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Metadiscourse in Academic vs. Non-academic writing: A comparative Corpus-driven Inquiry

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The main purpose of the current research was to analyse interactive and interactional metadiscourse features usage and distribution in academic and non-academic texts. To this end, two different corpora of academic and non-academic texts were compiled by random sampling procedure and the Sketch Engine software was used for extracting and analysing metadiscourse features in both corpora. As far as the theoretical framework of the study was concerned, the classification proposed by Hyland (2005), interactive and interactional dichotomy, was used. As the data from both corpora reveal, the interactive metadiscourse features were used more in comparison with interactional metadiscourse features. In addition, in academic writing, transitions were the most applicable interactive metadiscourse features while in non-academic writing while hedges were the most used ones. The results show that while the academic writing corpus was interactive oriented in nature, the non-academic corpus was more interactional supported in naturehe abstract should synthetically outline all the pertinent results, in a short but intelligible form.

Key-words: *Metadiscourse, academic writing, non-academic writing, corpora, interactive and interactional*

1. Introduction

Academic writing ability has always been one of the most difficult tasks in second language acquisition (Yuan-bing 2011). This is due to the fact that "writing as a social engagement … reveals the way that writers project themselves into their discourse to signal their attitude towards the propositional content and the audience of the text" (Hyland and Tse 2004, 154). For this reason and owing to the fact that writing requires a variety of cognitive and linguistic abilities, the ability to

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write fluently and accurately has been a very complex task for EFL learners (Tahvildar and Emamjome Zade 2013).

Writing is a skill which plays a crucial role in language learning and teaching (Ghahremani Mina and Biria 2017). Out of various genres, academic writing is used for miscellaneous purposes (Bailey 2003). Indeed, this special kind of writing is used for reporting the results of a research, answering research questions, discussing a scientific inquiry and synthesising research done by others. In other words, "academic writers generate texts as much to represent some external reality as to display their attitudinal positions in relation to the external reality and the recipients thereof" (Zarei and Mansoori 2007, 25).

Academic writing as a genre is a skill which has to be mastered by students and researchers in order to be able to produce research papers and dissertations. It is a common tool for examining the different fields of English studies (Rashidi and Alihosseini 2012). Indeed, academic writing has a number of features as compared to non-academic writing. Bowker (2007) addresses some of the most salient features of academic writing. For him, one difference is the application of punctuation and grammar, which follows very strict rules. Apart from punctuation and grammar, academic writing focuses mostly on abstract ideas, which cannot be explained in physical form. In addition, academic writing requires the use of citation and reference to other works. Evidently, non-academic writing does not strictly observes these rules thus making the process of writing easier and less complex.

From among various aspects of academic discourse, one of the most salient features is the writer's use of metadiscourse features (Hyland and Tse 2004). The term metadiscourse or metacommunication was first coined by Harris in 1959 to propose a way of deciphering the language in a real situation. Since then, this concept has been further explained and developed by such scholars as Williams and Kopple (Hyland 2005). Metadiscourse "embodies the idea that communication is more than just the exchange of information, goods or services, but also involves the personalities, attitudes, and assumption of those who are communicating" (Hyland 2005, 3). Based on the assumption that writing is a mutual process between the writer and the reader, metadiscourse features are the elements by which the writer projects and represents himself in the course of composition and shows his attitudes to the content and to the readership of the message (Hyland and Tse 2004).

Williams (as cited in William and Vande Kopple 1985, 83) defines metadiscourse as "writing about writing, whatever does not refer to the subject matter being addressed". This definition implies that metadiscourse is not limited to the writing itself, but it is above the sentence level. In another definition, Vande Kopple (1985, 83) defines metadiscourse features as "discourse about discourse or

communication about communication". Based on this view, he contends that metadiscourse features have inherently two major functions. One function is that they can show how the text is organized and how different sections of a piece of writing are connected to each other. The second function is to show what speech or discourse acts the writer is performing in specific situations.

