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Interactional Metadiscourse Markers: A Comparison of Articles on Science Education and English Language in the Abstract Section

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***Abstract*-**The purpose of this study is to identify the usage of interactional metadiscourse markers in the articles of Science Education and English Language in the abstract section. 20 articles, 10 were on Science Education and 10 were on English Language and were carefully selected and these articles were published from 2009 to 2019 in online archives of journals. The selected corpora were analyzed through the model to find out the number, and frequency of the markers, respectively **[6].** To determine whether the data obtained demonstrate statistically significant difference content analysis techniques and the paired t-test were used. The finding of the study revealed that there is more usage of interactional metadiscourse markers in the abstract section in Science Education articles with *0.81%*, respectively than in the abstract section of English Language with *0.5%.* Further, it was found out that there is a statistically significant difference in the usage of interactional metadiscourse markers between Science Education and English Language articles in the abstract section with a P value of *.178.*

***Keywords*-** abstract, interactional metadiscourse, articles, metadiscourse markers

I. INTRODUCTION

The use of metadiscourse is considered to be a basic element in academic writing. In Harris's views, it is the author's way of explicating for the reader to perceive his ideas. Metadiscourse is referred to as self-reflective linguistics expressions which include text, imagined readers, and the writer **[5].**

"Functional" in metadiscourse markers best describes how a language is being used to achieve its purposes. The focus of this is on the meanings of, how the language works, not on how the dictionary says about it. Metadiscourse is considered to be an integral part of sentences in text composition, it is very crucial in academic writing to contributes and forms understanding and also to helps the authors in composing a reader-friendly text **[14].**

It is assumed that the concept of metadiscourse, is related to academic writing which is a very important role in the field along with academic studies in different languages, and disciplines. The aspects of Interactional demonstrate the way in how the author manages the interaction; in which the aim is to explain the author's point of view and integrate the reader into the text **[5]**. The following are what Interactional markers composed of; hedges, boosters, attitude markers, engagement markers, and self-mentions, taken by articles and explained below.

Hedges. the knowledge shows the thought or the reality, hedges where subjectivity was indicated in this condition and demonstrated an open debate to that condition **[5].** Words such as *perhaps, possible, probable, about, be worked, be thought, seem,* and morphemes such as *can be* examples that can be used.

Boosters. This marker reduces options, settles disagreements, and expresses the certainty of what is said by the author which emphasizes a close dialogue **[5]**. Examples of this marker such as *quiet, prove, it is clear that necessary* and morphemes such as *should* and *would* are can be used.

Attitude markers. In Hyland's view, to express astonishment, opinions, and disappointment the author should demonstrate attitude. Words such as *unfortunately, hopefully, fortunately, interesting*(ly), *important*(ly), *surprising, very beneficial, join, prefer, remarkable,* and *pay attention* are an example of this marker.

Engagement markers. It is a device that explicitly addresses the reader to focus their attention or includes themselves in the text, wherein a relationship builds between reader and writer **[5].** Examples of this marker *look, note, think* and *table (X) shows* which can be used.

Self-mentions. The author demonstrates his identity to be involved in the text as a conscious choice **[5].** In self-mentions markers, words such as *I, we, our, the researcher,* and *my* are used.

Several studies conducted which have examined metadiscourse markers in different sections of research

articles, e.g abstract **[3,4,5]**, Introduction **[10,16],** results and discussions **[11,12],** conclusion sections [**14**].

In the study reported in this article, abstract sections of journal articles were analyzed since this section is an important first part presenting the gist of what is going to follow. It has been a long time since research article abstracts became a part of a standard rule in admitting and publishing articles among the discourse community of scholars **[17]**. Genres arise from the requirements of regular rhetorical situations, asking for sufficient response **[13].**

Abstract sections help the readers in learning the most important aspects of the study are to help readers learn about the most important aspects of a study which persuade about the importance it bears. Thus, learning how to prepare an abstract is an important stepstone for those who are novice writers who may enter the discourse community of their disciplines. This interpersonal metadiscourse was categorized as (a) hedges, (b) certainty markers, (c) attribution, (d) attitudinal markers, and (e) commentaries. The corpus of the study was analyzed by examining the usage of interpersonal metadiscourse by the writers'. The results showed that the writers used at least one kind of interpersonal metadiscourse. It was also found that the English writers of the texts in each area used more metadiscourse markers than the Spanish ones.

In the study Metadiscourse markers in the abstract sections of Persian and English law articles, the findings of the study revealed that English authors enlisted a larger number of metadiscourse than the Persian counterpart. Persian authors, on the other hand, employed a larger number of transitions among others **[7].**

In the study conducted in which they investigated the usage of hedges and boosters in academic article abstracts. The corpus of their study was 649 abstracts which are collected from 8 journals in applied linguistics written in Chinese and English language. The results revealed that abstracts that are published in the English language used more hedges than those published in the Chinese language **[3].**

Although several many studies have been conducted to compare metadiscourse markers in research articles, few studies have been conducted to compare these markers in abstract sections. The outcomes of this study would help researchers in the field of ESL/EFL teaching and learning, sociocultural, and research in expanding their respective areas and help learners learn more effectively.

