A STUDY ON
INTERACTIONAL METADISCOURSE MARKERS IN RESEARCH ARTICLES

Meral ÇAPAR

(Doktora Tezi)

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INTERACTIONAL METADISCOURSE MARKERS IN RESEARCH ARTICLES

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PhD DISSERTATION

Program in English Language Teaching

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Anadolu University Graduate School of Institute of Educational Sciences

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To my precious family

JÜRİ VE ENSTİTÜ ONAYI

Meral ÇAPAR'ın "A STUDY ON INTERACTIONAL METADISCOURSE MARKERS IN RESEARCH ARTICLES" başlıklı tezi 02.05.2014 tarihinde, aşağıda belirtilen jüri üyeleri tarafından Anadolu Üniversitesi Lisansüstü Eğitim-Öğretim ve Sınav Yönetmeliğinin ilgili maddeleri uyarınca Yabancı Diller Eğitimi Anabilim Dalı İngilizce Öğretmenliği Programında, Doktora tezi olarak değerlendirilerek kabul edilmiştir.

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ABSTRACT

A Study on Interactional Metadiscourse Markers in Research Articles

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Anadolu University School of Educational Sciences, 2014
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The aim of this study is to investigate the use of interactional metadiscourse markers (IMM) in research articles written by American academic writers and Turkish academic writers and to find out whether there are differences in the use of interactional metadiscourse markers between American and Turkish academic writers when they write research articles. With this purpose, on total 150 research articles on the field of teaching a foreign language were analyzed based on the taxonomy Hyland and Tse (2004) suggested. 50 English research articles written by American academic writers (AAWs), 50 English research articles written by Turkish Academic writers (TAWs) and 50 Turkish research articles written by TAWs from different journals were collected for the aim of the study.

This study followed a qualitative study design and used a qualitative data analysis program NVivo10. English research articles written by AAWs and TAWs were collected from internationally published and refereed journals and the Turkish research articles were collected from journals published nationally. The biographies of AAWs were checked from their both personal and institutional websites in order to make sure that all the AAWs had their educational background completed in the USA (MA and PhD) and work at a university in the USA.

The data were analyzed according to the taxonomy suggested by Hyland and Tse (2004) and some additional markers were considered after the pilot study such as the passive voice used as directives. All data were analyzed twice since extra markers came up during the analysis for constructing interaction with the readers on the writer's side. After the first analysis, extra markers were added to the taxonomy and second analysis was carried out. The frequencies for each marker under each category were found out and

then statistical test (Binomial test) was run to find out whether significant difference among the use of interactional metadiscourse markers of AAWs and TAWs existed.

The results of the binomial test showed that significant differences in the use of interactional metadiscourse markers existed among the data sets. AAWs used significantly more IMMs in English research articles compared to IMMs in English and Turkish research articles written by TAWs. TAWs used significantly more IMMs in their English research articles compared to IMMs in their Turkish research articles. The subcategories were analyzed and significant differences were found in terms of boosters, attitude markers, and self-mention.

Key words: Academic writing, research articles, Interactional metadiscourse markers

ÖZET

Araştırma Makalelerinde Etkileşimsel Üstsöylem Öğeleri

Meral ÇAPAR
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Bu çalışmanın amacı Türk yazarlar tarafından yazılmış Türkçe, İngilizce, Amerikalılar tarafından yazılmış İngilizce makalelerde üstsöylem öğelerinden iletişimsel boyutunun kullanımını araştırmaktır. Bu amaçla yabancı dil öğretimi alanında yayınlanmış 150 makale, Hyland ve Tse (2004)'ün sınıflaması temel alınarak incelenmiştir. Amerikalı akademik yazarlar ve Türk akademik yazarlar tarafından yazılmış 50şer İngilizce makale ve Türk akademik yazarlar tarafından yazılmış 50 Türkçe araştırma makalesi incelenmiştir.