Genre has been defined as "linguistic expressions conventionally associated with certain forms of writing" (Baker 2001, 68). In other words, genre refers to the norms which are conventionalized and associated with a particular context (Swale 1990) and are determined based on some external criterion with regard to the speaker's purpose and topic (Lee 2001). In recent years, there has been a growing interest in the genre-based analysis of metadiscourse features. Mauranen (1993) (quot. in Reza Zarei and Mansoori 2011, 43) claims that texts are "culturally independent and culturally variable, signifying the specificity of genre and distinctiveness of rhetoric or scientific community cultures"

Indeed, metadiscourse and genre have quite a lot in common. Assuming that academic writing is a social engagement and a genre (Hyland 2005) in which "writer and reader interact with each other, it requires that the writer can understand the receivers' expectations and needs" (Amiryousefi and Eslami Rasekh 2010). In this regard, there are various linguistics and rhetorical features which play crucial roles in genre analysis, one of which being metadiscourse. This research, therefore, considered metadiscourse features as a yet neglected variable which can affect academic and non-academic discourse, and sought to investigate the application and distributional pattern of metadiscourse features in the academic and non-academic genre with an emphasis on rhetorical preferences used by the writers of the texts included in the corpus.

2. Literature review

Various researchers in different contexts and with different purposes have investigated metadiscourse features in various genres. Therefore, in order to gain a broader view of the topic of the study, it seems justifiable to have a look at the works written in this area of inquiry in line with the topic of the research.

In 2011, Zarei and Mansoori conducted a research on the way metadiscourse features were used and distributed in humanities vs. non- humanities across the Persian and English languages. In this regard, they compiled a corpus of Applied Linguistics and Computer Engineering in English and Persian and used Hyland and Tse's categorisation (2004) as their theoretical framework. The results showed that the Persian writers used more metadiscourse features as compared to the English

writers. In addition, humanities writers relied mostly on the textual metadiscourse features, whereas the engineering writers resorted more to the interactional ones.

Akbas (2012) investigated the way metadiscourse features were used in dissertation abstracts. To this end, he compiled a corpus of 90 articles (30 written by native speakers, 30 by Turkish speakers of English and 30 by Turkish native speakers) and applied Hyland's model of metadiscourse features as the theoretical framework. As the results of his study indicated, the interactional metadiscourse features were used more than the interactive ones; however, the native speakers of English used more interactive and interactional features as compared to the Turkish writers.

In another study, Khajavy, Asadpour and Yousefi (2012) analysed the way metadiscourse features were used and distributed in research articles in English and Persian. Having limited their study to interactive metadiscourse features, they analyzed 10 articles in the field of sociology, written by native speakers, and 10 papers in the same field, written by Iranian writers. The results revealed that except for the hedging, the English native speakers used more interactive metadiscourse features as compared to their Persian counterparts.

In a special case study, Letsoela (2013) did a very interesting research on the way metadiscourse features were distributed and used in the academic writing of university students. His corpus consisted of 60 texts in different fields of studies at the National University of Lesotho. For analyzing metadiscourse features, he exploited Holland's model of metadiscourse features. The findings of this research indicated that the students preferred to make used of interactional metadiscourse features due to the fact that they had a clear sense of the readership.

Gholami, Tajalli, and Shokrpour (2014) did a research on the distribution of metadiscourse features on English texts and their Persian translations. To this end, they analyzed 35 medical texts and their Persian translations as the corpus of their research. As the data indicated, there was a significant difference between the type and distribution of metadiscourse features in both corpora; what this means is that the English texts used more metadiscourse features than the Persian translations and that not all the English metadiscourse features had been translated into Persian.

Tardyon and Vasheghani Farahani (2017) conducted a research on the usage and distribution of metadiscourse features in academic articles written by Iranian and native speakers of English. To this end, they randomly selected 60 articles (30 for Persian and 30 for native speakers of English) and applied Fraser’s (2006) taxonomy as their theoretical framework. Their research showed that the elaborative discourse markers were the most frequently used ones in Iranian scholars' articles. In addition, Iranian writers used more discourse markers as compared to native speakers.

Along the same line, Forouzan and Shahla (2018) conducted a research on the way metadiscourse features were used in English language teaching texts books and Iranian high school English textbooks. Applying Hyland's model of metadiscourse features, they analysed the reading sections of the corpus and came to the conclusion that the English books contained more interactional metadiscourse features, while the Iranian books displayed more interactive metadiscourse features. The results of their study also indicated that the Iranian books contained code glosses as the most used metadiscourse features as compared to English textbooks, which contained evidentials as the main metadiscourse features.

3. Research questions

The literature reviews showed that metadiscourse features in academic and non-academic texts are a neglected area of research. In addition, most of the studies on metadiscourse features have failed to exploit corpus software, which questions their external validity. Considering these issues, this research this research was an attempt to address the following research questions:

Q1: How are interactive metadiscourse features distributed and used in academic writing?
Q2: How are interactive metadiscourse features distributed and used in non-academic writing?
Q3: How are interactional metadiscourse features distributed and used in academic writing?
Q4: How are interactional metadiscourse features distributed and used in non-academic writing?
Q5: Are there any statistically significant differences between the way interactive metadiscourse features are distributed and used in academic and non-academic writing?
Q6: Are there any statistically significant differences between the way interactional metadiscourse features are used in academic and non-academic writing?

