



TÜRKÇE DİL BİLİMİ ARAŞTIRMA MAKALELERİNİN ÖZETLERİNDE ETKİLEŞİMLİ ÜST SÖYLEM BELİRLEYİCİLERİ: ART ZAMANLI BİR İNCELEME

Ruhan GÜÇLÜ*

Özet

Üst söylem, yazar-okuyucu ilişkisini kuran ve bir metni okur dostu yapan önemli bir dilsel kaynaktır. Üst söylem belirleyicilerini art zamanlı olarak inceleyen araştırmalar oldukça azdır. Bu çalışma, 2008-2009 ve 2017-2018 yıllarında *Dil ve Edebiyat Dergisi*, *Dilbilim Araştırmaları Dergisi*, *Dil Dergisi*'nde yayımlanan araştırma makalelerinin Türkçe özetlerinde kullanılan bağlayıcılar, çerçeve belirleyiciler, metin içi belirleyiciler, tanıtlayıcılar, kod çözümlenimler gibi etkileşimli belirleyicileri araştırmayı amaçlamaktadır ve Hyland'ın (2005) kişiler arası üst söylem modelini kuramsal çerçeve olarak ele almaktadır. Bu çalışmanın bulguları, 2017-2018 yazarlarının araştırma makalelerinin özetlerinde, diğer araştırmacıların fikirlerine atıfta buldukları tanıtlayıcıları 2008-2009 yazarlarına göre daha fazla kullandıklarını ve böylece okuyuculara metin boyunca daha çok rehberlik ettiklerini göstermektedir. Bu sonuç, yazar-okuyucu ilişkisi derecesinin toplumsal ilişkiler açısından art zamanlı evrimini ortaya koymaktadır, şöyle ki 2017-2018 yazarları belirli bir söylem topluluğunun üyesi olduklarını tanıtlayıcı kullanımıyla daha fazla beyan etme eğilimindedir. Bu araştırmanın, Türk akademik söyleminin art zamanlı bir bakış açısıyla daha iyi anlaşılmasına katkı sağlaması ve yabancı dil öğretimi, bütüncü dil bilimi ve metin çözümlenmesi gibi alanlarda faydalı sonuçlar sağlaması beklenmektedir.

Anahtar Kelimeler: Etkileşimli üst söylem belirleyicileri, araştırma makalesi özetleri, tanıtlayıcılar, art zamanlı inceleme.

* Arş. Gör., Hacettepe Üniversitesi İngiliz Dilbilimi Bölümü, ruhang@hacettepe.edu.tr, ORCID: 0000-0002-2748-8363.



INTERACTIVE METADISOURSE MARKERS IN TURKISH RESEARCH ARTICLE ABSTRACTS: A DIACHRONIC ANALYSIS

Abstract

Metadiscourse is an important linguistic resource which establishes the writer-reader relationship and makes a text reader-friendly. There is a scarcity of research which has analyzed the metadiscourse markers in a diachronic way. This study aims to explore the interactive markers such as transitions, frame markers, endophoric markers, evidentials, code glosses employed in Turkish research article abstracts published in *Journal of Linguistics and Literature*, *Journal of Linguistics Research*, *Language Journal* in 2008-2009 and 2017-2018 years and takes Hyland's (2005) Interpersonal Model of Metadiscourse as the theoretical framework. The findings of this study illustrate that 2017-2018 writers guide the readers in their research article abstracts much more than 2008-2009 writers with the use of evidentials by which they refer to the other researchers' ideas. This result reveals the diachronic evolution in the degree of writer-reader relationship from the perspective of social relations so that 2017-2018 writers are more inclined to declare being member of a specific discourse community with the use of evidentials. This research is expected to contribute to the understanding of Turkish academic discourse from a diachronic perspective and to provide useful implications in the fields such as foreign language teaching, corpus linguistics and text analysis.

Keywords: Interactive metadiscourse markers, research article abstracts, evidentials, diachronic analysis.

Introduction

In recent years genre has gained particular prominence in the field of linguistics. Hyland (2005, p. 87) defines genre "as a term that is used for grouping texts together, representing how writers typically use language to respond to recurring situations." The genre covered in this definition is the one commonly used in the academic community. Academic prose is usually considered as "a unique form of argument because it depends on the presentation of the truth, empirical evidence or flawless logic" (Hyland, 2005, p. 173). While reading, readers expect to receive the facts of the given topic or argument. Hyland (2005) claims that these days academic writing is "a persuasive endeavour involving interaction between writers and readers" instead of an objective form of writing. In other words, academic writers do not just write texts representing an outer reality, they also utilize language to recognize, develop and examine social relations.



The research article (RA) is a genre which has gained great interest over the last two decades (Hyland, 2005). While it is often considered a predominantly impersonal genre, transferring knowledge to the readers is actually a social process and involves linguistic choices which an audience will recognize as persuasive. According to Abdi (2012), persuasion, as part of the rhetorical structure of RAs, is achieved through the use of metadiscourse features. Metadiscourse then is “an important pragmatic feature through which writers show a disciplinary awareness of how to represent themselves and their research” (Hyland, 1998). According to Chambliss and Garner (1996) and Hyland (1996), metadiscourse is one of the important rhetorical strategies to organize and produce persuasive texts. 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 rhetorical appeals to achieve this” (Hyland, 2005, p. 69). Therefore, as metadiscourse is an important area in discourse analysis and can be considered as a means of facilitating social interaction between reader and writer in research articles (Hyland, 1998; Tavanpour et al., 2016), it is possible to talk about the writer-oriented and reader-oriented texts based on the metadiscourse markers. In respect to the rhetorical expectations, the abstract section is one of the most applied sections where the metadiscourse is used and it provides the readers with getting the central points of the research in a brief but effective manner. Metadiscourse markers can effectively render abstracts more reader-friendly and coherent (Karimi et al., 2017).

Metadiscourse use has received much attention from scientific researchers and in scholarly writing over the past few decades (Mauranen, 1993; Hyland, 1998; Dahl, 2004; Hyland & Tse, 2004; Hyland 2005; Abdi et al., 2010; Lee & Casal, 2014; Kawase, 2015; Zadeh et al., 2015) and many studies have focused on the use of metadiscourse markers in the academic genre of RAs (e.g., Dahl, 2004; Abdi et al., 2010; Rashidi & Alihosseini, 2012; Khedri et al., 2013; Alotaibi, 2015; Hu & Cao, 2015).

The concept of metadiscourse

The term “metadiscourse” was coined by the linguist Zelig Harris (1959) for the first time to refer to “a writer’s or speaker’s attempts to guide a receiver’s perception of a text” (in Hyland, 2005, p.3) and later has been developed by writers like Vande Kopple (1985) and Crismore (1989). The concept of metadiscourse (MD) has been defined by many scholars. Some definitions are given as follows: Metadiscourse is defined as “expressing the writer’s acknowledgment of the reader” (Dahl, 2004, p.1811), “metatalk or metacommunication” (Vande Kopple, 2012, p. 37), “discourse about the evolving discourse, or the writer’s explicit commentary on his/her own



ongoing text” (Adel, 2006, p. 2), “metatexts which refer to writer’s self-awareness of organizing the text and guiding readers to figure out the intended organization” (Bunton, 1999), “‘discourse about discourse’ that can also be seen as the author’s linguistic manifestation in a text” (Chambliss & Garner, 1996; Hyland, 1996).

Hyland (2005) uses metadiscourse as an umbrella term for “linguistic devices that writers utilize to guide their readers to perceive the text.” Halliday (1994) argues that people use language to realize three functions such as expressing their experience, getting interaction with their audience and organizing their expressions which carries three different kinds of meaning; ideational, interpersonal, and textual. Some linguists draw on interpersonal and textual functions to categorize metadiscourse markers since these markers play a vital role in interacting with the audience and organizing the text. Most of the metadiscourse models given below follow Halliday’s (1994) tripartite metafunctions.

Metadiscourse models

Metadiscourse markers have been classified in several taxonomies over the past decades. Vande Kopple (1985) introduced the first model of metadiscourse in two main categories such as “textual” and “interpersonal”. Textual metadiscourse included four strategies such as text connectives, code glosses, illocution markers, and narrators while three strategies such as validity markers, attitude markers, and commentaries constituted interpersonal metadiscourse. Vande Kopple’s model was the first systematic approach to compose a taxonomy which give rise to many studies and new taxonomies. On the other hand, the categories are unclear and overlap in many ways.