Bu çalışma nitel bir araştırma desenini temel almıştır ve bu nedenle veriler nitel bir çözümleme programı olan NVivo 10'da incelenmiştir. İngilizce araştırma makaleleri uluslararası yayınlanan hakemli dergilerden, Türkçe araştırma makaleleri de ulusal yayınlanan hakemli dergilerden toplanmıştır. Amerikalı akademik yazarların özgeçmişleri kişisel ve kurumsal internet sitelerinden incelenmiş olup, eğitimini (Yüksek Lisans ve Doktora) ABD'lerinde tamamlamış olup bir ünivesitede çalışan akademisyenler seçilmiştir.

Veriler Hyland ve Tse(2004)'ün sınıflaması temel alınarak incelenmiştir ve bazı öğe gruplarında yapılan pilot çalışma sonrası eklemeler yapılmıştır. Tüm veriler ek öğelerin ilk çözümleme sürecinde ortaya çıkmasından dolayı iki kez incelenmiştir. Etkileşimsel öğelerin frekansları bulunmuş olup yazarlar arasında anlamlı farklılık olup olmadığını belirlemek için istatistiksel test uygulanmıştır (binom testi).

Binom test sonucunda etkileşimsel üst söylem öğelerinin araştırma makalelerinde Amerikalı ve Türk akademik yazarlar arasında farklılık görülmüştür. Amerikalı yazarların etkileşimsel üst söylem öğrelerini Türk yazarlara göre İngilizce yazılan makalelerde daha fazla kullandıkrları bulunmuştur. Türk yazarların bu öğeleri İngilizce

araştırma makalelerinde Türkçe araştırma makalelerine göre daha sık kullandıkları gözlemlenmiştir. Alt kategorilerden *eminlik, tutum belirteçleri ve ben/biz dili* açısından anlamlı farklılılar bulunmuştur.

Anahtar Kelimeler: Akademik yazma, araştırma makaleleri, etkileşimsel üstsöylem öğeleri.

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ÖZGEÇMİŞ

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LIST OF ABBREVIATIONS

IMMs:	Interactional Metadiscourse Markers
RAs:	Research Articles
TRAs:	Turkish Research Articles
ERAs:	English Research Articles
TAWs:	Turkish Academic Writers
AAWs:	American Academic Writers

CHAPTER ONE

INTRODUCTION

Writing is a prevailing form of communication. Since the onset of globalization, writing has become a key concept, and the use of English is one way to enhance this. However, it is important to realize that writing in English needs close attention. A great deal of communication is achieved through written texts using this internationally accepted language, for work such as coursebooks and research articles to reach all types of audiences. Thus, it is necessary to include certain common elements in texts, such as metadiscourse elements.

While writing, the main aim of a writer is to express ideas through words and sentences and to interact with the readership. Therefore, how to present these ideas appropriately, within a particular social context of the targeted community, is also a concern of the writer. Moreover, this interaction takes place through engagement of the reader with the text (Swales, Ahmad, Chang, Chavez, Dressen, and Seymour, 1998). As a result, the writer and reader form a relationship. To be able to establish a smooth relationship with the reader, the pragmatic aspect of the text needs to receive attention. Swales et al (1998) state that the relationship between writer and reader is a central issue in the pragmatic dimension of academic writing. Traugott and Dasher (2002) propose a systematic account of the role of pragmatics in language change, and they state that the speaker/writer asks the addressee/reader to make inferences like conversational partners and that both conversational partners are conceived as active partners in the communicative interaction. While it is a complex process for native speakers to construct this relationship in English written texts, it can be even more difficult for non-native writers of English.

Since English is a global language in today's world, it is important to know it well to be able to communicate ideas to people of different cultures. As Tardy (2004) suggests, a common language is necessary if one wants to establish cross-cultural communication. English is not only a common language for spoken communication, but also for written communication, especially for texts which aim to share knowledge, experiments and information; in other words, for published texts. In particular, if someone wants to research a topic, most publications containing academic articles are written in English. Thus, as non-native writers, if we want to be included and to share information in this

vast arena of communication, it is vital to learn how to write and express our ideas effectively in English.