4. Methodology

4.1. Design and instrumentation

As far as the design of the study is concerned, the current research was a descriptive, quantitative, non-experimental corpus-based study. There are various categories of metadiscourse features (see, for example, Crismore 1989, 1993,

Vande Kopple 1985, 2002, Hyland 2005, Adel 2006). For the theoretical framework, however, the classification proposed by Hyland (2005) was utilized due to the fact that it is the most up to date and the most comprehensive classification for analysing metadiscourse features (Ghadyani and Tahririan 2015). Hyland's classification of metadiscourse features basically includes two main categories - interactive and interactional. The interactive part

> concerns the writer's awareness of a participating audience and the ways he or she seeks to accommodate its probable knowledge, interests, rhetorical expectations and processing abilities. The writer's purpose here is to shape and constrain a text to meet the receiver's needs (Hyland 2005, 49).

However, the interactional part "concerns the way writers conduct interaction by intruding and commenting on their message. The writer's goal here is to make his or her views explicit and to involve readers by allowing them to respond to the unfolding text" (Hyland 2005, 49.). Indeed, the interactional part is "evaluative, engaging, expressing solidarity, anticipating objections and responding to an imagined dialogue with others" (Ghadyan and Tahririan 2015, 311).

Category	Function	Example
Interactive	Help to guide the reader through the text	Resources
Transitions	express relations between main clauses	in addition, but, thus, and
Frame markers	refer to discourse acts, sequence or stages	finally, to conclude, my purpose
Endophoric markers	refer to information in other parts of the text	noted above; see figure
Evidentials	refer to information from other texts	According to X; Z states
Code glasses	elaborate propositional meanings	Namely; e.g.; such as; in other words,
Category	**Function**	**Example**
Interactional	Involve the reader in the text	Resources
Hedges	withhold commitments and open dialogue	might, perhaps, possible, about
Boosters	emphasis certainty or close dialogue	in fact, definitely, it is clear that
Attitude markers	express writer's attitude to the proposition	Unfortunately, I agree, surprisingly
Self-mentions	explicit reference to the author(s)	I, we, my, me, our

Category	Function	Example
Engagement markers	explicitly build a relationship with the reader	consider, note, you can see that

Table 1. An Interpersonal Model of Metadiscourse Feature (Hylland 2005, 49)

4.2. Data collection

For running any kind of corpus research, three main criteria should be taken into account (Tognini-Bonelli 2001). The first criterion is that the corpus must be compiled out of authentic and real samples, which have been produced in a real context. The second factor is that the corpus needs to be machine readable in a way that it can be processed and read by electronic software. Indeed, electronic software is used due to the fact that it can run and analyse an unlimited amount of texts, which is difficult to carry out manually. The last issue is that the compiled corpus must be balanced and representative in nature as "it contains all the types of text, in the correct proportions, that are needed to make the contents of the corpus an accurate reflection of the whole of the language or variety that it samples" (Mcenery 2012, 250).

Considering the above-mentioned issues, this research had a comparable corpus-based design. A comparable corpus is defined as "a corpus containing components that are collected using the same sampling method, e.g**.** the same proportions of the texts of the same genres, in the same domains, in a range of different languages, in the same sampling period" (Mcenery 2012, 20). This study had two variables - the academic and non-academic discourse. However, it was a monolingual and synchronic corpus as all the authentic samples were taken from English language texts produced in the twenty-first century. In addition, it is worth noting that, since the current research was a comparative corpus-based study in nature, two synchronic, unannotated Do It Yourself (DIY) corpora were compiled. DIY corpora, also known as disposable and/or ad hoc corpora, are "usually created by individuals with a specific purpose in mind and are not available to the general public. They are often of a disposable nature and are not meant to be redistributed" (Zanettin 2012, 55).

The first corpus consisted of 25 research articles published in international journals in the field of Applied Linguistics, Management, Law, Political Sciences, and Sociology. The texts were all written in English and both American and British varieties were included in the text selection. All the articles were written after 2010 (more synchronic). Various disciplines were selected to ensure text diversification, corpus balance, and representativeness. In addition, the texts were all selected

from areas of humanities as research has shown that usually the humanities academic domain contains more metadiscourse features as compared to other domains, such as basic sciences or engineering (see for example Zarei and Mansoori 2011, Firoozian Pooresfahani, Khajavy and Vahidnia 2012, Rashidi and Alihosseini 2012).

