



The Usage and Distributional Pattern of Metadiscourse Features in Research Articles in Applied Linguistics Based on Hyland's Classification

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ABSTRACT

Metadiscourse features refer to those elements which construct the relationship between the writer and the reader. The present research a comparative and corpus-based study on the usage, type and distribution of interactional and interactive metadiscourse features in research articles written in the field of Applied Linguistics. The theoretical framework of this study was Hyland's model (2005). To this end, 30 research articles in the field of Applied Linguistics which were written and published in various journals after 2010 were randomly selected. For analyzing the texts, Sketch engine software was exploited. The findings of the study could demonstrate the fact that the writers outperformed the usage of interactive metadiscourse features, as compared to interactional ones. In addition, within the interactive metadiscourse features, transitions and frame markers had the highest level of occurrence; while for the interactional metadiscourse features, hedging and self-mentions were used most by the writers. The findings of this research can have useful implications in such fields as contrastive analysis, corpus linguistics and text analysis.

Keywords: Academic writing; metadiscourse features; interactive metadiscourse features; corpus linguistics.

1. Introduction

Academic Writing as one the four major skills of learning a foreign language has always been of paramount importance (Abdalla, 2009). It is in, scientific terms, defined as a "kind of writing in which the writers of an academic community try to inform their colleagues about their findings" (Nasiri, 2013, p. 67). Academic writing is important in that it is "a valuable tool for communicating one's thoughts to others" (Salem, 2013, p. 71). In other words, academic writing with a special focus on genre of the research articles is a precondition for an affective writing. In this regard, one of the elements of grammaticality which have significant role in academic writing is the proper use of metadiscourse features (Akbas, 2012).

As it is conspicuous, writing has gained too much attention in academic context and students consume too much time and energy for mastering writing ability (Jahin, 2012). Without having the ability to write grammatically, in a second language, one will not be able to express his thoughts, ideas and feelings in an accurate way. For its complexity, arduousness and difficultness, writing in an effective, accurate and grammatical way is deemed a precondition for mutual communication and understanding. As Cumming (2001) puts it, this is largely due to the fact that "People learn to write in a second language they gain better control over their abilities to plan, revise and edit their texts, to search for appropriate words, and phrases... and to attend more often and intently to their ideas in respect to the forms of the second language (p.6).

Among from the different criteria for writing affectively and persuasively in a second language writing context, one very important criterion is the appropriate and correct usage of metadiscourse features (Taghizadeh & Tajabadi, 2013). The term of metadiscourse was first coined by Harris (1959) as a term to refer to the way of perceiving the language in real situation that help the writers or speakers to guide the receivers' understanding of the message (Ghahremani Mina & Biria, 2017).

In this regard, metadiscourse has been defined as "discourse about discourse or talk about talk that can also be seen as the author's linguistic manifestation in a text" (Hyland, 1999, p. 5). In other words, "Metadiscourse is interpersonal in that it takes account of the reader's knowledge, textual experiences, and processing needs and that it provides writers with an armory of rhetorical appeals to achieve this" (Hyland, 2005, p.69).

Metadiscourse features are widely used by various writers in order to make their writings more comprehensible, more coherent and well-structured for their readership; therefore, it is significantly important to understand the correct and accurate use of metadiscourse features in writing in a second language context (Anwardeen, Luyee¹, Gabriel, & Kalajahi, 2013). Metadiscourse features are used to shape the structure of the writing, to observe the grammaticality of the structures and to stimulate the knowledge of the reader. In other words:

We use metadiscourse when we filter our ideas through a concern with how our readers will take them. Metadiscourse is, therefore, the language we use when we refer to our own thinking and writing as we think and write... to summarize, on the contrary, I believe; to the structure of what we write. (Amiryousefi & Eslami Rasekh, 2010, p.163)

The importance of metadiscourse and its relation to the audience lies in the fact that a text communicates effectively only when the writer has correctly assessed the readers' resources for interpreting (Hyland, 1999). As a result, metadiscourse is regarded an essential specification of spoken interactions between speaker and hearer (Penz, -Maria Graf & Marko, 2016). In addition, metadiscourse features are very salient features in directing the communication, interpretation and understanding the text and the course of communication (Hatim & Mason, 2007), the way metadiscourse features are used and distributed in second language writing

can be of great help to understanding their proper usage and their precise role. Metadiscourse features are such a new field of inquiry that has recently attracted the attention of researchers in language studies; however, it is a concept which is still going from strength to strength and needs more study and investigation (Pooresfahani, Khajavy, & Vahidnia, 2012).