Non-native writers, especially academic writers, also need to develop their writing skills because, more specifically, they are expected to compose texts for literacy courses, reports, summaries, or research papers in English for publication. To be able to write in English to the target discourse community is not enough for academic writers; it is also crucial for them to know how to communicate effectively in these texts and how to establish an interaction with readers since reading is not just a process, it is a process in which the reader needs to interact with the writer too. There is a need for both the reader and the writer to construct interaction during this process, and the use of metadiscourse markers is one way of doing this. Therefore, it is important to focus on interactional elements in writing English in the EFL setting as well. As a result, the aim of this study is to investigate the use of interactional text markers in English research articles written by Turkish and American writers and Turkish research articles written by Turkish writers.

In the following section, first the background of the study will be presented by discussing metadiscourse, academic discourse and research articles. Then the statement of the problem and the significance of the study will be discussed. Finally, the methodology will be presented explaining the data and data analysis procedure.

Background to the Study

In writing, the main purpose is communication, so writing information, ideas or emotions or the result of a study is not sufficient. The text should include some communicational aspects in order that readers can follow the text. To be able to involve the readers in the text, writers can make use of certain markers, such as metadiscourse markers. Metadiscourse is a tool that writers use to construct a relationship. It helps to organize the discourse, engage the audience and signal the writers' attitudes (Zarei, 2011). Metadiscourse helps the writer to manage the *role* in adopting the relationship to the *content* and *reader* and this relationship is seen as *textual*. Textual means how a text is carefully encoded to achieve coherence and organization, and this relationship is also viewed as interpersonal being used to help writers express their attitudinal and personal reactions toward readers (Halliday, 1994). Moreover, metadiscourse is considered as a part of academic rhetoric and something that can be influenced by the culture of the writer

(Halliday, 1994). For example, while in some cultures it is acceptable to use the imperative form to guide the reader within the text (see table 1), in other cultures this is not acceptable because it soundsauthoritative and/or impolite

Moreover, metadiscourse elements reflect the degree of writer or reader responsibility, writers' reference to their own act of thinking, and writing organization or readers' act of reading and understanding (Zarei, 2011). Therefore, it facilitates an easier following of text by readers. Furthermore, Perez-Ltanada (2003) focuses on metadiscourse in speech, and states that through textual metadiscourse listeners are able to rebuild the organization of the talk, recognize the logical linkage of contents, comprehend the flow of information more effortlessly and activate those schemata involved in communication. From this point of view, it can be seen that the use of metadiscourse elements may prevent reader confusion, similar to the processing of information in a talk.

Although the use of metadiscourse is vital in texts and should be taught to writers or help writers discover its use, overuse of these elements may cause the opposite of a writer's aim. It may create a sense of text redundancy and may cause confusion or disorientation for readers (Zarei, 2011). As a result, it may make the text seem tedious for the readers and the writer may not accomplish the aim of expressing and sharing ideas.

To be able to use metadiscourse text markers, writers should be aware of the different types and how to use them. In most studies, the metadiscourse taxonomy of Hyland and Tse (2004) has been taken as a basis. They formed the taxonomy after their study on a corpus from postgraduate students.

Hyland and Tse (2004) conducted a study on the use of metadiscourse of postgraduates. The corpus includes six disciplines: Applied linguistics, Public Administration, Business Studies, Computer Science, Electrical Engineering, and Biology. The results of the study show that humanities and social sciences use more metadiscourse elements than non-humanities. Moreover, it shows that boosters and engagement markers are used in almost the same way across disciplines; however, hedges are more common in the humanities and self-mentions are nearly four times more frequent.

