clarification of the concept of metadiscourse, characterizing it as comprised of the explicit organizational elements within a discourse or the writer’s position towards the content or the reader. To him, metadiscourse means using certain words and phrases to help introduce or summarize ideas, indicate transitions between topics, express the author’s attitude or stance toward the material being presented, provide evidence for claims, establish coherence and cohesion within the text, and engage as well as helping the reader or listener to understand the social and communicative intentions of the writer (p. 14). The model of metadiscourse

markers established by Hyland (2005), which is utilized in the current study, categorizes metadiscourse markers as interactive which provide the reader with guidance throughout the text and incorporate transitions (e.g., “thus”), frame markers (e.g., “finally”), endophoric markers (e.g., “in section 2”), evidentials (e.g., “Z states”) and code glosses (e.g., “namely”) or interactional which concern the extent to which the writer makes their ideas clear and includes the reader in their text through the utilization of hedges, boosters, attitude markers, self-mentions, and engagement markers (Hyland & Tse, 2004).

Considerable research (e.g., Abbaszadeh et al., 2019; Estaji & Vafaeimehr, 2015; Khedri et al., 2012; Rezaei et al., 2015; Saidi & Karami, 2021; Sheikh, 2020; Susanti et al., 2017) has explored the frequency, use, and type of interactional metadiscourse markers across various fields of study and sections of research articles; however, a look into the literature exposes that there is a paucity of research on the use of interactional metadiscourse devices in the two disciplines of political science and religious studies. Research on political and religious articles is of high importance to showcase how the use, type, and frequency of the aforementioned markers are used in producing valid arguments. Therefore, such a paucity encouraged the present researchers to conduct this study which also responds to calls of scholars (e.g., Estaji & Vafaeimehr, 2015; Khedri et al., 2012; Nawawi & Ting, 2022) to further study the type, frequency, and use of interactional MDMs across other disciplines and research sections, namely, discussion and conclusion segments of political and religious articles.

The study aims to:

1. compare the type, frequency, and use of interactional metadiscourse markers in the discussion and conclusion sections of the articles.
2. determine the most commonly recurring class of interactional metadiscourse markers across the two sections of the disciplines under study.

2. Review of the Related Literature

The concept of “Metadiscourse” has been defined and elaborated by

numerous academics (Bunton, 1999; Crismore & Fansworth, 1990; Dafouz-Milne, 2003; Hyland, 2000, 2005; Hyland & Tse, 2004; Luuka, 1994; Crismore et al., 1993; Vande-Kopple, 1985, 2002; William, 1981). It was first invented by Harris (1970) and further elaborated by Williams (1981). Williams (1981, p. 212) clarifies meta-discrimination merely as “writing about writing, which does not refer to the subject under consideration”. In his book entitled “*Metadiscourse*” Hyland (2005) expounded on the significance of metadiscourse in conveying the intention of authors or speakers in their written or spoken communication. He further asserted that the presence of metadiscourse can enhance the effective transmission of textual messages.

A number of metadiscourse taxonomies have been suggested by metadiscourse theorists (Crismore et al., 1993; Hyland, 2005; Vande Kopple, 1985, 1997). Vande Kopple (1985) introduces the initial categorization of metadiscourse. His model is composed of “textual” and “interpersonal” metadiscourse markers. In this taxonomy, textual metadiscourse incorporates four categories: text connectives, illocution markers, code glosses, and narrators, whereas interpersonal metadiscourse falls into three categories: attitude markers, validity markers, and commentaries. Vande Kopple’s taxonomy was particularly important as it was the primary organized and efficient endeavor to offer a model that sets the stage for several studies as well as new taxonomies.

Crismore et al. (1993) propose a modified version of the Vande Kopple model. In this particular taxonomy, the dominant textual and interpersonal classifications have remained constant, albeit with a subdivision and rearrangement of sub-categories. They also break the textual metadiscourse into two broad classes of “textual” and “interpretive” markers. Textual metadiscourse presents markers that can help organize the discourse, and interpretative markers attend to facilitate the reader’s comprehension and rendering of the author’s desired message (Crismore et al., 1993).