Metadiscourse as a new field of inquiry is an open-ended category which can be analyzed from different perspectives. As a result, there are various classifications and categories of metadiscourse features with different subcategories (Amiryousefi & Eslami Rasekh, 2010). Vande Kopple (1985) was among the first researchers who developed a basic category for analyzing metadiscourse features. In his category, Kopple divided metadiscourse features into two main categories as textual metadiscourse and interpersonal metadiscourse. The textual category has the sub-classifications of text connectives, code glosses, validity markers and narrators. The interpersonal category consists of illocution markers, attitude markers and commentaries. The important thing about this classification is that Kopple's model was the first systematic categorization of metadiscourse features; however, this classification is not complete and cannot cover all elements of metadiscourse features.

While Vande Kopple's classification (1985) was the first structured categorization of metadiscourse features, Crismore, Markkanen and Steffensen (1993) introduced a broader and more comprehensive categorization of metadiscourse features. What they did in their category was that they added more subcategorizations of textual metadiscourse and interpersonal metadiscourse as the two main categories. Although their model, in comparison with Kopple's, was more comprehensive and straightforward, it was still confusing and some expressions could be used in two or more subcategories.

One of the latest proposed models for analyzing metadiscourse features is Hylland's (2005). What distinguishes Hylland's model from other categories is its comprehensiveness and straightforwardness. He classifies metadiscourse features into two main categories as interactive and interactional. Interactive metadiscourse features are used for helping and guiding the reader throughout the text; while the other category, interactional, is basically used to involve the reader through the text.

1.2. Corpora

Adopting corpora and computer software in language studies has gained too much attention due to the advances in computer sciences (Mukherjee, 2006). Corpus, as its name implies, refers to a collection of naturally written texts in electronic format which can be analyzed by computer software (Guo-rong, 2010; Kilgarriff, 2000; O'Keeffe, McCarty & Carter; 2007). Despite the fact that in the beginning, compiling corpus was regarded a very expensive job for the cost of computer storage and language processing difficulties (Vintar, 2008), with the interests of linguistics to use corpora software (Piotrowski, 2008), Corpus Linguistics is now becoming a major trend in language studies. In fact, the versatility of corpora and the fast evolution of computer software in analyzing and processing texts has made it possible to

Table 1. A Model of Metadiscourse (Hyland, 2005)

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 marker	Refer to discourse acts, sequences and stage	Finally; to conclude; my purpose is
Endophoric markers	Refer to information in other parts of the text	Noted above; see figure; in section 2
Evidentials	Refer to information from other	texts According to X; Z states
Code glosses	Elaborate propositional meaning	
Interactional	Involve the reader in the text	Resources
Hedges	Withhold commitment and open dialogue	Might; perhaps; possible; about
Boosters	Emphasize certainty and close dialogue	in fact, /definitely/it is clear that
Attitude markers	Express writer's attitude to proposition	Unfortunately; I agree; surprisingly
Self-mentions	Explicit reference to authors	I; we; my; me; our
Engagement markers	Explicitly build relationship with reader	Consider; note; you can see that

produce large corpora for analyzing language patterns and the way language is used (Munday, 2012). Indeed, using corpora for educational objectives has made it possible to make a "systematic exploration or reoccurring patterns in language use" (Adolphs, 2006, p. 1).

Since its advent in mid-1980s (Ashkan & Seyyedrezaei, 2016), corpora have been extensively used in language studies, including language teaching and language learning, and have opened up new horizons in this area of research. Indeed, the use of corpora in language teaching is in such a way salient that "The development of science and technology has allowed researchers to collect learner data in large quantities electronically, as well as to analyze the data with linguistic software" (Ma & Wang, 2016, p. 113). In other words, curriculum designers use corpora for different skills that learners should learn and they exploit corpora for identifying the real needs of language learners (Adolphs, 2006). One area of inquiry which can be benefited from corpus software is the systematic investigation of metadiscourse features used and distributed in different texts and corpora.