In addition, Hyland and Tse (2004) believe that 'metadiscourse represents the writer's awareness of the unfolding text as *discourse*: how writers situate their language

use to include a text, a writer and a reader' (p. 167). According to the study they conducted, they formed taxonomy on a metadiscourse model. The intended model is named, 'a model of metadiscourse in academic text' and is presented below:

Table 1: Hyland and Tse (2004) Taxonomy of Metadiscourse

Category	**Function**	**Examples**
Interactive resources	**Help to guide readerthrough the text**	
Transitions	Express semantic relation between main clauses	In addition/but/thus/and
Frame markers	Refer to discourse acts, sequences, or text stages	Finally/to conclude/my purpose is to
Endophoric markers	Refer to information in other parts of the text	Noted above/see Fig./in Section 2
Evidentials	Refer to source of information from other texts	According to X/(Y, 1990)/Z states
Code glosses	Help readers grasp meanings of ideational material	Namely/e.g./such as/in other words
Interactional resources	**Involve the reader in the argument**	
Hedges	Withhold writer's full commitment to proposition	Might/perhaps/possible/about
Boosters	Emphasise force or writer's certainty in proposition	In fact definitely/it is clear that
Attitude markers	Express writer's attitude Proposition	Unfortunately/I to agree/surprisingly
Engagement markers	Explicitly refer to or build relationship with reader with devices such as *directives, reader pronouns, personal asides, questions.*	Consider/note that/you can see that
Self-mentions	Explicit reference to author(s)	I/we/my/our

Academic discourse

The genre approach has been one of the basics of the teaching of writing. The genre approach is the commonalities that a specific genre type shares. Hyland (2005) defines genre as a term that is used for 'grouping texts together, representing how writers typically use language to respond to recurring situations' (p.87). Although some similarities are expected in certain text types, variation is as important as the similarities (Swales, 1990). In other words, the shared knowledge of a genre is needed for understanding, however, genre can be considered as flexible and show variety. Use of metadiscourse is one way that genres vary internally and in relation to other genres (Hyland, 2005).

Academic prose is a genre type that shares some common elements, and also varies in terms of metadiscourse use. 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). While reading, readers expect to receive the facts of the given topic or argument. Hyland (2005) states that persuasion in academic writing is conducted through the presentation of information based on methodologies, dispassionate observation and informed reflection. Objective description of what the natural and human worlds are actually like is presented by academic prose. Since readers expect the truth, knowledge is considered a guarantee in academic prose.

Although academic prose offers its audience the truth based on methodologies and observations, Hyland (2005) states that nowadays it has lost its traditional view as an objective, faceless and impersonal form of discourse and it is seen as a persuasive work which includes interaction between the writer and the reader. It is difficult to see texts as accurate representations of 'what the world is really like' (Hyland, 2005, p. 66) because this representation is separated out through the acts of selection and foregrounding. In scientific texts, the proof is based on extra-factual and extra-logical arguments, including probabilities rather than facts. To present such facts cannot be considered as absolute proof, but as particular forms of persuasion (Hyland, 2005b). Academic writers do not just write texts representing an external reality, they also use language to recognize, construct and discuss social relations.

Research articles

Research articles are good opportunities for academicians to follow the novelties and works in their field and also to publish and share their own works. Therefore, Hyland (2005) states that research articles are still the main genre of academia. Academicians write research articles to present both the relevance and the novelty of their work to colleagues. Thus, they need to construct arguments that will also be peer reviewed to offer the social justification which changes beliefs into knowledge (Hyland, 2005).

In research articles, the focus is on knowledge and the writer achieves this knowledge by negotiating agreement with colleagues about interpretations and claims (Hyland, 2005). Hence, writers need to consider their readers in terms of what they know and need to know, and engage with them efficiently. Hyland (2005) suggests metadiscourse usage to achieve this goal.

Use of metadiscourse elements is also suggested by another study of Hyland (1998). He examined 28 research articles from seven journals in the fields of Microbiology, Marketing, Astrophysics and Applied Linguistics with the corpus having 160,000 words. 10,000 metadiscourse devices were found and the results showed that there were more interactive than interactional forms of discourse, including hedges, code glosses and evidential. Moreover, Hyland (1999) found more metadiscourse elements in research articles in a follow-up study. These studies show that metadiscourse usage is preferred by research article writers mainly because they help writers to show their stance and establish interaction with their readers.