In subsequent taxonomies, distinctions have been drawn between categories like “interactive” and “interactional” (Hyland & Tse, 2004). Hyland’s model of metadiscourse research (Hyland, 2000, 2005) may be the most

comprehensive. Based on earlier works like Vande-Kopple (1985) and Crismore et al. (1993), his model is primarily comprised of two distinct forms of metadiscourse, namely interactive and interactional. The former aids in the overall organization of the text, whereas the latter serves to engage the reader in the text. Hedges, boosters, attitude markers, self-mentions, and engagement markers are all parts of the interactional category. It basically aims to provide a vivid text in which the writer's voice is easily discernible to the reader. When it is employed to deliver the writer's reactions to the content, it also aims to cultivate a personal bond with the audience. Through a variety of comments on the message that is being conveyed, it focuses on how the author organizes interaction. Readers are made aware of the author's perspective on propositional information and are provided with opportunities to contribute to the discussion (Hyland, 2005). According to Paltridge (2012), interactional metadiscourse resources include the ways in which authors explicitly engage with or address their readers in their texts as well as how they express their stance regarding what they are saying.

The following is a list of the five types of interactional MDMs adopted from Hyland's (2005) interpersonal model of metadiscourse markers which are illustrated in Table 1.

Table 1

Analysis framework for interactional metadiscourse markers

Category	Functions	Examples
Boosters	Emphasize certainty or close dialogue	in fact, definitely, only
Hedges	Withhold commitment and open dialogue	may, might, would
Self-mentions	Explicit reference to writer(s)	first person pronouns
Attitude markers	Express writer's attitude to proposition	simply, unfortunately
Engagement markers	Explicitly build a relationship with reader	personal asides

Note. Interactional metadiscourse markers adopted from Hyland's (2005)

In the case of this study, Hyland's (2005) taxonomy of metadiscourse was utilized, as opposed to other models (Crismore et al, 1993; Vande-Kopple, 2002), given its comprehensive and streamlined classification (Orta et al.,

2006). Additionally, it was found to be straightforward, clear, and comprehensive (Abdi et al., 2010). The metadiscourse markers have been the subject of numerous academic studies, including research papers (Abdi, 2002; Atai & Sadr, 2008; Hyland, 1996, 2005; Yağiz & Demir, 2015), doctoral and master's theses (Akoto, 2020; Hyland & Tse, 2004; Salahshoor & Afsari, 2017; Samraj, 2008). In addition, the frequency of metadiscourse markers has been examined in the subsections of academic papers. This was done by looking at the introductions, discussion sections, and abstracts of research articles (Faghih & Rahimpour, 2009; Gillaerts & Van de Velde, 2010; Rubio, 2011).

The studies by Aragonés (2009) and Estaji & Vafaeimehr (2015), which investigated the frequency and function of interactional metadiscourse markers in patent abstracts and in the introduction and conclusion sections of engineering research articles, respectively, are the two most relevant studies to the present investigation. Moreover, Aragonés (2009) analyzed patent abstracts in four fields—medicine, chemistry, telecommunications, and information technology—in four different languages, including Chinese, Spanish, French, and English. Premised upon the findings of the study, boosters and hedges are both rhetorical devices for modifying tone in patent abstracts and are used to persuade readers of the invention's usefulness. Estaji & Vafaeimehr (2015) also concluded that there was no statistically significant difference between the disciplines, despite a few minor contrasts within the frequency and type of these metadiscourse markers. This is due to the close relationship between these fields.