While Crismore and colleagues (1993) adopt the same major types of Vande Kopple (1985), they adapt the subtypes either by adding or deleting classes such as dividing the textual into textual and interpretive. Even though Hyland (2005) makes use of the previous models in generating his own model of metadiscourse markers, the subtypes of this model has no gap or overlaps regarding the functions of metadiscourse markers as the previous ones. Hyland (2005) classified metadiscourse features into two main categories, namely: interactive (or textual) and interactional (or interpersonal) dimension.

There is a considerable amount of studies which analyze the particular features of metadiscourse markers (Bunton, 1999; Hyland & Tse, 2004; Ifantidou, 2005; Abdi, 2009; Adel, 2010; Kondowe, 2014). Many researchers have focused on the use of metadiscourse markers from cross-cultural (Blagojevic, 2004; Burneikaite, 2008; Mur-Duenas; 2011; Özdemir & Longo, 2014; Çapar, 2014), cross-disciplinary (Hyland, 1998; Hyland, 1999; Dahl,



2004; Hyland, 2004; Hyland, 2010; Rezaei et al., 2015; Salas, 2015) and gender-based perspectives (Yavari & Kashani, 2013; Yeganeh, 2014; Zareifard & Alinezhad, 2014; Zadeh et al., 2015; Salehi & Biria, 2016). However, there is scant attention on the use of metadiscourse markers in research articles from the point of diachronic influences.

Turkish studies on metadiscourse markers

Over the last decades, Turkish researchers have been concerned about the use of metadiscourse markers in academic texts (Fidan, 2002; Uzun, 2002; Zeyrek, 2002; Bayyurt, 2010; Akbaş, 2012; Algi, 2012; Çapar, 2014; Özdemir & Longo, 2014; Atmaca, 2016; Bal-Gezegin, 2016; Kan, 2016; Duruk, 2017; Can & Yuvayapan, 2018; Koroğlu, 2018; Dağ Tarcan, 2019; Şen, 2019).

Özdemir and Longo (2014) analyzed 52 MA theses abstract sections written in English by Turkish and USA postgraduate students in the field of English Language Teaching in regard to the metadiscourse use according to Hyland's (2005) taxonomy. The data analysis shows that Turkish students employed less evidential, endophorics, code glosses, boosters, attitude markers, self-mentions and more transitions, frame markers and hedges when compared to USA students MA theses abstracts. Atmaca (2016) compared the hedges in MA theses and PhD dissertations in English Language Teaching discipline and detected that hedges are much more deployed in PhD dissertations than in MA theses. Furthermore, it has been revealed that nouns are less frequently used to form hedging features while modals-followed by passivization- is mostly applied hedging type. Can and Yuvayapan (2018) analyzed 120 PhD dissertations written by native academic authors of English and Turkish-speaking academic authors of English in terms of the use of interactional metadiscourse markers within the framework of Hyland's taxonomy. The study revealed that native academic authors of English overused all of the metadiscourse markers. Dağ Tarcan (2019) examined the metadiscourse markers in Turkish scientific texts on the basis of Hyland's (2005) metadiscourse model. Within this context, the database of the study consists of randomly selected scientific texts from different branches (Psychology, History, Sociology, Educational Sciences, Philosophy, Linguistics and Tourism) in the field of social sciences. The study revealed that the metadiscourse use varies according to the branch of the scientific texts.

Considering the studies carried out by Turkish researchers, there is need to conduct more studies in the context of describing metadiscourse markers in Turkish scientific texts in a diachronic way. The main effort of this study has been to contribute to this need to a certain extent.



Diachronic investigation of metadiscourse markers

As the writing conventions vary across disciplines, cultures, genres, and sub-genres synchronically, writer-reader interaction may also vary diachronically. Swales's (1990) notion of dynamic nature of genre can be considered as a rationale for the importance of interactional nature of writing.

Kuhi and Dust-Sedigh (2012) analyzed the interactional metadiscourse markers in the chemistry articles of native and Iranian journals during two decades. The data analysis revealed the considerable growth in the frequency of interactional metadiscourse features. In the authors' view, the changes in the socio-historical context impose pressure on the structure of academic genres and epistemological norms of science. In the same vein, Gillaerts (2014) examined the use of interactive and interactional metadiscourse markers in 60 abstracts from applied linguistics journal published from 1987 to 2007 and found an overall increase of interactive metadiscourse coupled with a decrease in interactional metadiscourse. In the author's view, these findings support the idea that there is an increasing tendency in applied linguistics towards more statistics and description. Kuhi and Mousavi (2015) investigated fifty research articles in order to find out changes over time in terms of three prominent interactional markers; hedges, boosters, and attitude markers. Data analysis indicated that there was a revolutionary change over time as the degree of interpersonality increased over time in applied linguistics research articles especially by means of using and devoting most of discussion section to hedging markers. According to Kuhi and Mousavi (2015), it can be claimed that writers in high prestigious journals tend to apply high degree of resources to produce more persuasive texts that reflects competitive nature of academic discourse. Keramati and colleagues (2019) examined 4.3 million words taken from three leading journals of applied linguistics according to Hyland's (2005) model of metadiscourse in order to trace the diachronic evolution of stance and engagement markers across four different sections of research articles from 1996 to 2016. The analysis revealed a significant decline in the overall frequency of metadiscourse resources in all sections of RAs. In the authors' perspective, this decrease was entirely due to the overall decline in the use of stance markers particularly in result and method sections. Finally, through the diachronic analysis of 2.2 million words in the articles from four disciplines, Hyland and Jiang (2016, 2018) found an overall increase of interactive metadiscourse and a significant decrease in interactional metadiscourse between 1965 and 2015.

The present study addresses the need for more research in diachronic analysis in regard to the metadiscourse markers. It would not be wrong to state that there is not any research which focuses on the use of Turkish metadiscourse



markers in a diachronic way. Specifically, the main aim of this study is to explore the interactive metadiscourse markers in abstract sections in a sample of Turkish research articles in the field of linguistics in a diachronic way. The researcher hypothesizes that there is a direct relationship between rhetorical strategies in writers' academic writing output and writers' awareness of its convention as Kuhl and Mousavi (2015) argue that writers consider the writer-reader interaction most in the recent decade's articles.

Significance of the study

Previous studies show that academic genres have been mainly investigated in regard to their communicative purpose and move structure (Bhatia, 1993; Swales, 2004; Hyland 2005), however diachronic genre research is less frequent, despite of its importance for genre theory (Gillaerts, 2010). Despite widespread interest and research among applied linguists to explore metadiscourse use, very little is known of how metadiscourse resources have evolved over time in response to the historically developing practices of academic communities (Keramati et al., 2019). Even though both interactional and interactive metadiscourse markers are vital rhetorical features in producing persuasive texts, most of the studies focused on interactional metadiscourse use over the last decades (e.g., Abdi, 2002; McGrath & Kuteeva, 2012). Notwithstanding that there are some exceptions regarding the researches on the use of interactive resources (e.g. Dahl, 2004; Khajavy, 2012; Khedri et al., 2013; Cao & Hu, 2014), these researches investigated only a subset of interactive resources. Hyland and Jiang (2019) state that:

The study of interactive features remains underexplored and we know almost nothing of how these features have changed over time; whether they have increased or declined; whether some fields have seen greater changes than others; or whether some features have become more frequent in academic arguments.

This study is an attempt to fill the above-mentioned gaps by investigating all types of interactive resources within the framework of Hyland's taxonomy (2005) in a diachronic comparative research design. Accordingly, this study addressed the need for more research in diachronic analysis for the field of applied linguistics.

The aim of the study

This study aims to trace the diachronic evolution of interactive metadiscourse markers in research article (RA) abstract sections published in the field of Linguistics from 2008 to 2018 with two year-blocks as 2008-2009 and 2017-2018.



The researcher tries to answer the following research questions:

- a) What types of interactive metadiscourse markers do native Turkish-speaking academic authors employ in their RAs abstract sections in the discipline of linguistics published in 2008-2009 and 2017-2018?
- b) How is the distributional pattern of interactive metadiscourse markers in RAs abstract sections published in 2008-2009 and 2017-2018?
- c) Are there any significant differences between 2008-2009 corpus and 2017-2018 corpus in regard to the authors' use of interactive metadiscourse markers in abstract sections of Linguistics research articles?