The second corpus (non-academic) consisted of different sub-corpora made up of 25 different texts in the fields of technical descriptions, short stories, news texts, business letters and exam papers. Like the academic corpus, a wide range of sub-corpora was selected to ensure balance and representativeness. It is worth noting that no intervention was exerted by the researcher in both corpora except for the fact that in the academic corpora, the references were removed as they were not regarded as part of the corpus. The texts were all written after 2010 in both American and British English.

Number of Sentences	Number of Tokens	Number of Words
3,554	64,713	55,900

Table 2. General information on the non-academic corpus

Number of Sentences	Number of Tokens	Number of Words
3,739	74,528	55,878

Table 3. General information on academic corpus

As the data in Tables 2 and 3 reveal, the two corpora consist of almost the same number of words; however, they differ in terms of the number of sentences and the number of tokens. In other words, while the non-academic corpus consists of 3,554 sentences and 64, 713 tokens, respectively, the academic corpus consists of 3,739 sentences and 74, 528 words, which shows many differences.

For analysing the texts and extracting the metadiscourse features, the Sketch Engine software was used. It is a Windows supported software which is commercially available and is used in different fields of language studies, like dictionary compiling, phraseology and collocations (McGillivray and Kilgarrif 2013). Sketch Engine gives the researchers the opportunity to have access to a wide range of corpora like British National Corpus (BNC), Early English Books Online, English Web, etc.

Figure 1.A Screenshot of Sketch Engine Software

4.3. Concordance lines

Concordance Lines and Key Words in Context (KWC) are among the most important and common corpus tools in any corpus-based study. They are defined as "a list of all of the occurrences of a particular search term in a corpus, presented within the context in which they occur – usually a few words to the left and right of the search term" (Baker, Hardie and Mcenery 2006, 44-43). A concordance line provides the exact and immediate context in which the key word is used so that the researcher can identify the words before and after it. In order to clarify and distinguish between the way metadiscourse features are used and distributed in academic and non-academic texts, some examples of concordance lines are presented in Figures 2 and 3.

in the EFL Classroom; Between Consensus	**and**	Controversy JelenaBobkina English I UCM
This article provides a review of ideas	**and**	research regarding the role of literature
the article discusses the reasons for the demise	**and**	the resurrection of literature as an input
that, the article deals with advantages	**and**	drawbacks of using literary texts as language
recent ideas on language teaching practice	**and**	theories. Finally, in a practical move,
the practical move, this paper depicts the past	**and**	current approaches to teaching literature
marked by an explosion of work in literary	**and**	cultural theory, providing a strong basis
the relationship between literature, language	**and**	education. Thus, a whole new paradigm involving
paradigm involving the integration of language	**and**	culture, being literature a part of a culture
part of a culture emerged in the late 80-s	**and**	has developed throughout the 90-s. Not
has been much debated since the sixties.	**In fact**	, an important number of attempts have been
McKay, 2001, Savvidou, 2004, Lima, 2005).	**In fact**	, if we stop to analyze some of the most
critical and creative thinking skills (CCTS).	**In fact**	, literature was selected out of many other
themselves and their fellow human beings.	**In fact**	, Dhanapal's approach combines the main
the best moment to start using literary texts.	**In fact**	, there is still controversy concerning
use literature in the language classroom.	**In fact**	, various approaches can be adopted b

Figure 3. Example of a concordance line of Interactional Metadiscourse Features

Examples of Interactive Metadiscourse features in Academic Texts

Transitions

Students to acquire the basic language skills, **but** also to explore historical, cultural (Academic text)

Impact on the core vote will be awful. **But** Mr. Green told BBC one's Andrew show (Non-academic text)

Frame markers

Through its listening and/or reading and are **finally** ready to focus on specific content (Academic text)

and they are our strengths today. And, **finally** , please continue praying for the victims (Non-academic text)

Endophoric markers

the paper has been divided into four main **sections** after a brief historical overview (Academic text)

The space inside was divided into square **sections** by interlocking scripts of cardboards (Non-academic text)

Evidentials

According to Collie and Slater, many genuine features of the written language such as (Academic text)

largest arms deal ever made in US history, according to the White house (Non-academic text).