2. Review of the Related Literature

In order to have an account of the theoretical and practical aspects of metadiscourse features, it is important to have a review over some existing studies done in this area of inquiry. A scan of the literature shows the fact that metadiscourse features have been analyzed and studied from various perspectives and by different authors. Also, the recent interest into metadiscourse features and the way they are distributed in texts has led into the production of research articles in this area of research.

Pooresfahani, et al. (2012) ran a comparative research on the metadiscourse features research articles written by Iranian Applied linguistics and Engineering writers in English. To this end, they selected, randomly eight articles in Applied Linguistics and 8 articles in Engineering. They also used Hylland's taxonomy of metadiscourse features (2005). The results of their study showed that in interactive metadiscourse features, both majors used logical markers than other ones.

However, in terms of interactional metadiscourse features, while Applied Linguists used more attitude markers, Engineering authors used hedging markers more frequently. Overall, they came to this conclusion that there was no any significant difference between two majors in terms of logical marker.

Akbas (2012), in another study, investigated metadiscourse features in in master's dissertation abstract written by native speakers of Turkish, Turkish speakers of English and native speakers of English in social science to see how they make use of metadiscourse features. He compared 90 abstracts as his corpus of the study and used Hyland and Tse's (2004) as the theoretical framework. In this study, he found that the total number of interactional metadiscourse was more than the total of interactive metadiscourse. Also, he found out that among from all the subcategories, transitions were the mostly used metadiscourse feature. The results of this study also revealed that native speakers of English used more interactive and interactional metadiscourse features than other groups.

In another research, Anwardeen, Luyee, Gabriel, and Kalajahi (2013) investigated, in their study, the usage of metadiscourse in argumentative writing by Malaysian tertiary level of students. To this end, they exploited Hyland's model (2005) as their theoretical framework and used MCSAW, Malaysian Corpus of Students Argumentative Writing. The results of their study showed the fact that the subjects used more textual discourse than interpersonal discourse.

Also, Yaghoubi and Ardestani (2014) investigated explicit or implicit instructions of metadiscourse markers writing skill improvements. In this experimental study, the were to find out if the writing quality of subjects increase by teaching explicit or implicit treatment? To this end, they presented metadiscourse features to two groups as control and experimental groups. What the results of their study suggested was that both teaching methodologies, explicit and implicit, had significant effects on writing quality of the subjects. Also, they proved that explicit instruction of metadiscourse markers could not have any impacts, more than the implicit instruction, on writing ability of the subjects.

In a parallel study, Salar and Ghonsooly (2015) conducted a comparative study on the metadiscourse features used and distributed in knowledge management articles written in English and Persian languages. In this study, they were to analyze the frequency of interactive and interactional metadiscourse features in the corpus. What they found after counting the metadiscourse features, was that English texts had a more frequency of metadiscourse features than Persian texts. They also found that the English texts enjoyed more amount of interactional metadiscourse features than in Persian texts.

Correspondingly, Rezaei Zadeh, Baharlooei and Simin (20015) did a gender-based study of the Interactive and Interactional metadiscourse markers in conclusion sections of English master theses to see how female and male writers have used metadiscourse features. This study which was failed to make use of metadiscourse features, used Hylland's model (2005) as their theoretical framework and selected 30 M.A theses in the fields of Translation, Literature and Teaching English as their corpus of study. In order to fulfill the purpose of the study, the divided the articles

into two main categories of male and female writers (each with 15 articles). They came to this conclusion that in English translation and in English literature, there was a significant difference between male and female writers in using metadiscourse features. They also found out that in Translation theses, both male and female writers used more interactional features than interactive. However, in teaching section, the results of this study revealed that female writer used more interactional markers (60.66%) than male writers with only (41.37%).

Likewise, Mansourim, Najafabadi, and Boroujeni (2016) conducted a cross lingual and disciplinary investigation on the way metadiscourse features are distributed in research article abstracts. To this goal, they made two corpora of 20 articles in two different disciplines in Applied Linguistics and Computer Engineering. They found out that there were about 247 metadiscourse elements in 3200 words in 20 research articles of the corpus. Their study also indicated that both languages had interactive features more than the interactional ones. Their study also proved the fact that while Persian and English relied mostly on interactive resources than interactional one, Persian writers overtake English writers in interactive resources (117 vs. 77 respectively). This study, however, failed to make use of corpus software for extracting the metadiscourse features.