Method

The researcher of the present study has adopted Hyland's (2005) taxonomy of metadiscourse markers as the theoretical framework. The reason behind is that this model is designed specifically for academic writing as stated by Zarei and Mansoori (2011, p. 45) when they describe it as "a model of metadiscourse in academic texts." In addition to this, the model includes previous models as stated by Hyland (2005). This means that it overcomes the gaps and overlaps in them. The study employed both qualitative and quantitative analysis with the analysis of a sample of thirtysix RA abstract sections written in Turkish by native Turkish authors. A detailed information about the corpus of the study is given below.

The corpus

The corpora of the present study featured a total of 4261 words in thirty six abstract sections of RAs in the field of linguistics published in 2008-2009 and 2017-2018 as two corpora at two periods over the past decade as shown in Table 1.

Table 1: Corpus Size

Year-blocks	Number of words
2008-2009	2031
2017-2018	2230
Overall	4261

The table above represents the quantification of interactive markers in RAs abstract sections published in the field of linguistics in 2008-2009 and 2017-2018 year blocks. The number of words used in the abstract sections in 2008-2009 is slightly higher than the 2017-2018 corpus.



Analytical framework

The researcher adopts Hyland's (2005b) model of metadiscourse for the analysis of the corpora which has two main types as interactive and interactional. The interactive metadiscourse markers provide that the writer organizes the information in the text and guide the reader throughout the text. The interactional markers, on the other hand, is employed to involve the reader in the text (Hyland, 2005). In this study, interactive part of metadiscourse markers are examined which are given below with its all of the categories, functions and resources.

Table 2: Interpersonal Model of Metadiscourse, Interactive Markers (Hyland, 2005, p. 49)

Category	Function	Examples
Interactive	help to guide the reader through the text	Resources
Transitions	expresses relations between main clauses	in addition; but; thus; and
Frame markers	refer to discourse acts, sequences or stages	finally; to conclude; my purpose is
Endophoric markers	refer to information in other parts of the text	noted above; see Fig; in section 2
Evidentials	refer to information from other texts	according to X, Z states
Code glosses	elaborate propositional meanings	namely; e.g.; such as; in other words

Each main category in the interactive resources shown in Table 2 performs special function. Transitions are employed to make relation between main clauses with additive, contrastive, and consequential functions. Frame markers organize the text by announcing discourse goals, sequencing and labelling text stages. Endophoric markers refer to information in other parts of the current text. Evidentials are deployed to point to information originated the outside of the current text. Code glosses are used to restate the information and thus help the author to make his/her text more reader-friendly. As Hyland (2005) suggests, 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.

Data collection procedure

The researcher compiles an electronic corpus consisting of 36 RAs, of which 18 were published in 2008-2009 (9 in 2008; 9 in 2009) and 18 were published in 2017-2018 (9 in 2017; 9 in 2018); all were published between



2008 and 2018. All the data used in this study is extracted from the website of the *Dergipark* (<https://dergipark.org.tr/tr/>). Having specified the discipline as “linguistics”, the journals are selected according to three criteria pointed out by Nwogu (1997): reputation, representativeness and accessibility. Three journals selected for this study are *Journal of Linguistics and Literature*, *Journal of Linguistics Research*, *Language Journal* and they are all leading open access journals in linguistics, indexed by *Ulakbim Turkish National Databases*.

The articles which were written by single author are selected as the writing styles of the authours may differ from each other and the differences may affect the findings obtained from the examination. The researcher uses stratified random sampling method for article selection which involves the division of a population into smaller groups known as strata.

Data analysis procedure

Qualitative and quantitative research paradigm is adopted for the study. To begin with the analysis, the researcher reads the abstract sections and identifies the interactive metadiscourse items of each category according to corresponding groups based on Hyland’s (2005) model of metadiscourse and calculates the items manually one by one. Then, each sample text is reread by a second rater to detect interactive metadiscourse markers once again.

An inter-rater reliability analysis using the Kappa statistic, which shows the degree of consistency between the analysis of the raters is found to be $Kappa = 0.81$ ($p < .001$) which means almost a perfect agreement between raters (Smith et al., 2005). After the agreement is achieved, the collected data are put in to SPSS software and the frequency counts with the percentages of the uses of interactive metadiscourse markers in the data are calculated and a Pearson chi-square test is conducted in different years period.

Results and Discussions

The goal of the present study was to track the changes in the occurrence of interactive metadiscourse markers in RAs abstract sections through time with the hypothesis that evolutionary behavior of years may affect the degree of writer-reader relationship from persuasiveness perspective.

The first research question addressed the differences between 2008-2009 authors and 2017-2018 authors in terms of using interactive metadiscourse markers. The findings reveal that all of the interactive metadiscourse markers namely frame markers, transitions, endophoric markers, evidentials, code glosses are used in both 2008-2009 and 2017-2018 corpora and it shows that authors of the linguistics RA in the last decade pay attention to guide the



readers throughout the discourse and conventionalized writing is preserved. The use of interactive metadiscourse markers illustrate that the authors are concerned with making their text as coherent and convincing as possible and with organizing their text in a way that they could predict the readers' knowledge of an explicit text (Hyland, 2010). In other words, the reliance of authors on interactive metadiscourse features can reveal the fact that authors intend to consciously guiding the flow of information in such a way that they can establish their intended meanings (Hyland, 2010).

The second research question was posed to analyze the distributional pattern of interactive metadiscourse markers in RAs abstract sections published in 2008-2009 and 2017-2018. The analysis showed that the distribution of metadiscourse markers is similar in 2008-2009 and 2017-2018 corpora.

Table 3: The Frequency of the Interactive Metadiscourse Markers in 2008-2009 and 2017-2018 Research Articles Abstracts

Interactive Metadiscourse Markers (IMDMs)	Frequency of 2008-2009 IMDMs	Percentage of 2008-2009 IMDMs	Relative Frequency of 2008-2009 IMDMs	Frequency of 2017-2018 IMDMs	Percentage of 2017-2018 IMDMs	Relative Frequency of 2017-2018 IMDMs
Transition markers	26	13,54%	0,14	25	10,37%	0,10
Frame markers	88	45,83%	0,46	104	43,15%	0,43
Endophoric markers	48	25,00%	0,25	60	24,90%	0,25
Evidentials	16	8,33%	0,08	36	14,94%	0,15
Code glosses	14	7,29%	0,07	16	6,64%	0,07

As can be understood from the table above, the authors of the RAs published in both 2008-2009 and 2017-2018 tend to guide their readers mostly with the frame markers which are the best representatives of organizational structure of discourse (Hempel & Degand, 2006) and provide framing information about 'text boundaries or elements of schematic text structure' (Hyland & Tse, 2004, p. 168) (n: 88, 45,83% and n:104, 43,15% respectively). Following example is an excerpt from the data which includes a frame marker.

Excerpt 1 (frame marker) (the author A11)

e.g. *Son bölümde ise kavram öğretimi model ve stratejilerinin günlük kavramların öğretiminde kullanışlı olmadığı ve günlük kavramların öğretimi*



ile sözcük öğretimi arasında ilişki kuran çalışmalara gereksinim olduğu görüşleri, kuramsal gerekçelerle değerlendirilmiştir “**In the last section**, the opinions that concept teaching models and strategies are not useful in teaching everyday concepts and the necessity of studies that establish a relationship between the teaching of everyday concepts and vocabulary teaching had been evaluated using theoretical justifications.”

In the example above, it is observed that the author employed the frame marker *son bölümde ise* “in the last section” to label the text stage which functions as indicating the text boundaries and order the argument in the text.

Considering the frame markers employed in 2008-2009 data in this study, frame markers are used to serve four different functions of Hyland’s metadiscourse model (2005). The functions and some of the occurrences of frame markers in the data are given as in the following: sequencing (i.e. *birincisi* “firstly, *ikincisi*, “second one”, *son olarak* “finally”, *öncelikle* “first of all”, *sonra/daha sonra* “then/next”) labelling text stages (i.e. *son bölümde ise* “in the final section”, *çalışmanın ilk bölümünde* “at the first part of the study”), announcing the goal of writers (i.e. *incelemek* “examine”, *çalışmanın temel amacı* “the main goal of the study”, *amacıyla* “with the aim of”, *bu çalışmanın amacı* “the aim of this study”, *çalışmadaki temel odaklanma* “the basic focus in the study”, *bu çalışma* “this study”, *bu çalışmada* “in this study”, *çalışmada* “in the study”, *bu yazıda* “in this paper”, *araştırmada* “in the research”, *bu yazı* “this paper”), indicating topic shift (i.e. *ışığında* “in the light of”, *bağlamında* “in the context of”, *-e göre* “in regard to”, *-e (a) dayanan* “based upon”, *göz önüne alınarak* “considering”, *çerçevesinde* “in the framework of”, *bakımından* “in terms of”, *doğrultusunda* “in accordance with”, *-e (a) ilişkin* “relating to”, *-e (a) bağlı olarak* “based on”, *konusunda* “in the matter of”, *temelinde* “based on”, *-de(a)n hareketle* “with reference to”).