Code glosses

In other words, Structuralism was only interested in the mechanical, formal relationships of the literary (Academic text)

In other words, it will determine our future (Non-academic text).

Examples of Interactional Metadiscourse features in Academic Texts

Hedges

the variety of **possible** structures, and the different ways of connecting (Academic text)

the administration would ensure the smoothest **possible** transition, just as President Bush did (Non-academic text).

Boosters
In fact, literature was selected out of many texts (Academic text)

Attitude markers
Surprisingly, most of the students evaluated the course (Academic text)
the rest came off **surprisingly** easy. Was it a piece of cardboard?
(Non-academic text).

Self-mentions
In fact, if we stop to analyze some of the most popular (Academic text).
The new supply has just reached me, **in fact.** (Non-academic text).

Engagement markers
The Cultural Approach **considers** literature as an ideal vehicle to transmit (Academic text)
Never really understand a person until you **consider** things from his point of view. (Non-academic text)

5. Data analysis

For answering the research questions of this study, it was necessary to run statistical analysis by using SPSS software. The data of each category of metadiscourse features in both academic and non-academic writings were calculated separately.

Transitions	**2239 (75.8)**	**P-value**
Frame markers	**428 (14.5)**	
Endophoric Markers	**87 (2.9)**	**<0.001**
Evidentials	**88 (3)**	
Code Glosses	**113 (3.8)**	
Total	**2955 (100)**	

Table 4. Interactive Metadiscourse Features in Academic Writing

As the statistics in Table 4 indicate, a total amount of 2955 counts of interactive metadiscourse features occur in the academic writing corpus. From among all the

interactive metadiscourse features, transitions were the most frequent type used in academic writing with 75% (2239 counts) of all the metadiscourse features, followed by frame markers and code glosses, with 14 % and 3.8% respectively. Evidential markers were the next frequent metadiscourse markers, with 3% only (88 counts). The least used metadiscourse feature in the interactive category was that of the endophoric markers, which constituted only 2.9% of all the interactive metadiscourse features.

Hedges	**541 (36.2)**	**P-value**
Boosters	**324 (21.7)**	
Attitude Markers	**68 (4.5)**	**<0.001**
Self-mentions	**557 (37.3)**	
Engagement Markers	**5 (0.3)**	
Total	**1495 (100)**	

Table 5. Interactional metadiscourse features in academic writing

As the data in Table 5 demonstrate, 1495 counts of metadiscourse features were used in interactional metadiscourse in academic writing, out of which 557 counts (37%) were assigned to self-mentions as the most frequent metadiscourse feature, followed by hedging, with 541 counts (36%) as the second most applicable interactional metadiscourse feature. The next frequent marker was boosters with 324 counts and 21% as the most assigned metadiscourse feature in academic writing. Attitude markers followed boosters in numbers, with 68 counts and 4.5%. The least used interactional metadiscourse feature was engagement markers with only 5 counts and 0.3 %.

Transitions	**674 (57.7)**	**P-value**
Frame markers	**217 (18.4)**	
Endophoric Markers	**13 (1.1)**	**<0.001**
Evidentials	**79 (6.8)**	
Code Glosses	**187 (16)**	
Total	**1168 (100)**	

Table 6. Interactive metadiscourse features in non-academic writing

As the data in Table 6 reveal, 1168 counts of interactive metadiscourse features were used in non-academic writing. Indeed, transitions with 57% (674 counts) were the most frequent interactive metadiscourse feature in non-academic writing followed by frame markers with 217 counts (18%). However, code glosses with 167 counts and 16% of the total interactive metadiscourse features in non-academic

writing were the next highly applicable feature. Evidentials were the fourth most applicable interactive metadiscourse feature in non-academic writing with 79 counts (6%) only. As far as endophoric markers were concerned, they were the least used metadiscourse feature used in non-academic writing with 13 counts (1%) only.

Hedges	**541 (36.2)**	**P-value**
Boosters	**324 (21.7)**	
Attitude Markers	**68 (4.5)**	**<0.001**
Self-mentions	**557 (37.3)**	
Engagement Markers	**5 (0.3)**	
Total	**1495 (100)**	

Table 7. Interactional metadiscourse features in non-academic writing

As the data in Table 7 indicate, the total number of interactional metadiscourse features in non-academic writing was 1495 counts out of which 557 ones (37%) were assigned to self-mentions as the most frequent interactional metadiscourse feature in non-academic writing. Hedges were the second most frequent interactional metadiscourse feature with 541 counts (36%), followed by boosters which were the third most applicable interactional metadiscourse feature in non-academic writing. From among the interactional metadiscourse features, attitude markers with 68 counts (4.5%) were the fourth interactional metadiscourse feature in non- academic writing. The least used interactional metadiscourse feature in non-academic writing was the engagement marker with 5 counts only.