Metadiscourse features are crucially important factors in academic writing. Looking at the review, it is seen that most studies in this area of inquiry are comparative in two or more majors. Indeed, the current study is significant in that it looks a comparative look into one single major (Applied Linguistics). In addition, taking a fleeting look on the review, it can be seen that majority of studies in the domain of metadiscourse features have been failed to exploit corpus-based software; relying mostly on traditional analysis which is done by hand. This can question the quantitative analysis and the reliability of the results. Moreover, the linguists as the researchers who are expert in the field of language seem to know, as compared to the experts in other fields, how to use metadiscourse features in their writings. Spotting these gaps, this study aims at investigating the way metadiscourse features are used and distributed in text written in this field of inquiry. In addition, as an innovation, this study exploits corpus-based software for a better quantitative analysis.

In line with the purpose of the current study, the following research questions are specifically addressed:

RQ1. How Interactive metadiscourse features are used and distributed in Applied Linguistics research articles?

RQ2. How Interactional metadiscourse features are used and distributed in Applied Linguistics research articles?

RQ3. Are there any statically significant differences between the amount of Interactional metadiscourse features in Applied Linguistics research articles?

RQ4. Are there any statically significant differences between the amount of Interactive metadiscourse features in Applied Linguistics research articles?

RQ4. What implications do the variations in number and type of metadiscourse features in Applied Linguistics research articles have?

3. Method

3.1. Corpus of the study

The current study was done based on a corpus Do It Yourself Corpus (DIY). Also, known as disposable corpus, DIY corpus is a combination of texts which are created for ad hoc and/ or short terms- single projects and are left unused after the research is over (Mahadi, Vaeziyan, & Akbari, 2010). The corpus was compiled of different subcorpora. The subcorpora were 30 articles written in the field of Applied Linguistics. The table blow represents the basic information of the corpus of the study. As far as the number of the papers is concerned, it is believed that 30 papers would be enough for the corpus compliment; because as Guo-rong (2010) puts it, the smallness or bigness of the corpus is not really a matter; what is important is that the corpus must be representative of the objective of the research as well as being balance in a sense that it is compile from various related sources. The main reason why papers in the field of Applied Linguistics were selected was due to the fact that usually researchers in the field of Applied Linguistics are more competent in English than in other majors and have better command of written English. The random sampling was used in order to overcome the issue of writers' idiosyncrasies.

The papers had been written after 2012 and the mode of writing was both American and British English. All papers had been written by male and female native and non-native speakers of English. The corpus of this study consisted of research papers which had been published and indexed in internationally well-known journals and which had been passed double the review process. It is worth mentioning that all parts of papers, except the bibliography, were studied. It is worth noting that all parts of texts were included in corpus except for the references and the basic information about the writers' names, their affiliations and the title of the journal. The texts were all converted from PDF into TXT files to become readable for the software.

Regarding the design of the study, the design of the current research in hand was comparative, descriptive and non- experimental in nature in order to compare and contrast the way metadiscourse features have been used and /or distributed in research articles in the field of Applied Linguistics. Also, as for the theoretical framework of the current research, Hylland's (2005) categorization of metadiscourse features was exploited. The reason beyond this selection was that Hylland's dichotomy is the most up-to date classification of metadiscourse features. Also, it is the most straightforward and the most comprehensive model ever proposed for analyzing and classifying metadiscourse features. Also, the classification of Hylland was built on previous classifications (Abdi, Tavangar & Tavakoli, 2010) and was thus more useful for the purpose of the study.