2017-2018 data also includes all these four functions of frame markers proposed by Hyland (2005) as sequencing (i.e. *ilk olarak* “first of all”, *öncelikle* “first of all”, *daha sonra* “next”), labelling text stages (i.e. *son bölümde* “in the last section”, *çalışmanın ilk bölümünde* “at the first section of the study”, *bu aşamada* “at this stage), announcing the goal of writers (i.e. *bu çalışmada* “in this study”, *amaçlamak* “to aim”, *tartışılmak* “to discuss”, *bu makalede* “in this article”, *çalışmanın amacı* “the aim of the study”), indicating topic shift (i.e. *açısından* “in terms of”, *hakkında* “about”, *ile ilgili* “with respect to”, *kapsamında* “within the scope of”, *ise* “as for”, *bağlamında* “in the context of”, *-a(e) ilişkin* “relating to”, *bu kapsamda* “within this scope”, *temel alınarak* “based on”, *perspektifinden* “from the perspective of”, *uyarınca* “in accordance with”). In addition to these functions, I have detected another function of frame marker in 2017-2018 data which can be



labelled as “announcing the results” (i.e. *çalışmanın sonunda* “at the end of the study”, *çalışmanın genel sonucu* “the overall result of the study”, *bu araştırma sonuçları* “the results of this study”, *inceleme sonucunda* “at the end of the investigation”, *sonucuna varmaktadır* “to result”). These are not labelling text stages, but announcing the results of the study as the function of announcing the goals prepares the reader learning about the goals of the researcher regarding the study. While the function of labelling the text stages provide the organizational structure of the text such as *çalışmanın son bölümünde* “at the last section of the study”, announcing the results serve function as identifying and providing the information about the results of the study with the phrases such as *çalışmanın sonucunda* “at the end of the study”. Furthermore, this function prepares the reader for the information that will be presented regarding the result of the study that the author expects or reveals whereas announcing the goals functions as providing information about the goals of the researcher regarding the study. Overall, in addition to the frame markers which provide that the authors explicitly refer to the discourse acts by labeling the stages, announcing the goals, shifting the topics and sequencing parts of the text, 2017-2018 employed a frame marker which serves another function “announcing the result” which shows a qualitative evolutionary perspective of metadiscourse markers in diachronic analysis.

Endophoric markers, also known as text references are the second most frequently applied interactive metadiscourse markers in 2008-2009 and 2017-2018 year blocks as shown Table 3 and deployed by the authors to refer to the information in other parts of the current text and help readers draw their attention to the different parts of the discourse (n: 48, 25% and n: 60, 24,9% respectively). The following example is an excerpt from the data which includes an endophoric marker.

Excerpt 2 (endophoric markers) (the author B13)

e.g. *Araştırmanın sonuçları aşağıdaki bulguları ortaya koymaktadır* “The results indicate the findings below”

As can be seen in the example above, the endophoric marker *aşağıdaki* “below” refers to the information stated in the other parts of the text, thereby provides the reader with additional information. In the example above, the author refers to the next statements in the text.

The structures employed regarding the endophoric markers are limited since only the abstract sections of the articles are examined in this study; hence no examples such as “as given in the Table 1, as stated in the previous section, Graphic 3 shows that.” 2008-2009 data mostly include *aşağıda/aşağıdaki* “below” and *yukarıda* “above” resources for endophoric markers.



In addition to such endophoric resources, 2017-2018 data also contains multi-word structures and as Hyland (2005) states these structures “refer to any information that the writer has stated previously anywhere in the text” (i.e. *sözü edilen parametrelerde* “in the above-mentioned parameters”, *bahsi geçen alanlarda* “in the given fields”, *belirtilen ölçütler* “indicated criterion”). It has been detected that these multi-word structures only refer to the information the writer has stated previously in the text. Accordingly, in the overall investigation of both data, it can be detected that Turkish endophoric resources not only refer to the sections but also to the other information in the text with the multi-word structures which mostly refer to the previous information in the Turkish abstracts of linguistics research articles.

The results further reveal that the third mostly applied interactive metadiscourse marker in RAs published in 2008-2009 is transition markers (n:26, 13,54%) which help the author clarify the relationships across arguments by creating textual cohesion with additive, causative and contrastive devices. On the other hand, the third most frequently applied interactive metadiscourse marker used in RAs published in 2017-2018 is evidentials (n:36, 14,94%) which is also known as citations (Swales, 1990) and which strengthens the texts’ persuasiveness with adequate documentation by present information from sources outside the text. Thereby, as for the third and forth most frequently employed interactive metadiscourse marker, the situation is exactly the vice versa in regard to two year blocks.

Transitions indicate the writer’s thinking via additive (and, furthermore, by the way, etc.), causative (because, thus, therefore, consequently, etc.) and contrastive (similarly, in contrast, but, on the other hand, etc.) relations (Hyland, 2005). In both 2008-2009 and 2017-2018 data, transition markers have been detected to connect the main clauses with additive resources (i.e. *ve* “and”, *bunun yanında/bunun yanısıra* “besides”, *ayrıca* “moreover”, *öyle ki* “in fact”, *hem... hem de* “both ...and...” *sadece değil aynı zamanda* “not only but also”) causative resources (i.e. *çünkü* “because”, *bu nedenle/bu yüzden* “therefore”, *sonuç olarak* “consequently”, *dolayısıyla* “accordingly”), contrastive resources (i.e. *ancak* “but”). The following excerpt from 2008-2009 data includes an additive transition marker.

Excerpt 3 (transition) (the author B8)

e.g. *Bu bakış açısı eğitim-öğretim ortamları için tanımlanan hedef davranışların tanımlanmasında ve öğrenciyi bu davranışlara yönlendirmekte kullanılacak tüm metinlerin seçiminde hem uzmanlar için elverişli bir başlangıç noktası sunmakta hem de bu ortamlarda kullanılmakta olan ders malzemelerini niteliğinin değerlendirilmesinde anahtar bir rol üstlenmektedir.*



“This point of view **both** proposes a convenient starting point in defining target behaviours in educational environments and choosing appropriate texts in order to achieve these behaviors **and** plays a key role in evaluating the quality of course materials used in educational environments.”

In the example above, it is observed that the author employed the transition *hem... hem de* “both... and” to make addition to the proposition. Furthermore, in the analysis of a transition marker, it is important to notice that the transitions connects semantic relations between two clauses as in the excerpt 3, not the phrases.

As for the evidentials, Yang (2013) reports that evidentials have three main types of realizations. In the following, these types of evidentials are given with the examples from 2008-2009 data. First one is (author+date) form [i.e. (*Vardar, 1998: 124*), (*Moorman ve Ram, 1994a* “Moorman and Ram”)]. Second one is *verb+ that* or *as verb(ed)* structure [i.e. *Brown ve Gilman’ın (1960) ön gördüğü gibi* “as Brown and Gilman (1960) predicted”, *dilbilgisi kitaplarında tanımlandığı üzere* “as defined in the grammar books”]. Third one is non-verbal reporting evidentials which are composed of *noun patterns or adjuncts* [i.e. *Brown ve Levinson’un İncelik Kuramı (1978, 1987)* “Brown and Levinson’s Politeness Theory (1978, 1987), *House’un (1981, 1997, 1998, 2001) İşlevsel-Edimbilimsel Modeli temelinde* “on House’s (1981, 1997, 1998, 2001) Functional-Pragmatic Model, *Baker’a (2001a) göre* “according to Baker (2001a)”, *alanyazında* “in the literature”, *Sağın-Şimşek, Babur ve Rehbein (2008)’de* “in Sağın-Şimşek, Babur & Rehbein (2008)”].