Because the nature of MD is dynamic, and it changes depending on the discipline and the context, additional studies are needed to achieve a comprehensive understanding of the rhetorical form and significance, distribution, use, and type of MDMs, despite these studies' contribution to the field of metadiscourse. In addition, undertaking such a study would potentially facilitate the comprehension of effective employment of metadiscourse markers among researchers and authors in their academic papers. As a result, the purpose of this research is to bridge the gap in the existing body of knowledge regarding the application of MDMs to the discussion and conclusion

sections of research articles in the fields of political sciences and religious studies. Particularly, this study aims to determine the field and nature of MD components utilized in the discussion and conclusion segments of political science and religious studies research articles. In this study, Hyland's (2005) model was utilized as a framework for determining the type, use, and frequency of MDs employed in the aforementioned sections.

The present research paper intends to address the following research inquiries:

1. What are the most and the least frequently recurring types of interactional metadiscourse markers across the two sections of these disciplines?
2. Is there a statistically significant difference in the use of metadiscourse markers in the discussion and conclusion sections of the political sciences and religious studies' research papers?

3. Method

3.1 Corpus

The current study probed the variety, frequency, and differences in the metadiscourse markers used in the discussion and conclusion parts of research articles in the two branches of political science and religious studies. This study's corpus was comprised of 45032 words excerpted from a total of fifty research articles written in English language, twenty-five articles (each five from one journal) in the field of political science, and twenty-five articles (each five from one journal) in the field of religious studies. This study endeavors to select scholarly articles that feature at least one author who is a native speaker, by cross-referencing their affiliations and names as indicated in their profiles on ResearchGate and Google Scholar. The articles included in this analysis were sourced from prominent, peer-reviewed international journals with a distinguished, superior impact factor and were published during the time period of 2019 to 2023. To explain, two major disciplines, namely, Social Science and Arts and Humanities, were selected from SCIMAGO institutions rankings. From Social Science, the sub-discipline of "Political Science and International Relations" was selected and "Religious Studies" from Arts and

Humanities. Moreover, it should be noted that five journals of high reputation were chosen from the sub-discipline of “Political Science and International Relations” as presented in Table 2, while another five (as indicated in Table 3) were selected from “Religious Studies”.

Table 2

Descriptive statistics of the selected journals in the field of political science

Title	Type	SJR		Country
American Political Science Review	Journal	5.816	Q1	United Kingdom
American Journal of Political Science	Journal	4.913	Q1	United Kingdom
Political Analysis	Journal	4.712	Q1	United Kingdom
International Organization	Journal	3.606	Q1	United Kingdom
British Journal of Political Science	Journal	2.918	Q1	United Kingdom

Table 3

Descriptive statistics of the selected journals in the field of religious studies

Title	Type	SJR		Country
Sociology of Religion	Journal	1.239	Q1	United States
Journal of the Scientific Study of Religion	Journal	1.109	Q1	United States
Religion, Brain, and Behavior	Journal	1.011	Q1	United Kingdom
Journal of Religion and Health	Journal	0.740	Q1	United States
Journal of Health Care Chaplaincy	Journal	0.623	Q1	United States

The researchers carefully considered Nwogu’s (1997) three criteria for selecting the aforementioned articles: representativeness, reputation, and accessibility. For the study to be conducted more precisely, those articles were chosen that were nearly representative of the genres being investigated and written under one title called discussion and conclusion section. The present investigation has collected and screened scholarly publications from English-language journals that have been designated and evaluated according to the SCIMAGO Institution Rankings, as recently published in 2021. Moreover, it is essential to note that all of the articles were chosen at random to ensure the reliability. Furthermore, Table 4 illustrates the descriptive statistics of the corpus analyzed in this study for the two specific fields under investigation.