Table 2. Basic Information of the Corpus

Token	Words	Sentences
187.33	140.49	8.00

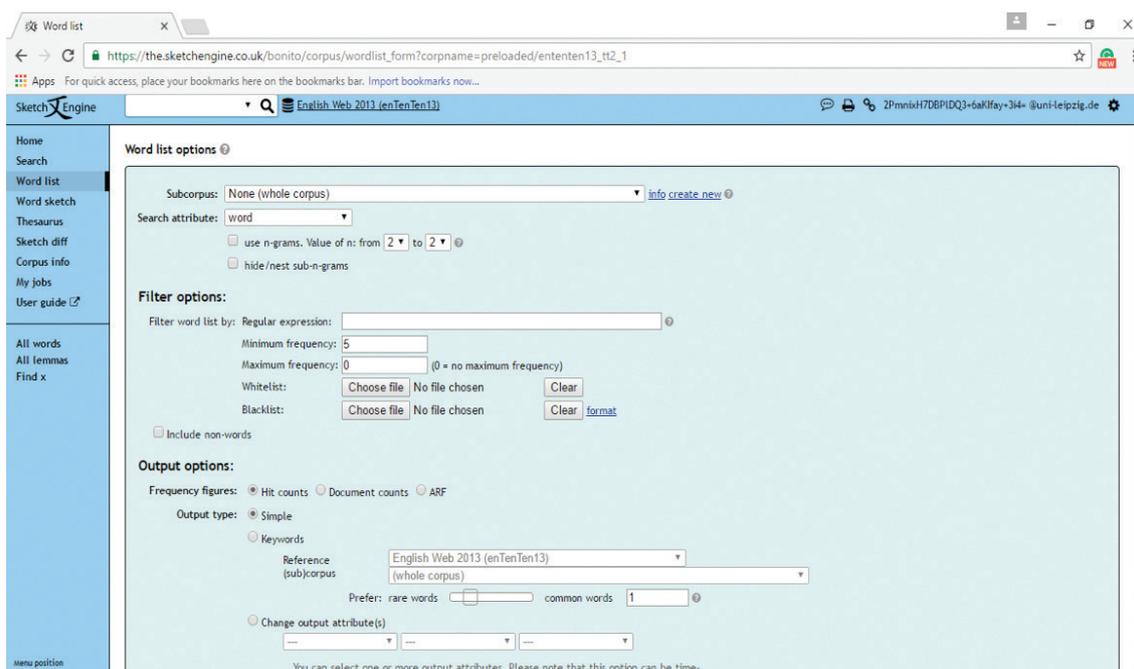


Figure 1. A basic screenshot of Sketch Engine Software

3.2. Corpus analysis of the software

For analyzing the texts, the program called “ Sketch Engine” was used. Sketch Engine is a windows-oriented and supported corpus software which since its advent in 2003 has been extensively used in different projects, including dictionary compiling and text analysis. As a pioneering software in corpus based studies, it gives the researcher the chance to use parallel corpora aligned at sentence level like English and Persian corpus. The other advantage of this program is that it allows the researcher to make his own corpus. Sketch Engine has a number of options which makes it quite a unique software for researchers; including concordance lines, word list, frequency, lemma, part of speech (POS) and contextual query language (CQL) (Culper, 2009).

4. Results

In order to draw statistically analysis, all the data were analyzed by SPSS software. As far as the first and the second research questions; that is to say, how interactive and interactional metadiscourse features are used and distributed in Applied Linguistics research articles, are concerned, a one-way goodness-of-fit chi-square test was done to see whether each category of metadiscourse features was used significantly more than the other. Usually, one-way goodness-of-fit chi-square test used when there is only one categorical variable from a one and single population. The frequency count for each major category is given in Table 3.

Table 3. Frequency counts of major categories of metadiscourse features

Major Categories	Frequency	Percent
Interactive	5156	72.9
Interactional	1917	27.1
Total	7073	100.0

Examples of metadiscourse features extracted from Corpus Interactive metadiscourse features**Transitions:**

doc#0	to the ideologies expressed by the source text.	Therefore	,different translations can reflect
doc#0	easily become a political tool. Translation	therefore	can serve purpose of gaining, maintaining, and
doc#0	model meets the goals of the present study.	Therefore	, this study is conducted within this framework
doc#0	deviated from the dominant ideology of the ST.	Therefore	, the researcher selected mixed method design

Frame markers:

doc#0	small group activity 'conversation partner'	in order to	find out how much feedback takes place in an out
doc#0	and small group activities in a Thai EFL context	in order to	find out whether theoretically attributed
doc#0	A for sample tests. 2.3.2 Questionnaire	In order to	gain background information about the
doc#0	the use of recordings and students' artifacts,	in order to	collect data; and analyzing the information
doc#0	for state institutions to make efforts,	in order to	solve families' and children's rights and to

Endophoric markers:

doc#0	One expression of apology+Two intensifier	Table 2	. A summary of the number and percentages of the
doc#0	results after the experiment were shown in	TABLE 2	. TABLE II. groups Firstly, metadiscourse
doc#0	significant level 1.749 0.046* 4.323 4.323	Table 2	shows that after the metadiscourse training,
doc#0			