The aim of the study

The purpose of this study is to compare the abstracts section of Science education and English language articles in terms of the usage of interactional metadiscourse markers. Hence, the following research questions guided the study:

Q1. Determine the frequencies of metadiscourse markers use between the articles on Science education and English language in the abstract section; and

Q2. Are there any significant differences between the articles on Science education and the English language in terms of the usage of interactional metadiscourse markers in the abstract section?

II. METHODOLOGY

Corpus of the study

The corpora of the present study utilized a total of 20 Abstract sections of articles. Twenty abstract articles were randomly chosen, of which 10 were in the field of Science education and 10 were in the English language. The reason behind the selection of the mentioned texts was the paucity of research on Interactional metadiscourse markers in the abstract sections, each containing about 150-350 words.

Data Collection and Analysis

To identify the interactional metadiscourse markers each Abstract section was read word by word through a manual frequency count to keep an orderly numeral record of interactional metadiscourse markers (MDMs). Inevitably, the size of each Abstract section differs in both groups. The abstracts of the different articles containing about 150-350 words. To ensure the comparability of the two sets of data and because of the brief nature of abstracts, the whole sections, amounting to the total number of 4,182 words, were analyzed. After coding and extracted the different Interactional markers in both 20 abstracts, the researcher asked the help of a Ph.D. student to code and validate the same abstracts to check the validity and correctness of the data. Content analysis technique was employed to evaluate the obtained data.

To measure the frequency of the interactional metadiscourse marker types, a quantitative test using Paired T-test as a non-parametric test was assumed to make for a more accurate analysis of the differences observed.

In brief, the present study aimed at examining interactional metadiscourse markers in two different sets of data in the field of Science education and the English language. In the first step, the interactional metadiscourse markers were marked and classified. The next step was the identification of a proper non-parametric analysis of the data to determine the frequency of occurrence in the texts to find the differences more evidently.

III. RESULTS AND DISCUSSION

Table 1 shows the total number and percentage of interactional metadiscourse use in the abstract section in the field of Science education.

Table 1: Percentage of interactional metadiscourse marker usage in Science Education article abstract section, N=2,164

Interactional metadiscourse marker	Total	Percentage
Hedges	7	0.32 %
Booster	4	0.18%
Attitude marker	4	0.18%
Engagement	1	0.04%
Self-mention	2	0.09%
	18	**0.81%**

Table 1 shows, a total of 18 markers were identified in the articles on Science Education. This was examined per 1,000 words, and it is evident that the most common markers in the abstract section in Science Education are hedges with 7 which is equivalent to 0.32%. Boosters and attitude markers are the second most common metadiscourse with 4 which is equivalent to 0.18%. Further, engagement is the least common marker with 1 which is equivalent to 0.04%, respectively.

Table 2: Percentage of interactional metadiscourse marker usage in Science Education article abstract section, N=1,901

Interactional metadiscourse marker	Total	Percentage
Hedges	2	0.10 %
Booster	2	0.10%
Attitude marker	3	0.15%
Engagement	2	0.10%
Self-mention	1	0.05%
	10	**0.5%**

According to table 2, a total of 10 metadiscourse markers were identified in the articles on Science Education. This metadiscourse was examined per 1,000 words, and it is evident that attitude is the most common marker found in the abstract section in English language articles with 3 which is equivalent to 0.15%. Hedges, boosters, and engagement are the second most common interactional metadiscourse markers with 2 which is equivalent to 0.10%. Further, with 0.05% self-mentions are the least common markers.

Table 3: Interactional Metadiscourse in the fields of science education and English language abstract section, N=4,182

Interactional metadiscourse marker	Science education	English language	Total	Frequency
Hedges	**7**	**2**	**9**	**0.21**
Booster	**4**	**2**	**6**	**0.14**
Attitude marker	**4**	**3**	**7**	**0.16**
Engagement	**1**	**2**	**3**	**0.07**
Self-mention	**2**	**1**	**3**	**0.07**

According to table 3, it is evident that hedges are the most commonly used markers in the fields of science education and English language abstract section with 0.21 respectively. Attitude markers are the second most commonly used interactional metadiscourse with 0.16 followed by a booster with 0.14. Interactional metadiscourse markers engagement and self-mention are the least commonly used in both fields with 0.07.

Table 4: Quantitative analysis using Paired T-Test.