	Value	**df**	**Asymp. Sig. (2-sided)**
Pearson Chi-Square	258.971[a]	4	.000
Likelihood Ratio	238.176	4	.000
Linear-by-Linear Association	217.667	1	.000
N of Valid Cases	4123		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 28.33.

Table 8. The results of chi-square tests of interactive metadiscourse features

As the data in Table 8 demonstrate, the P.value of the Pearson Chi-Square was significantly above 0.05 (4123). As a result, there was a significant difference

between the way interactive metadiscourse features were used in academic vs. non-academic writings. However, in order to better demonstrate the distribution of interactive metadiscourse features in academic vs. non-academic writing, the detailed comparative statistics were shown in a pie chart.

As the data in Figure 4 demonstrate, in academic writing, 78% of all the metadiscourse features were assigned to transitions as opposed to 57% in non-academic writing. Furthermore, with respect to endophoric markers, academic writing used more interactive metadiscourse features as opposed to non-academic writing. However, in the rest of the metadiscourse features the non-academic writing displayed more interactive metadiscourse features than the academic writing. In other words, in frame markers, the non- academic writing included 18.4% of all the interactive metadiscourse features while in academic writing, only 14.5% of all the interactive metadiscourse features were assigned to frame makers.

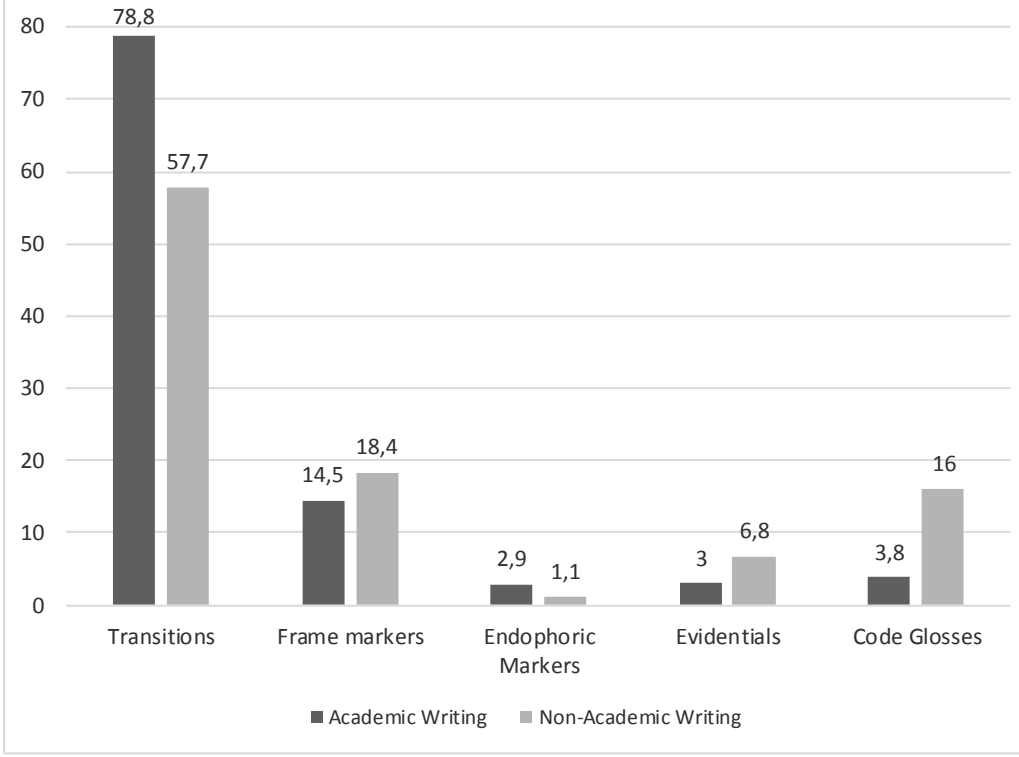

Figure 4. Distribution of interactive metadiscourse features in academic vs. non-academic writing.