Evidential

doc#0	also examined second language achievement	according	to gender. However, there is not a sizeable
doc#0	pertaining to second language achievement	according	to gender, especially in the Canadian context.
doc#0	, age, country of origin), the achievement gap	according	to gender remained. The speaking and writing
doc#0	increases and decreases in FSL achievement	according	to questionnaire items, where there were
doc#0	that may result from other social variables	such as	class, age, and ethnicity and, thus as (freed,
doc#0	ranged from the word sorry to clauses	such as	excuse me, I apologize, Female respondents
doc#0	very with the word sorry, yielding expressions	such as	very sorry Female respondents used these

a. Interactional Metadiscourse Features

Hedges:

doc#0	where use of other language knowledge	may	be discouraged (Dailey-O'Cain & Turnbull,
doc#0	provided details for older students, this	may	, in part, account for this study's different
doc#0	staff and student bodies, and peer influence	may	become more influential with age. As noted in
doc#0	female performance on speaking components	may	be due to a more advanced rate in terms of verbal

Boosters:

doc#0	, comprehends and interprets the world.	In this sense	, ideologies are representations of who we are,
doc#0	of ideology should be multidisciplinary.	In this sense	, Van Dijk's approach to ideology can be located
doc#0	skills and knowledge for teachers to learn.	In this sense	, the provision of professional development–
doc#0	and global professional assessments.	In this sense	, these extra-governmental providers reflect

Attitude markers:

doc#0	, 3 for neither agree nor disagree, 4 for	agree	, and 5 for strongly agree. After conducting the
doc#0	nor disagree, 4 for agree, and 5 for strongly	agree	. After conducting the pilot test and
doc#0	1 to 5, from "strongly disagreed" to "strongly	agreed	“. To ensure full understanding of the items by
doc#0	(80%) in pre-questioning class, strongly	agreed	that prequestioning technique made them more
doc#0	more interested in reading and others (20%)	agreed	. More than half of the students (53.3%)

Self-mentions:

doc#0) examined various influential variables.	The researchers	purported that male disinterest stemmed from
doc#0	between teachers and learners. One of	the researchers	had visited five classes several times over a
doc#0) and, then, translated into the French.	The researchers	used a multitrait scale for scoring the
doc#0	expressions in their different languages.	The researchers	found speech-gesture modality to be more
doc#0	resolve to deal with idioms in their classes.	The researchers	suggest that teachers try new technologies for

Engagement markers:

doc#0 throughout the all tests. It must also be noted that , as will be seen later, this discrepancy pales
 doc#0 in section 2; however, it is important to note that a corpus is not simply a random collection of
 doc#0 by the control group. It is also interesting to note that none of feedback from the control group
 doc#0 are more useful pursuits. However, it should be noted that their participants were beginning and

As the chi-square test in table 6 revealed, interactive metadiscourse features were used significantly more than interactional ones ($\chi^2=1483.26$, $df=1$, $p=.000$). In general, the interactive metadiscourse features have been used in 5156 occurrences, with 72% of the total percentage; while interactional metadiscourse features have been employed only in 1917 counts with 27% of the total percentage. It means that the authors have devoted their efforts to make their texts well- structured and coherent; organizing the propositional information as this is achieved through using interactive metadiscourse features. In other words, the texts have been written in a way that the readers find them convincing.

For the third research question, which is about the significant differences between the amount of interactional metadiscourse features in Applied Linguistics research articles, differences in the number of metadiscourse features in the sub-categories of interaction category were also analyzed by using another one-way goodness-of-fit chi-square test.

As can be seen in table 4, Hedges were the most frequent type of interaction metadiscourse features, and there was a statistical difference in the number of markers in this sub-category ($\chi^2=702.12$, $df=4$, $p=.000$). This can indicate that the authors were not sure of their presuppositions and claims as they tried to exploit alternative viewpoints so as to not pledge a full commitment to the propositions. Following the hedging, engagement markers and self-mentions were the second and third used metadiscourse features, respectively. However, attitude markers and boosters were the least used interactional metadiscourse features.