In 2018-2019 data, some of the evidential resources are as following: (*author+date*) [i.e. (*van Eemeren, Grootendorst & Henkemans, 2002*), (*Hempelmann, 2017; Trouvain & Truong, 2017*), (*Glen, 2003*)]; *verb+ that* [i.e. *Mantıksal Olguculuk ...öne sürmüştür* “Logical Positivism asserts that”, *Partington (2006) ...çalışmıştır* “Partington (2006) studied that”] or *as verb(ed)* structure (i.e. *Li (1993) ün ima ettiği gibi* “as Li (1993) implies”, *Kratzer (1981, 1991) ’in ileri sürdüğü gibi* “as Kratzer (1981, 1991) assert”), *noun patterns or adjuncts* [i.e. *Ruhi (2011), geniş bir literatür* “a wide literature”, *Sözcükler ve Kurallar kuramının savunucularına göre* “according to proponents of the Words and Rules theory”, *edimsel-eytişimsel yaklaşıma göre* “in pragma-dialectical terms”].

Considering the 2008-2009 and 2017-2018 data, in addition to Yang’s (2013) three types of realization, three different realizations of these types of evidentials have also been detected. First one is *eylem+ArAk* “*verb+ing*” structure [i.e. *İşlevsel Dilbilgisi yaklaşımını göz önüne alınarak* “taking into account the theory of Functional Grammar”, *McKeown ve*



diğ. (2012)'nin kahkaha sınıflandırması temel alınarak “grounding on the laughter classification by McKeown et al. (2012)”. Second one is a structure composed of *relative clause* as *Brown ve Gilman'ın (1960) ortaya koydukları “Güç ve Dayanışma” modeli* “Power and Solidarity’ model set forth by Brown and Gilman (1960), *Prof. Dr. Şükriye Ruhi'nin öncülüğünde geliştirilen ODTÜ Sözlü Türkçe Derlemi (STD)* “the METU Spoken Turkish Corpus (STC), which is pioneered by the late Prof. Dr. Şükriye Ruhi”, Çakır (2016a) tarafından elde edilen veriler “data obtained by Çakır (2016a)”. Third one is “*relative clause+adjunct*” structure regarding Turkish language [i.e. *Moorman ve Ram'ın geliştirdiği (1994a, 1994b, 1999) İşlevsel Okuma Kuramı çerçevesinde* “in view of Functional Theory of Reading developed by Moorman and Ram (1994a 1994b, 1999)]. In addition to these structures detected, both 2008-2009 and 2017-2018 data also include following non-verbal reporting evidentials composed of *noun patterns and adjuncts* as *X'in kuramı* “X’s theory”, *X'in modeli* “X’s model”, *X kuramı çerçevesinde* “in the framework of X’s theory”, *X'in Y modelinde* “in X’s Y model”, *-e göre* “according to”. The following excerpt includes an evidential marker.

Excerpt 4 (evidential) (the author B16)

e.g. **Baker’a (2001a) göre** *ideolojik, bireysel ve/ya uluslararası nedenlerle gerçekleşen ikidillilik ile beyin ve zeka arasındaki ilişki, kimi araştırmacıların ilgi odağı olmuştur.* “**According to Baker (2001a)**, the relationship between bilingualism which is introduced with ideological, individual and/or international issues, and brain & intelligence have been in the center of interest of some researchers.”

As shown in the above excerpt, the author employs an evidential resource *-a göre* “according to” to represent ideas originated out of the text. Along with presence of homograph words in the language, their different functions should also be taken into consideration in the analysis of metadiscourse markers. As a metadiscourse item *-a(e) göre* “according to” may function as an evidential marker to refer an information out of the text as in the excerpt 4 or as a frame marker with the meaning “in regard to” to indicate the topic shift. Although metadiscourse markers have meaning independently of the discourse, they should be evaluated based on their meaning and functions in the text as they get their meaning depending upon the discourse they exist in. Thereby, it can be asserted that metadiscourse is discourse contingent upon discourse semantically along with being beyond discourse with the feature of connecting the arguments, propositions or entities in the world outside the text which is objective in nature and gain them a convincing feature.



The frequency of occurrence of code glosses are almost the same in both 2008-2009 and 2017-2018 RAs abstract sections as being the least frequently employed interactive metadiscourse marker (n: 14, 7,29% and n: 16, 6,64% respectively). The findings reveal that the authors in both year blocks avoid from the restatement of ideational information or the explanation of the implicate premises. Following excerpt includes a sentence including a code gloss.

Excerpt 5 (code glosses) (the author A3)

e.g. *Derlem incelemesinden ve deneysel bir çalışmadan elde edilen sonuçlar bire bir örtüşmezken, genel olarak Türkçe anadil konuşucularının daha önce incelenmiş olan başka dillerin (İngilizce, Almanca gibi) anadil konuşucuları gibi, ad tamlamalarında çoğul adları tamlayan olarak daha az kullandıkları ortaya çıkmıştır.* “In spite of the fact that the results obtained from a corpus-analysis and a paper and pencil experiment yielded findings that did not perfectly overlap, it was found that Turkish native speakers, like native speakers of other languages investigated before (**such as English and German**), overall preferred plural nouns to a lesser extent than they did singular nouns as non-heads in nominal compounds.”

In the above example, the author uses two functions of the code glosses together: reformulation and exemplification (Hyland, 2007). The parenthesis is used to reformulate the argument and *gibi* “such as” to exemplify the argument. When 2008-2009 and 2017-2018 data is investigated in regard to the use of code glosses, reformulation [i.e. (*Türkçe/İngilizce*) “(Turkish/English)”, (*95 Kadın, 96 Erkek*) “95 Women, 96 Men”, (*Türkçe*) “(Turkish), *bir başka deyişle* “in other words”, (*geçişli ve çift geçişli*) “(transitive and ditransitive), (*Türkçe Ulusal Derlemi*) “(Turkish National Corpus)”] and exemplification [i.e. *İngilizce, Almanca gibi* “such as English, German”].

It is also observed in both data that the reformulation with the parenthesis is also used to elaborate the argument or proposition regarding the study [i.e. *191 öğrenci (95 kadın, 96 erkek)* “191 students (96 women, 96 men)”] and to restate the words in English or to write the original name [i.e. *söylem belirleyicisi* “discourse marker”, *Çırak* (orijinal adı “The Apprentice”) “Çırak (the original name “the Apprentice”)”, *Mantıksal Olguculuk* “Logical Positivism”] Thereby, in the analyzed Turkish abstracts, codeglosses are employed to redefine the first proposition with different words in order to strengthen the message given in the text or to present it from a different perspective. In addition to these realizations, the data also shows another type of realization of the code glosses which can be revealed with the following excerpt:

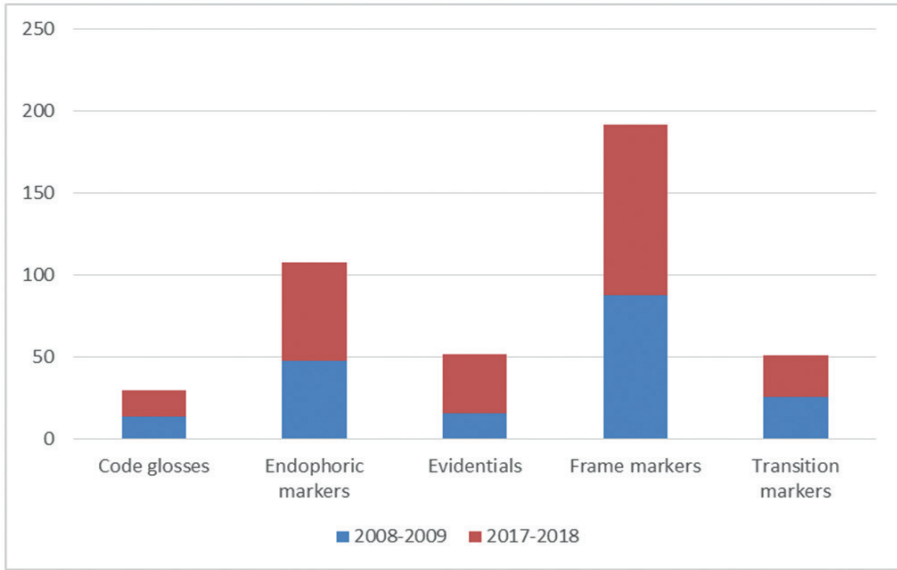


Excerpt 5 (code glosses) (the author A15)

e.g. *Ancak kaygı düzeyi yüksek öğrencisi olan okulların bir kısmında başarı düzeyleri düşük bulunmuştur* “However, it was found that in some of the schools, where the students’ anxiety level was high, the students’ success was low”

In the example above, there is a relative clause *kaygı düzeyi yüksek öğrencisi olan okulların bir kısmı* “some of the schools where the students’ anxiety level was high” which can also function as reformulation in the context. In contrast with the reformulation with the paranthesis which restate the previous proposition, this type is realized with the relative clause which elaborate the following proposition because of the fact that Turkish is a head-final language.