As far as evidentials are concerned, 6.8% of all the interactive metadiscourse features were assigned to them in contrast to 3% in academic writing. Similarly, code glosses were used more in non-academic writing in contrast to academic writing with 16 and 3.8%, respectively. As the data in Table 9 reveal, the P.value of the Pearson Chi-Square was significantly above 0.05 (4123). As a result, there was a significant difference between the way interactional metadiscourse features were used in academic vs. non-academic writings.

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	158.928[a]	4	.000
Likelihood Ratio	167.619	4	.000
Linear-by-Linear Association	69.826	1	.000
N of Valid Cases	3297		

Table 9. Results of the chi-square tests of interactional metadiscourse features

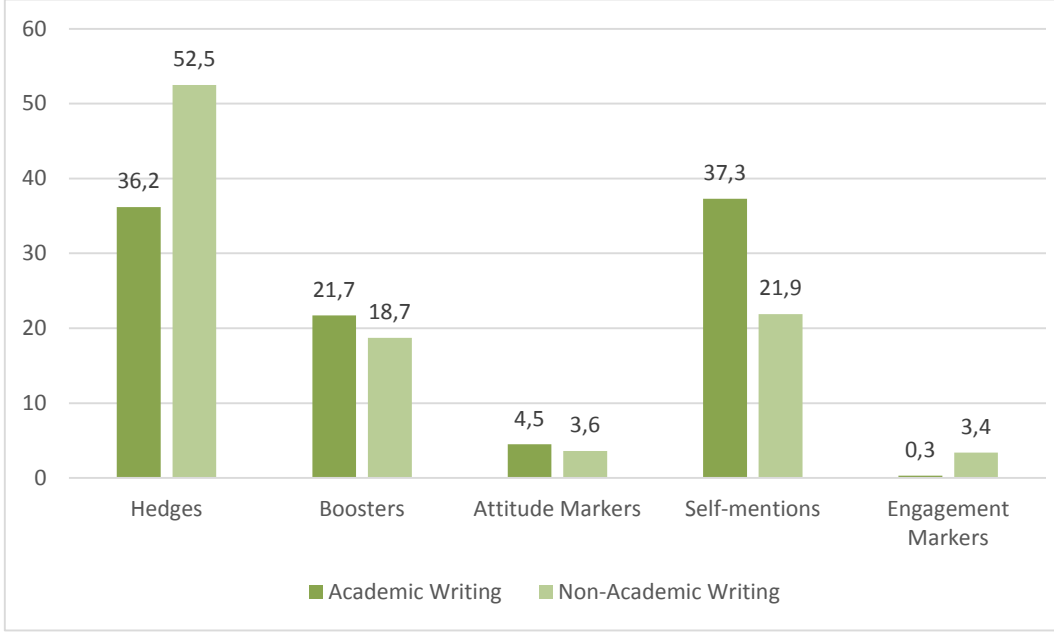

Figure 5. Distribution of interactional metadiscourse features in academic vs. non-academic writings

Figure 5 indicates the comparative statistics of interactive metadiscourse features in academic vs. non-academic writings. As can be seen, in two cases, namely those of the hedges and engagement markers, the non-academic writing used more interactive metadiscourse features compared to academic writing. In fact, non-academic writing assigned 52% of all the interactive metadiscourse features to hedges while only 36% of the total interactive metadiscourse features were allocated to hedges in academic writing. In engagement markers, 3.4 of the total interactive metadiscourse features were allocated to non-academic writing as opposed to 0.3% in academic writing. However, when it comes to boosters, 21.7% of all the interactive metadiscourse features are allocated to boosters in academic writing as compared to 18.7% of the non-academic writing. Likewise, in academic writing, 3.4% of all the interactive metadiscourse features were allocated to attitude markers as compared to 3.6% in non-academic writing. In self-mentions, too, academic writing was higher than non-academic writing with 37% and 21%, respectively.

6. Discussion

6.1. Answer to the first and second research questions

The first and second research questions of this study dealt with the way interactive metadiscourse features were distributed in academic vs. non-academic writing. As the statistics in Tables 4 and 6 indicate, in academic writing the total number of interactive metadiscourse features was 2955 as opposed to 1168 counts in non-academic writing. In addition, of all the interactive metadiscourse features, all except for code glosses were used more in academic writing than in non-academic writing. Moreover, in both corpora, transitions were the most frequent type of interactive metadiscourse features used with 75% and 57%, respectively, followed by frame markers and code glosses. In both corpora, evidentials and endophoric markers were the least applicable metadiscourse features.