Table 4

Descriptive statistics of the corpus

Journal Titles	No. of Research Articles	No. of Words	Mean of Words per Article
Political Science	25		22606
904.24			
Religious Studies	25		22426
897.04			
Overall	50		45032
900.64			

3.2 Procedure

This research study is grounded in theoretical underpinnings that aligns with the interactional metadiscourse model provided by Hyland (2005) in which he proposes an overarching model for writer and reader interaction. As it was earlier discussed in the literature review section, there are two dimensions of interaction in this model: interactional as well as interactive. However, due to the nature of the study, only the interactional dimension of MDMs was studied. The interactional dimension, which includes the implementation of hedges, boosters, attitude markers, self-mentions, and engagement markers was the focus of this study to address the research questions. Appendix A provides an all-embracing inventory of said markers and occurrences. To examine the dispersion of interactional metadiscourse markers within the discussion and conclusion sections of the research studies and to analyze the data, the frequency, forms of use, and type of interactional metadiscourse markers, a manual corpus analysis method augmented by a concordance package approach was conducted to offer an inclusive depiction of the utilization of metadiscourse devices by native English writers in the genre of academic writing in political science and religious studies fields. To attain this objective, every instance of interactional metadiscourse markers listed by Hyland (2005) was looked for in the corpus.

3.3 Data Analysis

The corpus-identified interactional metadiscourse markers were

subjected to quantitative analysis. A manually conducted analysis of the collected corpus was conducted to ascertain the occurrence rate of individual MDMs in the discussion and conclusion sections of research papers in both political science and religious studies. The researchers analyzed the data to ensure that the type, use, and frequency of MDMs in the selected corpus were correctly identified and calculated. Following a content analysis and frequency count, Chi-square was employed to determine how statistically significant the variance of the employment of metadiscourse markers was in research articles, specifically within the discussion and conclusion sections. It is imperative to acknowledge that the quantitative analysis was conducted using SPSS software version 28.

4. Results

Interactional metadiscourse markers refer to the writer's use of linguistic devices to enhance clarity and engage the reader in their writing. These devices include attitude markers (e.g., admittedly), boosters (e.g., definitely), hedges (e.g., apparently), self-mentions (e.g., I), and engagement markers (e.g., imagine) (Hyland & Tse, 2004). First, the number of times each type of metadiscourse marker was employed in the sample of each discipline (political science and religious studies) was computed and compared. Table 5 shows the results.

Table 5

Frequency and Percentage of Meta-Discourse Markers in Each Discipline

Interactional Meta-discourse Markers	Religious Studies		Political Science	
	frequency	percent	frequency	percent
Attitude Markers	79.00	7.66	104.00	7.03
Boosters	135.00	13.09	207.00	13.99
Hedges	433.00	42.00	461.00	31.15
Self-mentions	163.00	15.81	321.00	21.69
Engagement Markers	221.00	21.44	387.00	26.15
Overall	1031	100	1480.00	100.00

As it can be seen in Table 5, the frequency and percentage of all forms of interactional metadiscourse markers are relatively higher in research papers related to political science compared to religious studies. It means that the interactional MDMs were employed more often in political science compared to religious studies as indicated by the higher number of overall markers used (1480 in political science compared to 1031 in religious studies).

According to the table, the most frequently recurring category of the interactional meta-discourse marker in both religious studies and political science was “hedges”, with a frequency of 433 and a percentage of 42.00% for the religious studies and a frequency of 461 and a percentage of 31.15% for the research papers in the field of political science. It appeared that the researchers in religious and political studies had a higher tendency to be cautious and avoid making strong claims or conclusions in their research paper than using other meta-discourse markers.

When comparing the frequency and type of interactional metadiscourse markers between the political science and religious studies, it was found that the least frequently recurring types of the interactional metadiscourse markers in both disciplines were “attitude markers” and “boosters” (104 and 207 in political science compared to 79 and 135 in religious studies respectively). In fact, both disciplines made almost similar use of “attitude markers” and “boosters”. The comparatively low proportion of boosters suggested that the researchers in these two fields tended to express their ideas and conclusions in a less confident and assertive manner. In addition, the low proportion of “attitude markers” depicted that in both disciplines the writers were not highly willing to express their personal feelings or assessments towards what was presented.