Table 4. Frequency counts of sub-categories of interaction metadiscourse markers

Sub-categories	Frequency	Percent
Hedges	733	38.2
Self-mentions	419	21.9
Attitude markers	288	15
Engagement markers	456	23.8
Boosters	21	1.1
Total	1917	100.0

Table 5. Frequency counts of sub-categories of interactive metadiscourse features

Sub-categories	Frequency	Percent
Transitions	3787	73.4
Frame markers	764	14.8
Endophoric markers	247	4.8
Evidential	128	2.5
Code glosses	230	4.5
Total	5156	100.0

For the fourth research question; that is to say, statically significant differences between the amount of interactive metadiscourse features in Applied Linguistics research articles, another one-way goodness-of-fit chi-square test was conducted to find statistical differences in the number of metadiscourse features in sub-categories of interactive category and to determine if the data are consistent with the hypothesized distribution.

As it can be seen in table 5, transition markers were used more than other ones, and as the chi-square test showed, this difference is significant ($\chi^2=9443.84$, $df=4$, $p=.000$). This extensive use of transitions in the articles put forward the idea that the authors have tried to express the relation that is existed between different parts of the discourse. Following transitions are frame markers, endophoric markers and code glosses with 14%, 4.8%, and 4.5%; respectively. Interestingly, code glosses with only 128 counts are the least used interactive markers in the articles which show that the authors had no firm intention to supply extra information by such techniques as paraphrasing or elaborating what had been said.

5. Discussion and Conclusions

According to Hyland, metadiscourse features have a very vital role in not only organizing the discourse, but in making interaction between the writer and the reader (Hyland, 2005). While the interactive metadiscourse features are usually used to produce a text so that writer could “meet the needs of particular readers” (Hyland, 2005, p. 49), the interactional ones are used to make a text well- structured and coherent (ibid, 2005). The findings of the present study could reveal the fact that metadiscourse features are crucially important elements in academic writings and are extensively used by authors so that they can make their texts more coherent and more understandable for the readership. Moreover, metadiscourse features were found to be also very significant elements in rhetoric.

Metadiscourse are the linguistics materials that do not add anything to the propositional meaning of the text; however, are used to help the reader or listener to better understand an interpret the text (Crismore, et al, 1993). These features are significantly important in writing as a social phenomenon (Crismore & Abdollahzadeh, 2010). As the statistics showed, interactive metadiscourse features were preferred by the writers. The results of the present study emphasized the importance of rhetorical conventions as the pre-requisite of a persuasive writing; specially the interactional features. Also, the finding of the study in hand could show that in persuasive writing, the usage of interactive metadiscourse features are usually more

important than that of the interactional ones due to the roles the interactive metadiscourse features can have in making the text (s) more coherent and more well- structured. There for it is very important for the novice writers learn how to use interactive metadiscourse. The finding of this research is very similar to the findings of the Alyousef’s paper who investigated the usage and distribution of metadiscourse features in multi modal finance texts. However, the findings are in contradiction with the findings of the Kuhi and Mojood’s paper (2014).

The present study was a comparative corpus-based inquiry into the investigation of metadiscourse features usage and application in articles written in Applied Linguistics. To this end, a corpus of 140,496 words compiled of 60 research articles in the field of Applied Linguistics were randomly selected. The theoretical framework of this study was the model proposed by Hyland (2005). For analyzing the texts, the Sketch engine software was used and chi-square test was conducted to analyze the two main categories (interactional and interactive metadiscourse features). As the data demonstrated, interactive metadiscourse features were preferred by the authors with near 72% of the total counts.

The overall tendency of the authors towards interactive metadiscourse features can depict the fact that the authors were more concerned with organizing their text in a way that they could predict the readers' knowledge of an explicit text as these goals can be attained by interactive metadiscourse features (Hyland, 2010). In other words, the reliance of authors on interactive metadiscourse features can reveal the fact that authors intended to consciously guiding the flow of information in such a way that they can establish their intended meanings (Hyland, 2010).

Another function of interactive metadiscourse is to help writers to make their text as coherent as possible. The preponderance of interactive metadiscourse features to interactional ones in the corpus can accentuate the important function of these features as the tools for managing the reading process and the flow of information. In this way, this predominance can add support to the fact that the texts were, largely, coherent and convincing as coherence is a prerequisite for academic writing (Hyland, 2005).