This statically significant difference between the number of interactive metadiscourse features in academic vs. non- academic corpus can support the idea that the academic corpus was written in a more coherent way and the writers' objective was to shape the message in such a way as to fulfill the needs of the readership. However, the reliance of both corpora on transitions can lead to the idea that the writers were very focused on making their writings coherent. Also, the very limited reliance on the writers in both corpora can show that their referring to extra information written in other parts of the texts was not a priority for them.

6.2. Answer to the second, third and fourth research questions

The third and fourth research questions dealt with the way interactional metadiscourse features were distributed and used in academic and non- academic writing. As can be seen in Tables 5 and 7, the total number of interactional metadiscourse features in non-academic writing was higher than that of the academic writing (1802 and 1495, respectively). As a matter of fact, the higher reliance of the non-academic corpus on interactive metadiscourse features may lead to the conclusion that it was written in such a way that the authors could make the readership more involved in the course of the text and make them behave in a certain way. However, in the academic corpus, self-mentions were the most frequent, interactive metadiscourse feature (557 counts). This can show that the authors were very interested in expressing very clear and explicit reference to themselves to establish their own ideas and claims in the texts as this is the main function of self-mentions. When it comes to non-academic writing, hedges (946 counts) were the most applicable interactive metadiscourse feature, which supports the idea that the authors were not sure enough about their propositions and withheld commitment in their writings. The second most applicable interactive metadiscourse in the academic text was hedges with 541 counts, as opposed to self-mentions with 394 counts in the non-academic corpus. This can show that withholding the commitment and projecting the idea that the authors were not sure of their propositions and claims in their writings was a very key feature in academic writing, while, in the non-academic corpus, referring to other references was very salient. Equally, boosters were the third most used interactive metadiscourse feature in both corpora, meaning that the authors were aware of the role of certainty and closing the dialogues.

6.3. Answer to the fourth and fifth research questions

As this was a comparative study, the fourth and fifth research questions were to analyse any statistically significant differences between the way interactive metadiscourse features and interactional metadiscourse features were used in academic and non-academic corpora. As the results of the chi-square test in Tables 8 and 9 present, since the P-value was higher than 0.050, it could be concluded that there was a significant difference between the number of interactive metadiscourse features in academic and non-academic writing (2955 vs. 1168). Also, the results of the Chi-square test in Table 9 show that there was a significant difference between interactional metadiscourse features in the two corpora,

meaning that non-academic corpus included more interactive metadiscourse features than academic corpus (1802 vs. 1495).

Needless to say, the results of this comparative study showed that while the academic corpus was interactive oriented, the non–academic corpus was more interactional oriented in nature. In other words, in academic writing, the main concern of the authors was to prepare the text in such a way that they could meet the expectations of the readers and organize the discourse to the extent that the text is produced in accordance with the readers' requirements and expectations. The fact that non-academic writing was interactional in nature can indicate that the writers' main concern was to make their message and idea explicit and to make their readers behave in the way that they want.

7. Concluding remarks

This study aimed to compare the distributional pattern of metadiscourse features in academic and non-academic corpora. To this end, two disposable corpora were created and the metadiscourse features were extracted by using Sketch engine and based on Hyland's model. The results demonstrated that the academic corpus was interactive whereas the non-academic corpus was interactional.

This study can have some implications for those who are interested in contrastive rhetoric. The results of this study showed how different metadiscourse features are in nature and how they can be distributed in the academic and non-academic genre. Another implication is for teachers who teach writing to second language learners of English. This study may help them to better teach metadiscourse features in order for their students to produce more coherent and cohesive textse. Another implication is for those who are interested in conducting corpus-based studies. The findings and the stages of this research can be regarded as a step-by-step instruction for corpus-based studies and scholars interested in the topic.

Like any other research, the current study had some limitations, some of which could have potential effects on the results and generalisability of the findings. This research could be done by compiling a bigger corpus, so that the results could have more external validity. Also, since metadiscourse features are an open-ended category, it is likely that in analysing the corpora, some metadiscourse features were neglected in the analysis. Another limitation was that the researchers had no control over the level of language competence of the authors, who probably were native and non-native speakers of English.

Some suggestions can be made as this paper can generate new studies. One suggestion is that the same study can be done with other categories of metadiscourse features as the current one (Hylland) is not the only available classification of metadiscourse features. Other studies can be conducted on other text types and genres because metadiscourse features can be found in every kind of text types and genres. In addition, other contrastive studies can be done by analysing these features in academic or non -academic writings in different languages.

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