Overall, regarding the use, frequency, and type of interactional metadiscourse markers in the discussion and conclusion segments of the articles in political science and religious studies, there were some similarities and differences between the two disciplines. Both disciplines used a range of interactional meta-discourse markers, including attitude markers, boosters, hedges, self-mentions, and engagement markers. However, there were some

differences with regard to the frequency of their uses. Hedges were the most frequently recurring category of interactional MDMs across the discussion and conclusion sections of both political science and religious studies articles. Figure 1 displays the distribution of the MDMs in the research papers across the two disciplines.

Figure 1

The Distribution of the Meta-Discourse Markers across the Two Disciplines

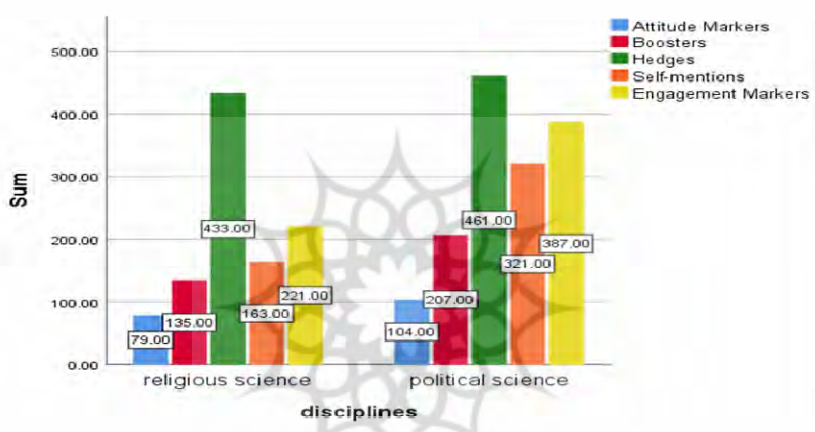


Figure 1 displays the total MDMs employed in two disciplines under the study: religious studies and political science. It suggests that there are a few differences in the use of meta-discourse markers between these two academic fields. It could be observed that in both disciplines, hedges were the most commonly used type of meta-discourse markers. Additionally, the instances when the author mentioned themselves in their writing were more frequent in research papers related to the political science than the religious studies.

For the purpose of studying the possible difference between the academic discipline and the type and frequency of MDMs used in research papers, the non-parametric Pearson correlation test followed by measures of association, namely Eta test was conducted. The findings are shown in Table 6.

Table 6

Pearson Chi-Square Tests

	Pearson Chi-Square Value	df	Asymptotic Significance (2-sided)
total meta-discourse markers	10.000	9	.350
Attitude Markers	10.000	5	.075
Boosters	10.000	9	.350
Hedges	6.000	7	.540
Self-mentions	10.000	9	.350
Engagement Markers	8.000	8	.433

Table 6 shows the results the Pearson Chi-square test achieved pertaining to the potential differences between the academic discipline and the frequency of metadiscourse devices used in research papers. The Pearson Chi-square value for the total meta-discourse markers was 10.00, with 9 degrees of freedom and an asymptotic significance level of .350 suggesting that no statistically significant difference was found between academic discipline and the total frequency of meta-discourse markers used in the research papers.

The results also indicated that the Pearson chi-square values for “attitude markers, boosters, and self-mentions” were also 10.000, but with varying degrees of freedom and asymptotic significance levels. Nevertheless, none of these categories showed statistically significant differences between the two areas.

For “hedges”, the Pearson chi-square value was 6.000, with 7 degrees of freedom and an asymptotic significance level of .540, indicating that there was no significant difference in the employment of “hedges” between both disciplines.

Finally, for “engagement markers”, the Pearson chi-square value was 8.000, with 8 degrees of freedom and an asymptotic significance level of .433, suggesting that there was no statistically significant difference between academic discipline and the frequency of “engagement markers” employed in the selected research papers.

Overall, the Pearson chi-square test results illustrated no statistically significant difference in the use of meta-discourse markers in the research papers used in the political and religious disciplines. Table 7 demonstrates the findings of the Eta test that building on the Pearson Chi-square results, shows the degree of the difference between the variables.