Overall, frame markers and endophoric markers occurred most frequently followed by transition marker, evidentials and code glosses as can be seen obviously in the Graphic 1.



Graphic 1. The frequency of the interactive metadiscourse markers in 2008-2009 and 2017-2018 corpora

Graphic 1 shows the writers of 2008-2009 and 2017-2018 employ all of the interactive metadiscourse markers in their academic texts and frequency use of these markers are close to each other, except evidentials which is found to be employed in 2017-2018 corpus almost two times more than 2008-2009

corpora. The table below shows the results of chi-square tests regarding the use of interactive metadiscourse markers in both corpora.

Table 4. Results of Chi-Square Tests of Interactive Metadiscourse Markers in 2008-2009 and 2017-2018 Research Article Abstracts

IMDMs	X ²	df	p
Transition markers	0.019	1	0.888
Frame markers	1.333	1	0.248
Endophoric markers	1.333	1	0.248
Evidentials	7.692	1	0.005
Code glosses	0.133	1	0.715

Based on the results of Chi-square test shown in Table 4, it can be inferred that there is a noticeable difference between two corpora in using evidentials ($p < 0.05$). According to the results, 2017-2018 researchers tend to use more evidentials to apply more support and justification in their writing. Thereby, it can be understood that the authors of the RA abstracts published in 2017-2018 more closely guide the readers through the text especially by means of evidentials with the sensitivity to the readers' need of being persuaded by referring to the information which originated the outside of the text.

Evidential features in academic genres such as citations, direct quotations, reporting verbs have been investigated by many researchers in different scopes such as PhD thesis (Thompson, 2001), L2 student writing (Petrić, 2007), medical journal articles (Thomas & Hawes, 1994), native and non-native master's thesis (Helali Oskouei & Kuhi, 2014). Kuhi (2017) points out the following statement as outlining the importance of evidential features in academic genres:

In fact, the way other scholars' voices are reflected in a piece of academic text is, amongst other things, an indication of the awareness among the members of a specific discourse community that they should have their share and investment in the social credit system of the academy and that this is a cooperative investment system which should be respected by all members.

As clarified above, Kuhi (2017) suggests that evidential features in the academic contexts should be evaluated and interpreted within the social perspective. Accordingly, it would be more appropriate to interpret the overuse of evidential marker in 2017-2018 corpus from social perspective. As moving ahead in the course of time, Turkish researchers are observed to have



preferred cooperation within the specific discourse community which results in the higher inclusion of evidentials in their research article abstracts in the discipline of linguistics.

The findings are almost in line with those obtained by Hyland and Jiang (2019) who investigated the diachronic changes in interactive metadiscourse uses in the last 50 years. The corpus was composed of the research articles published in four disciplines such as applied linguistics, sociology, electrical engineering and biology in three different years as 1965, 1985 and 2015. This comparative study showed a significant increase in the use of interactive metadiscourse markers since 1965. Specifically, transitions and evidentials remain the most frequent devices overall with evidentials nearly doubling.

The present study confirms all these studies such that the authors are getting much more aware of the fact that metadiscoursal elements empower the persuasiveness in their texts. The overall results of the present study disclose that 2017-2018 authors of Turkish RAs are more persuasive in their research writing as they guide the readers more with the help of text.

Conclusion

This study examined the abstract sections of research articles in a diachronic way. The focus was on interactive metadiscourse in Turkish RA abstract sections in linguistics, which were examined, first, to ascertain the frequency and range of use and, then, to find out the how interactive metadiscourse markers enacted in abstract sections in 2008-2009 and 2017-2018 years. Hyland's categorization of metadiscourse led to the conclusion that all of the interactive resources was employed in both sets of data, with frame markers and endophoric markers being among the most frequent categories and code glosses the least employed category which indicates that the writers' awareness regarding the persuasive power of interactive resources in the academic texts. Furthermore, the higher inclusion of evidentials in 2017-2018 corpus in contrary to 2008-2009 RA abstract sections which can be explained by resorting to the evolutionary behavior of years and diachronic evolution which is indicated by a stronger interaction between the writer and the reader in the course of time and writers' awareness regarding the importance of referring to the other researchers' ideas with different realizations of evidential types which actually shows that they declare being member among a specific discourse community. Overall, tracking any changes in metadiscourse use over the past eleven years, this study indicates that there is a direct relationship between academic writing output and authors' awareness regarding the persuasive power of evidentials.



Limitations and Future Directions

This is a preliminary study and much more research is needed. It also has some limitations which need to be tackled. The corpus is restricted to a sample of thirtysix RAs which may constrain the generalizability of the findings. Moreover, the analyses of texts in other Linguistics journals may be taken into consideration. On the other hand, the investigation of interactive metadiscourse markers in a diachronic way is limited to the last ten years. The writers of the last years consider the writer-reader interaction more in contrary to the beginnings of the last decade. In a further research, a course of time more than one decade can be investigated to illustrate the evolutionary behavior of metadiscourse markers throughout the time. The other limitation is that the researcher only investigated interactive metadiscoursal resources. In a further research, interactianal metadiscourse markers in Turkish academic texts may also be examined within the framework of Hyland's (2005) taxonomy in a diachronic way.

Taking into account that producing persuasive texts is important for students' academic life (Crowhurst, 1990) and that they mostly focus on the grammar rules (Mauranen, 1993) and do not receive much information on academic writing both in graduate and undergraduate programs (Başaran & Sofu, 2009), academic writing courses should be included in MA and PhD programs which could be helpful in providing students awareness about using rhetorical strategies especially metadiscourse markers to produce well-developed persuasion texts. Moreover, courses on academic writing including activities relating to metadiscourse markers and introducing metadiscoursal strategies presenting a variety of resources should also be emphasized in the curriculum of teaching Turkish and English as a foreign language which may improve their learners academic writing skills by raising consciousness about metadiscourse markers which help them guide their readers throughout the text and be involved in social interaction with their readers.

References

- Abdi, R., Rizi, M. T., & Tavakoli, M. (2010). The cooperative principle in discourse communities and genres: A framework for the use of metadiscourse. *Journal of Pragmatics*, 42(6), 1669-1679.
- Abdi, R. (2002). Interpersonal metadiscourse: An indicator of interaction and identity. *Discourse Studies*, 4(2), 139-145.
- Abdi, R. (2009). Projecting cultural identity through metadiscourse marking; A comparison of Persian and English research articles. *Journal of English Language Teaching and Learning*, 1(212), 1-15.



- Abdi, R. (2012). Metadiscourse strategies in research articles: A study of the differences across subsections. *Journal of Teaching Language Skills*, 30(1), 1-16.
- Ädel, A. (2006). *Metadiscourse in L1 and L2 English* (Vol. 24). John Benjamins Publishing.
- Ädel, A., & Mauranen, A. (2010). Metadiscourse: Diverse and divided perspectives. *Nordic Journal of English Studies*, 9(2), 1-11.
- Akbas, E. (2012). Interactional metadiscourse in Turkish postgraduates' academic Texts: A comparative study of how they introduce and conclude. *Journal on English Language Teaching*, 2(3), 35-44.
- Algi, S. (2012). *Hedges and boosters in L1 and L2 argumentative paragraphs: Implications for teaching L2 academic writing*. (Unpublished master's thesis). Middle East Technical University.
- Alotaibi, H. (2015). Metadiscourse in Arabic and English research article abstracts. *World Journal of English Language*, 5(2), 1.
- Atmaca, Ç. (2016). Comparison of hedges in MA theses and PhD Dissertations in ELT. *Zeitschrift für die Welt der Türken/Journal of World of Turks*, 8(2), 309-325.
- Bal-Gezegin, B. (2016). A Corpus-based investigation of metadiscourse in academic book. *Procedia-Social and Behavioral Sciences*, 232, 713-718.
- Başaran, S. and Sofu, H. (2009). The process of writing research articles in English and getting published: A case study. *Gaziantep University Journal of Social Sciences*, 8 (2), 371-384.
- Bayyurt, Y. (2010). Author positioning in academic writing. In Zyngier, S. & Viana, V. (Eds), *Appraisals and perspectives: Mapping empirical studies in the Humanities*. 163-184. Rio de Janeiro: The Federal University of Rio de Janeiro.
- Bhatia, V. K. (1993). *Analysing genre: Language use in professional settings*. London: Longman.
- Blagojevic, S. (2004). Metadiscourse in academic prose: A contrastive study of academic articles written in English by English and Norwegian native speakers. *Kalbu Studijos*, (5), 60-67.
- Bunton, D. (1999). The use of higher level metatext in PhD theses. *English for Specific Purposes*, 18, 41-56.
- Burneikaitė, N. (2008). Metadiscourse in linguistics master's theses in English L1 and L2. *Kalbotyra*, 59, 38-47.
- Can, C., & Yuvayapan, F. (2018). Stance-Taking through metadiscourse in doctoral dissertations. *Online Submission*, 6(1), 128-142.
- Cao, F., & Hu, G. (2014). Interactive metadiscourse in research articles: A comparative study of paradigmatic and disciplinary influences. *Journal of Pragmatics*, 66, 15-31.
- Chambliss, M. J., & Garner, R. (1996). Do adults change their minds after reading persuasive text. *Written Communication*, 13(3), 291-313.