	Paired Differences					t	df	Sig. (2-tailed)
	mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 Science-English	**1.60000**	**2.19089**	**.97980**	**-1.12035**	**4.32035**	**1.633**	**4**	**.178**

This present study broadly reviews the usage of interactional metadiscourse in articles on Science education and the English language. The second research question was posed to analyze the extent to which there are any statistically significant differences between the articles on Science education and the English language in the usage of interactional metadiscourse markers in the abstract section. As can be a glance in Table 4, the total number of markers was significantly different indicating that articles on Science education researchers used a significantly higher number of markers.

To summarize, the finding of the current study might contribute to the researchers interested in the field of contrastive rhetoric, contrastive analysis, studies of Science education articles, English language articles in terms of written language or academic texts.

IV. CONCLUSIONS

To conclude, the present study set out to compare and contrast the frequency of interactional metadiscourse markers in the abstract section of Science education and English language articles. The data were analyzed by the researcher against the taxonomy of **[5]** and **[4]**. The analysis was carried out in terms of interactional metadiscourse markers. The results are indicated that the writers in the Science education articles used more Interactional metadiscourse markers compared to English language articles in the abstract section.

This study has some limitations which need to be acknowledged. The study was limited to investigating the interactional metadiscourse markers in 20 articles which was a rather constrained corpus. Hence, covering article abstracts from a variety of files under the scope of Science education and English language articles is recommended. Indeed, there is room for further research using a larger, inclusive sample on abstracts of different articles in various horizons of applied linguistics as well as other research areas. In addition, for educators teaching metadiscourse as part of the course in academic writing is highly recommended.

REFERENCES

[1] H. Allami, "Metadiscourse Markers in the Discussion/Conclusion Section of Persian and English Master's Theses", *Journal of Teaching Language Skills*, Vol. **5**, Issue.**3**, pp **23-40, 2013.**

[2] A. Crismore, R. Markkanen, M. S. Steffensen "Metadiscourse in persuasive Writing a Study of Texts Written by American and Finnish University Students", *Written Communication*, Vol. **10**, Issue. **1**, pp **39-71**, **1993**.

[3] J. Gholami, R. Ilghami, "Metadiscourse Markers in Biological Research Articles and Journal Impact Factor: Non-native Writers vs. Native Writers" *Biochem. Mol. Biol. Educ*, Vol. **44**, Issue.**4**, pp. **349–360**, **2016.**

[4] P. Gillaerts, F. Van de Velde, "Interactional Metadiscourse in Research Article Abstracts", *Journal of English for Academic purposes*, Vol. **9**, Issue. **2**, pp. **128-139**, **2010**.

[5] G. Hu, F. Cao, "Hedging and boosting in abstracts of applied linguistics articles: A comparative study of English-and Chinese-medium journals", *Journal of pragmatics*, Vol. **43**, Issue.**11**, pp. **2795-2809**, **2011.**

[6] K. Hyland, P. Tse, "Metadiscourse in Academic Writing: A Reappraisal", *Applied linguistics*, Vol. **25**, Issue.2, pp.**156-177**, **2004**.

[7] K. Hyland, "Exploring Corporate Rhetoric: Metadiscourse in the CEO's Letter", *Journal of Business Communication*, Vol. **35**, Issue.**2**, pp. **224-244, 1998**.

[8] M.O., Kan, "The Use of Interactional Metadiscourse: A Comparison of Articles on Turkish Education and Literature", *Kuram Ve Uygulamada Egitim Biimleri (Educational Sciences: Theory & Practice)*, pp.**1639-1648, 2016.**

[9] K. Karimi, M. Maleki, M., Farnia, M., "Metadiscourse Markers in the Abstract Sections of Persian and English Law Articles", *International Journal of Foreign Teaching & Research*, Vol.**5**, Issue. **18**, pp.**69-83,2017**.

[10] T. Kawase, "Metadiscourse Introductions of Ph.D. these and research Articles, *Journal of English for Academic Purposes*, Vol. **20**, pp. **114-124**.

[11] M. Khedri, C. S. Heng, S. F. Ebrahim, "An exploration of Interactive Metadiscourse Markers in Academic Research Article Abstracts in Two Disciplines, *Discourse Studies*, Vol. **15**, Issue. **3**, pp-**319-331, 2013**.

[12] D. Kuhi, Z. Mousavi, "A Diachronic Study of Interpersonal in Research Articles' Discussion Section: The Field of Applied Linguistics, *International Journal*, Vol. **4**, Issue. **2**, pp**. 6-13, 2015**.

[13] C. R. Miller, "Genre as Social Action", *Letras & Letras*, Vol. **31**, Issue. **3**, pp. **56-72, 2015.**

[14] A. Mirshamsi, H. Allami, "Metadiscourse Markers in the Discussion/Conclusion Section of Persian and English Master's These, *Journal of Teaching Language Skills*, Vol. **5**, Issue. **3**, pp **23-40, 2013**.