Table 7

Eta test

Values

total meta-discourse markers	Eta	.584
Attitude Markers	Eta	.485
Boosters	Eta	.468
Hedges	Eta	.148
Self-mentions	Eta	.623
Engagement Markers	Eta	.632

Table 7 showed the results of the Eta test that provided insight into the size and direction of the difference between the academic disciplines and the frequency of meta-discourse markers used in research papers in two disciplines, political science and religious studies. Eta is a measure of association that ranges from 0 to 1, where higher values mean a stronger relationship (Berry & Armitage, 1995).

The total Eta value for all meta-discourse markers combined was 0.584, indicating a moderate difference between academic discipline and the frequency of MDMs used in the selected research papers.

When examining the specific categories of meta-discourse markers, “attitude markers” had an Eta value of 0.485, suggesting a moderate relationship between academic discipline and the frequency of these markers. “Boosters” had an Eta value of 0.468, also indicating a moderate relationship. “Engagement Markers” had the highest Eta value of 0.632. Moreover, “Self-mentions” had a relatively high Eta value of 0.623, suggesting a moderate relationship between the academic discipline and the frequency of self-referential language used. Finally, “hedges” had the lowest Eta value of 0.148,

indicating a weak relationship between academic discipline and the frequency of these markers. However, none of these relationships were statistically significant.

5. Discussion

This paper intended to examine the implementation of the interactional metadiscourse devices in researches in political science and religious studies published in top journals. The statistical analysis showed that the authors of the aforementioned articles had the tendency to implement these rhetorical markers to execute the interpersonal function in this insufficiently researched area. The findings revealed that “hedges” were the most frequently recurring class of interactional MDMs, while “attitude markers” were the least commonly used category. Based on the findings, the two most frequently employed interactional metadiscourse markers were “hedges” and “engagement markers” respectively, whereas “attitude markers” and “boosters” were the least often utilized categories of interactional MDMs.

This study is in line with Estaji & Vafaeimehr’s (2015) study which probed the difference in the implementation and occurrence of MDMs in the two fields of mechanical and electrical engineering. The results suggested that the least commonly used category of metadiscourse markers were “attitude markers”. Also, the findings demonstrated that there was no statistically significant difference in the employment of MDMs across the two aforementioned disciplines. Moreover, the results of this study corroborate the findings of Blagojevic’s (2004) study which also illustrated no statistically significant difference in the utilization of MDs in the English native and non-native speakers’ academic research papers. Furthermore, this study supports Hyland’s (2000) findings that “hedges” are the most frequently employed category of metadiscourse markers in academic research papers. Contrastively, the findings of the present paper are not in accordance with those of Saidi and Karami (2021) who explored the frequency of interactional metadiscourse markers in applied linguistics reply articles and the findings of Khedri et al.’s (2012) study investigating interactional metadiscourse devices in the four

fields of English Language Teaching, Biology, Economics, and Civil Engineering. To illustrate, Saidi and Karami (2021) discovered that “self-mentions” were the highest ordinarily employed interactional metadiscourse markers while in Khedri et al.’s (2012) study, “boosters” were the most commonly used class.

6. Conclusion

Interactional metadiscourse markers as contended by Hyland (2005) play a vital role in birthing new knowledge as well as producing academically established claims. The current study examined the type, use, and frequency of interactional MDMs in the discussion and conclusion sections of research papers in the two areas of political science and religious studies. Further, to determine the type, use, and frequency of interactional MDMs, Hyland’s (2005) model was utilized. Also, to analyze the data, one Eta and two Chi-square tests were implemented to investigate the differences between the two majors in respect of their use of MDMs in the discussion and conclusion sections in the corpus. The recommendations drawn from the conclusions of the current study can benefit ESP (English for Specific Purposes) and EFL teachers in various ways, including familiarizing them with various metadiscourse markers, and preparing them to write coherently in a way that helps establish true interaction with their audiences. Also, it is of the findings of the current research that helps English language teachers, students and also researchers from text analysis and writing conventions to benefit for the purpose of writing appropriately in various contexts.