- Crismore, A., Markkanen, R., & Steffensen, M. S. (1993). Metadiscourse in persuasive writing: A study of texts written by American and Finnish university students. *Written Communication*, 10(1), 39-71.
- Crowhurst, M. (1990). Teaching and learning the writing of persuasive/argumentative discourse. *Canadian Journal of Education*, 15(4), 348-359.
- Dağ Tarcan, Ö. (2017). Türkçe bilimsel metinlerde etkileşimli üstsöylem belirleyicileri. *Ankara Üniversitesi Sosyal Bilimler Dergisi*, 8(2).
- Dağ Tarcan, Ö. (2019). *Sosyal bilimler alanında yazılan Türkçe bilimsel metinlerde kullanılan üstsöylem belirleyicileri*. (Published PhD thesis). Ankara Üniversitesi.
- Dahl, T. (2004). Textual metadiscourse in research articles: a marker of national culture or of academic discipline. *Journal of Pragmatics*, 36(10), 1807-1825.
- Duruk, E. (2017). Analysis of metadiscourse markers in academic written discourse produced by Turkish researchers. *Dil ve Dilbilimi Çalışmaları Dergisi*, 13(1), 1-9.
- Fidan, Ö. (2002). *Türkçe bilimsel metinlerde üstsöylem belirleyicileri*. Unpublished PhD thesis, Ankara.
- Gillaerts, P. (2014). Shifting metadiscourse: Looking for diachrony in the abstract genre. In M. Bondi, & R. Lores Sanz (Eds.), *Abstracts in academic discourse: Variation and change* (pp. 271-286). Bern: Peter Lang.
- Hatipoglu, Ç., & Algi, S. (2018). Catch a tiger by the toe: Modal hedges in EFL argumentative paragraphs. *Educational Sciences: Theory and Practice*, 18(4), 957-982.
- Helali Oskouei, M.H. & Kuhi, D. (2014). The use of citations in academic writing: Analysis of introduction section of Iranian and native English master's theses. *Journal of Social Issues and Humanities*, 2(3), 216-220.
- Hyland, K. (1996). Writing without conviction? Hedging in science research articles. *Applied Linguistics*, 17(4), 433-454.
- Hyland, K. (1998). *Hedging in scientific research articles* (Vol. 54). John Benjamins Publishing.
- Hyland, K. (2005). Stance and engagement: A model of interaction in academic discourse. *Discourse Studies*, 7(2), 173-192.
- Hyland, K. (2010). Metadiscourse: Mapping interactions in academic writing. *Nordic Journal of English Studies*, 9(2), 125-143.
- Hyland, K., & Jiang, F. (2016). Change of attitude? A diachronic study of stance. *Written Communication*, 33(3), 251-274.
- Hyland, K., & Jiang, F. K. (2018). Text-organizing metadiscourse: tracking changes in rhetorical persuasion. *Journal of Historical Pragmatics*.
- Hyland, K., & Jiang, F. K. (2018). Text-organizing metadiscourse: Tracking changes in rhetorical persuasion. *Journal of Historical Pragmatics*, 21(1).

- Hyland, K., & Tse, P. (2004). Metadiscourse in academic writing: A reappraisal. *Applied Linguistics*, 25(2), 156-177.
- Hu, G., & Cao, F. (2015). Disciplinary and paradigmatic influences on interactional metadiscourse in research articles. *English for Specific Purposes*, 39, 12-25.
- Ifantidou, E. (2005). The semantics and pragmatics of metadiscourse. *Journal of Pragmatics*, 37(9), 1325-1353.
- Kan, M. O. (2016). The use of interactional metadiscourse: A comparison of articles on Turkish education and literature. *Educational Sciences: Theory & Practice*, 16, 1639-1648.
- Karimi, K., Maleki, M., & Farnia, M. (2017). Metadiscourse markers in the abstract sections of Persian and English law articles. *International Journal of Foreign Language Teaching and Research*, 5(18), 69-83.
- Kawase, T. (2015). Metadiscourse in the introductions of PhD theses and research articles. *Journal of English for Academic Purposes*, 20, 114-124.
- Keramati, S., Kuhi, D., & Saeidi, M. (2019). Cross-sectional diachronic corpus analysis of stance and engagement markers in three leading journals of applied linguistics. *Journal of Modern Research in English Language Studies*, 6(2), 1-25.
- Khajavy, G. H., Asadpour, S. F., & Yousefi, A. (2012). A comparative analysis of interactive metadiscourse features in discussion section of research articles written in English and Persian. *International Journal of Linguistics*, 4(2), 147-159.
- Khedri, M., Heng, C. S., & Ebrahimi, S. F. (2013). An exploration of interactive metadiscourse markers in academic research article abstracts in two disciplines. *Discourse Studies*, 15(3), 319-331.
- Kim, L. C., & Lim, J. M. H. (2013). Metadiscourse in English and Chinese research article introductions. *Discourse Studies*, 15(2), 129-146.
- Kondowe, W. (2014). Hedging and boosting as interactional metadiscourse in literature doctoral dissertation abstracts. *International Journal of Language Learning and Applied Linguistics World*, 5(3), 214-221.
- Kopple, W. J. (1985). Some exploratory discourse on metadiscourse. *College Composition and Communication*, 36, 82-93.
- Kopple, W. J. V. (2012). The importance of studying metadiscourse. *Applied Research in English*, 1(2).
- Köroğlu, Z. (2019). A corpus-based analysis: The types of transition markers in the MA theses of native speakers of English and Turkish speakers of English. *Journal of Language and Linguistic Studies*, 15(2), 496-507.
- Kuhi, D., & Dustsadiğ, Z. (2012). A cross-cultural diachronic study on hedging devices diversity in chemistry research articles. Paper presented at the Second International Conference on Foreign Language.

- Kuhi, D., & Mousavi, Z. (2015). A diachronic study of interpersonality in research articles' discussion section: The field of applied linguistics. *International Journal of Research*, 6.
- Kuhi, D. (2017). Towards the development of a socially-informed, process-oriented model of research in metadiscourse. *Journal of English Language Pedagogy and Practice*, 10(20), 92-129.
- Lee, J. J., & Casal, J. E. (2014). Metadiscourse in results and discussion chapters: A cross-linguistic analysis of English and Spanish thesis writers in engineering. *System*, 46, 39-54.
- Mauranen, A. (1993). *Cultural differences in academic rhetoric: A textlinguistic study*. Frankfurt am Main: Peter Lang Publisher.
- Mauranen, A. (1993). Contrastive ESP rhetoric: Metatext in Finnish-English economics texts. *English for Specific Purposes*, 12(1), 3-22.
- McGrath, L., & Kuteeva, M. (2012). Stance and engagement in pure mathematics research articles: Linking discourse features to disciplinary practices. *English for Specific Purposes*, 31(3), 161-173.
- Mur-Dueñas, P. (2011). An intercultural analysis of metadiscourse features in research articles written in English and in Spanish. *Journal of Pragmatics*, 43(12), 3068-3079.
- Özdemir, N. O., & Longo, B. (2014). Metadiscourse use in thesis abstracts: A cross-cultural study. *Procedia-Social and Behavioral Sciences*, 141, 59-63.
- Petrić, B. (2007). Rhetorical functions of citations in high-and low-rated master's theses. *Journal of English for Academic Purposes*, 6(3), 238-253.
- Rashidi, N., & Alihosseini, F. (2012). A contrastive study of metadiscourse markers in research article abstracts across disciplines. *Bulletin of the Transilvania University of Brasov*, 5(4), 17-23.
- Rezaei Keramati, S., Kuhi, D., & Saeidi, M. (2019). Cross-sectional diachronic corpus analysis of stance and engagement markers in three leading journals of applied linguistics. *Journal of Modern Research in English Language Studies*, 6(2), 25-1.
- Salas, M. D. (2015). Reflexive metadiscourse in research articles in Spanish: Variation across three disciplines (Linguistics, Economics and Medicine). *Journal of Pragmatics*, 77, 20-40.
- Salehi, B. M., & Biria, R. (2016). Exploring Gender Differences in Cross-disciplinary Discourse: Interactional Metadiscourse Markers in the Discussion Section of Research Articles. *Language in India*, 16(12).
- Smith, P., Weingart, L., & Olekalns, M. (2005). Markov chain models of communication processes in negotiation. *International Negotiation*, 10(1), 97-114.
- Swales, J. (1990). *Genre analysis: English in academic and research settings*. Cambridge University Press.