Moreover, as for the interactive metadiscourse markers, transitions and frame markers were the metadiscourse features which were highly preferred by the authors. These features are, basically, used to depict contrast and / or additives consequences in the course of the communication. In this regard, it can be concluded that transitions are among the integral part of academic writing as they can show how the authors represent various argumentations in their writings (Hyland, 2010). In other words, these features reflect the fact that the authors made spaces for alternative ideas and claims in their discourse as these are the characteristics of writing in academic writing contexts. Indeed, by using transitions, for example, writers helped the readers to interpret and follow the links that existed in the ideas and to reveal the reasoning of the authors in a clear way.

Frame markers are among the metadiscourse features that are used, mostly, to show how writers cite and / or refer to other parts of the texts. Indeed, it is by using these elements that the reader can recover the intended meaning of the author (s) and attain a better understanding of the message (Hyland, 2005). In other words, citing to other parts of the text is a unique feature of academic writing. For this purpose made efforts to refer to examples, illustrations, parts, sections and arguments in other parts of their texts in authors order to be able to help the reader to retrieve the expressed intention (s) of the authors (Hyland, 2002).

In the interactional category, hedges were the most frequent metadiscourse features. In academic writing, it is common to separate facts from unsupported

ideas and claims. This characteristic of academic writing can be assured by the usage and application of hedges. The extensive usage of hedges as the most frequent interactional metadiscourse features can add support to this fact that writers made efforts to offer their intentions in such a way that it can be accepted and academically persuasive to the intended audience (Hyland, 2005). In other words, these features can show that the statements, claims or the propositions offered by authors in the text were figured out mostly based on their own interpretation rather than some certain amount of knowledge.

The second most applicable interactional metadiscourse features were engagement markers. These features are used, by writers, to explicitly attract the attention of the reader towards a proposition (Hyland, 1998). Indeed, the scientific texts are not the kind of register in which direct instructions on the readers can be found. By using these features, this idea can be place that the authors overestimated the presence of the readers during the interaction.

Self-mentions were the third interactional metadiscourse features used by the authors. These are the features by which the authors propose their own intended claims, propositions, findings and, conclusions and ideas. The application of the self-mentions can lend support to the idea that the authors tried to show their scholarly identity through the interaction with their audience as it can be attained by these features (Hyland, 2001). In other words, the authors showed their impressive presence in the texts by using the self-mentions.

Attitude markers were the fourth used interactional metadiscourse features. Authors use these features to show their attitudes towards a claim or proposition. In other words, they use these features to reveal affective not scientific and/ or logical attitude of the authors (Hyland, 2005). In the academic setting, there is less opportunity to exploit these affective elements as these features are mostly used in nonacademic discourses like literature and poetry or fiction. Therefore, it can be said that authors of the papers had no interest and or intention in stepping out of the scientific boundaries.

Interestingly, the least used interactional metadiscourse features were boosters. These features are usually used to represent a degree of certainty and closing down the argumentation and / or make no space for the alternative propositions (Hyland, 2010). The less usage of boosters than the hedges (uncertainty elements) can reveal the fact authors did not certain in most of their ideas, propositions, claims, and argumentations; eschewing them to express their 100% certainty in the context.

6. Implications, Limitations, and Suggestions for Further Research

This study has some implications. One implication is for those who are interested in analyzing metadiscourse features. They can use the results and methodology of this paper as a guideline on how to embark on research in metadiscourse features. In addition, this study can be used as a guideline on how to exploit corpus software in analyzing metadiscourse features. Also, those students and researchers who study majors other than Applied Linguistics may use the results of this paper to learn how to use metadiscourse features to enrich their papers.

Like any other research, the present study was accosted to some limitations which could have some impacts on the results. The first limitation was that, the focus of this study was to analyze metadiscourse features in one field of inquiry, that is to say, Applied Linguistics. A good topic of research could be analyzing metadiscourse features in a contrastive design in which metadiscourse features could be analyzed in more than one discipline. Furthermore, the corpus of this study was limited to 30 research articles which could have some negative impacts on the generalizability and external validity of the results. It is suggested that new studies with bigger corpora be done. In addition, the authors in this study were both native and non-native speakers of English; however, their mother tongue was not taken into consideration. A future study could be a comparative study of metadiscourse features used by native and non-native speakers of English in terms of metadiscourse features usage. This paper used Hyland's model of metadiscourse features as a theoretical framework. There are some other frameworks for analyzing these features. It is suggested that further research be done by using these frameworks. The last, but not the least limitation of the present study was that the current study was limited to English language only. It can be very interesting to analyze metadiscourse features in more than one language.

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