The application of MDs in the discussion and conclusion sections of both political science and religious studies, highlighting the significance of interactional functions of language in academic discourse, demonstrating that metadiscourse markers play a pivotal role. The core finding of this paper was that “hedges” were the most recurring markers employed in both political sciences and religious studies papers which signify the writer’s commitment is explicitly qualified. This could be done to convey deference, modesty, or respect for the viewpoints of peers or to demonstrate uncertainty and signal that the information is presented as a personal opinion rather than an acknowledged

fact. Further, hedges are typically found in groups, but in this case, they serve to enhance the author's propositions' uncertainty attributed to them. Therefore, hedges emphasize the fact that statements not only convey ideas but also convey the author's attitude toward them as well as the readers. On the other hand, attitude markers were the least frequently used metadiscourse devices in the discussion and conclusion parts of the aforementioned research papers.

This study's findings have some educational implications that could shed light on the immediate necessity to urge EFL teachers, university professors, and research publishers in the fields of TEFL and ESP to make an undertaking to supply EFL learners with suitable materials and settings to increase their familiarity with various metadiscourse markers, especially the category of interactional MDMs which can prepare them for writing coherently and establish genuine interaction with readers and audiences.

In order to better comprehend the nature of metadiscourse markers as an interactional resource, future research studies can investigate a number of aspects of MDMs. It is important to note that the corpus selected for this study consisted of 50 research articles selected from a small number of journals, making it possible to classify it as a small corpus. For more generalizable results, it is proposed that this article be replicated with a much larger corpus. In addition, researchers can determine the authors' extent of awareness of the patterns of writing in diverse genres by examining the implementation of all types of metadiscourse markers in distinct texts, other rhetorical parts, and contexts.

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Appendix A:

Instances of Metadiscourse Markers

Attitude Markers

admittedly, agree, agrees, agreed, amazed, amazing, amazingly, appropriate, appropriately, astonished, astonishing, astonishingly, correctly, curious, curiously, desirable, desirably, disappointed, disappointing, disappointingly, disagree, disagreed, disagrees, dramatic, dramatically, essential, essentially, even x, expected, expectedly, fortunate, fortunately, hopeful, hopefully, important, importantly.

Boosters

actually, always, believe, believed, believes, beyond doubt, certain, certainly, clear, clearly, conclusively, decidedly, definite, definitely, demonstrate, demonstrated, demonstrates, doubtless, establish, established, evident, evidently, find, finds, found, in fact, incontestable, incontestably, incontrovertible, incontrovertibly.

Hedges

about, almost, apparent, apparently, appear, appeared, appears, approximately, argue, argued, argues, around, assume, assumed, broadly, certain amount, certain extent, certain level, claim, claimed, claims, could, couldn't, doubt, doubtful, essentially, estimate, estimated, fairly, feel, feels, felt, frequently, from my perspective, from our perspective, from this perspective, generally, guess.

Self-mention

I, we, me, my, our, mine, us, the author, the author's, the writer, the writer's.

Engagement Markers

(the) reader's, add, allow, analyse, apply, arrange, assess, assume, by the way, calculate, choose, classify, compare, connect, consider, consult, contrast, define, demonstrate, determine, do not, develop, employ, ensure, estimate, evaluate, find, follow, go, have to, imagine, incidentally, increase, input, insert, integrate, key, let x=y, let us, let's, look at, mark, measure, mount, must, need to, note, notice, observe, one's, order, ought, our (inclusive), pay, picture, prepare, recall, recover, refer, regard, remember, remove, review, see, select, set, should, show, suppose, state, take (a look/ as example), think about, think of, turn, us (inclusive), use, we (inclusive), you, your.