- Şen, E. (2019). *Bilimsel makale özetlerinde üstsöylem belirleyicilerinin incelenmesi*. (Published PhD dissertation). Dokuz Eylül University.
- Tavanpour, N., Goudarzi, Z., & Farnia, M. (2016). Interactional metadiscourse markers in sports news in newspapers: A cross-cultural study of American and Iranian columnists. *The Philologist, 1*, 1-13.
- Thomas, S. & Hawes, T. (1994). Reporting verbs in medical journal articles. *English for Specific Purposes, 13*(2), 129-148.
- Thompson, G. (2001). Interaction in academic writing: learning to argue with the reader. *Applied Linguistics, 22*(1), 58-78.
- Uzun, L. (2002). Dilbilim alanında Türkçe yazılan araştırma yazılarında metin dünyasına ilişkin düzenlemeler. L. Uzun ve E. Huber (Ed.), *Türkçede bilgi yapısı ve bilimsel metinler içinde*. Essen: Die Blaue Eule.
- Yang, L. (2013). Evaluative functions of reporting evidentials in English research articles of Applied Linguistics. *Open Journal of Modern Linguistics, 3*(02), 119
- Yavari, M., & Kashani, A. F. (2013). Gender-based study of metadiscourse in research articles' rhetorical sections. *International Journal of Applied Linguistics and English Literature, 2*(2), 77-88.
- Yeganeh, M. T. & Ghoreishi, S. M. (2014). Exploring gender differences in the use of discourse markers in Iranian academic research articles. *Global Journal of Guidance and Counselling, 4*(1).
- Zadeh, Z. R., Baharlooei, R., & Simin, S. (2015). Gender-Based study of interactive and interactional metadiscourse markers in conclusion sections of English master theses. *International Letters of Social and Humanistic Sciences, 47*, 195-208.
- Zareifard, R., & Alinezhad, B. (2014). A study of interactional metadiscourse markers and gender in the defense seminars of Persian speakers. *Journal of Educational and Social Research, 4*(1), 231-231.
- Zeyrek, D. (2002). Psikoloji makalelerinde üstsöylem belirleyicileri. L. Uzun ve E. Huber (Ed.), *Türkçede Bilgi Yapısı ve Bilimsel Metinler: Die Blue Eule*, Essen.

Extended Summary

The research article (RA) is a genre where an orientation to readers is crucial in securing rhetorical objectives (Hyland, 2005). While it is often considered a predominantly propositional and impersonal genre, the act of accrediting knowledge is a social process and involves making linguistic choices which an audience will recognize as persuasive. According to Abdi (2011), persuasion, as part of the rhetorical structure of RAs, is partly achieved by employing metadiscourse. Metadiscourse then is an important pragmatic feature through which writers show a disciplinary awareness of how to represent themselves and their research (Hyland, 1998).

Metadiscourse is defined as “expressing the writer’s acknowledgment of the reader” (Dahl, 2004, p.1811), “metatalk or metacommunication” (Vande Kopple, 2012, p. 37), “discourse about the evolving discourse, or the writer’s explicit commentary on his/her own ongoing text” (Adel, 2006, p. 2), “metatexts which refer to writer’s self-awareness of organizing the text and guiding readers to figure out the intended organization” (Bunton, 1999), “‘discourse about discourse’ that can also be seen as the author’s linguistic manifestation in a text” (Chambliss & Garner, 1996; Hyland, 1996). Hyland (2005) uses metadiscourse as an umbrella term for “linguistic devices that writers utilize to guide their readers to perceive the text and categorizes metadiscourse features into two main categories, namely interactive and interactional resources. The interactive part of metadiscourse provides that the writer organizes the information in the text and guides the reader throughout the text. These markers are transitions, frame marks, endophoric markers, evidentials and code glosses. On the other hand, interactional resources such as hedges, boosters, attitude markers, engagement markers, self-mentions are employed to involve the reader in the text (Hyland, 2005).

There is a considerable amount of studies which analyze the particular features of metadiscourse markers (Abdi, 2009; Bunton, 1999; Hyland & Tse, 2004; Ifantidou, 2005; Adel, 2010; Kondowe, 2014). Many researchers have focused on the use of metadiscourse markers from cross-cultural (Blagojevic, 2004; Burneikaite, 2008; Mur-Duenas; 2011; Özdemir & Longo, 2014; Çapar, 2014), cross-disciplinary (Dahl, 2004; Hyland, 1998; Hyland, 1999; Hyland, 2004; Hyland, 2010; Rezaei et al., 2015; Salas, 2015) and gender-based perspectives (Yavari & Kashani, 2013; Yeganeh, 2014; Zareifard & Alinezhad, 2014; Zadeh et al., 2015; Salehi & Biria, 2016). Despite widespread interest and research among applied linguists to explore metadiscourse use, Keramati and colleagues (2019) called upon “very little is known of how metadiscourse resources have evolved over time in response to the historically developing practices of academic communities”. Over the past several decades, Turkish researchers have paid much attention on the use of metadiscourse markers in academic texts (Uzun, 2002; Zeyrek, 2002; Fidan, 2002; Bayyurt, 2010; Akbaş, 2012; Algi, 2012; Çapar, 2014; Bayyurt, 2015; Atmaca, 2016; Kan, 2016; Dağ Tarcan, 2017; Can & Yuvayapan, 2018; Hatipoğlu & Algi, 2018; Koroğlu, 2018). Considering the studies carried out by Turkish researchers, there is need to conduct more studies in the context of describing metadiscourse markers in Turkish scientific texts in a diachronic way. On the other hand, with notable exceptions (e.g., Khedri et al., 2013),



the small number of existing inquiries into interactive metadiscourse (e.g., Bunton, 1999; Hyland, 1999; Dahl, 2004; Peterlin, 2005; Hyland, 2007) typically examined only a subset of interactive resources each time, which made it difficult to identify common mechanisms shaping the use of interactive metadiscourse as a whole.

This study set out to bridge these gaps by providing some insights into the evolutionary nature of interactive metadiscourse markers in Turkish research article abstract sections according to Hyland's (2005) taxonomy of metadiscourse markers. To this end, this study employed qualitative and quantitative analysis with the analysis of a sample of thirty six RA abstract sections written in Turkish by native Turkish authors in 2008-2009 and 2017-2018 years in *Journal of Linguistics and Literature*, *Journal of Linguistics Research*, *Language Journal*.

The analysis of data showed that all of the interactive resources was employed in both 2007-2008 and 2017-2018 data, with frame markers and endophoric markers being among the most frequent categories and code glosses the least employed category which indicates that the writers' awareness regarding the persuasive power of interactive resources in the academic texts. Furthermore, the higher inclusion of evidentials in 2017-2018 corpus in contrary to 2008-2009 RA abstract sections which can be explained by resorting to the evolutionary behavior of years and diachronic evolution which is indicated by a stronger interaction between the writer and the reader in the course of time and writers' awareness regarding the importance of referring to the other researchers' ideas with different realizations of evidential types which actually shows that they declare being member among a specific discourse community. Overall, tracking any changes in metadiscourse use over the past eleven years, this study indicates that there is a direct relationship between academic writing output and authors' awareness regarding the persuasive power of evidentials.

There are some limitations in this study which further research could take into account. The corpus is restricted to a small number of RAs from a single disciplinary community. The RAs in corpus are sampled from only a limited number of journals. This may constrain the generalizability of the empirical findings. Therefore, the results cannot be generalized to other disciplinary fields. Only the interactive part of the interpersonal metadiscourse framework of Hyland was examined in this study. In a further research, interactional metadiscourse markers in Turkish academic texts may be examined within the framework of Hyland's (2005) taxonomy in a diachronic way and a broader course of time could be included.