Statement of the Problem

Since writers aim at sharing their ideas, knowledge or work with their readers, the use of metadiscourse comes into being. Writing serves the need to communicate and to provide opportunities for interaction with readers. While writing effectively is vital in a native language, it is also important to be able to write in a second/foreign language, mainly English. English is a common language in today's world, so to have a chance to interact with readers all over the world, knowing how to write in English effectively should receive attention. While teaching writing, the main focus has often been on the use of accurate grammar, topic development and the organization of ideas. As a result, teaching

writing in English as a foreign language generally lacks any element of teaching how to interact with readers through the use of metadiscourse elements.

A second language writer is a second language learner, so learners still experience the process of acquiring elements of a new language and, at the same time, they are learning the skill of writing (Williams, 2005). Teaching this skill to foreign language learners is important since they are expected to develop their writing skills through the composition of texts for literacy courses, reports or summaries. Therefore, teaching writing becomes significant in an educational context.

Teaching writing is not teaching only explicitness and accuracy, because texts are responses to a particular communicative setting. Writers focus on their knowledge of their readership and similar texts to decide on what to write and how to write it. Therefore, teachers aim to help learners develop effective texts through topic sentences, supporting sentences, transitions and developing different kinds of texts (Hyland, 2003). However, they should also focus on the interactional aspect of text which occurs between writer and reader.

Additionally, writing skills are essential if a writer has to write to improve academically. Since English is a world language, especially for Turkish academic writers, it is essential to know English and how to write effectively in English, since they have to follow resources and publications in English to improve in their fields. Moreover, they have to write English publications in order to share their work. Considering this, teaching academic writing is significant in a Turkish academic context. Turkish academicians need to learn how to write academically and use the language properly (Başaran and Sofu, 2009). In addition, teaching effectively, by focusing on pragmatic, sociolinguistic and generic competence, should receive attention. There should be a focus on the use of metadiscourse because they will write not only to report their work, but also to discuss the results of their studies. Thus, interacting with their readers should be a focus too.

Teaching academic writing in a Turkish context can provide the opportunity to communicate with readers, mainly academicians, in other parts of the world. It can help the writer to express ideas and work more effectively and efficiently, so that the publication not only receives attention from the people in that particular field, but also can be followed internationally. Hyland (2004) focuses on the importance of genre knowledge by stating that genre knowledge is, “the ability to understand how to

participate in real world communicative events" (p. 55). Also Hyland sees genre as one of the most vital and leading notions in language education. As a consequence, it is important to examine the common sharings in academic prose, and to teach writers to focus on these sharings while writing research articles. To illustrate, Hyland (2001) conducted a study on self-mention in research articles. The results show that first person pronouns and self-citation are not only in optional use, but are also important components of enhancing a proficient scholarly identity and gaining approval for research claims. In other words, in academic writing and learning, genre commonalities help writers gain, "credibility by projecting an identity invested with individual authority, displaying confidence in their evaluations and commitment to their ideas" (Hyland, 2002; 1092).

One common sharing in texts is the use of metadiscourse. Metadiscourse gives writers the chance to involve their readers in their text and interact with them. Much attention has been paid to metadiscourse in academic genre, considering it as an important rhetorical aspect that may affect communicative ability (Zarei, 2011). There have been various studies in context and text types such as casual conversation (Schiffrin, 1980); Darwin's *Origins of the Species* (Crismore and Farnsworth, 1989); company annual reports (Hyland, 1998b);post-graduate dissertation (Bunton, 1999); introductory course books (Hyland, 1999b); slogans and headlines (Fuertes–Olivera, Velasco-Sacristan, Arribas-Bano and Samaniego-Fernandez., 2001); and metadiscourse in academic writing: a reappraisal (Hyland and Tse, 2004), metadiscourse use (Kuhi and Behnam, 2011).

Elements of metadiscourse have also been studied in various disciplines and languages, such as Finish-English economic texts (Mauranan, 1993), Spanish-English economic texts (Valero-Garces, 1996), and medical, economics and linguistics texts in English, French and Norwegian (Breivega, Dahl, Flottum, 2002).

Moreover, metadiscourse in academic prose has been studied in various languages comparing English texts with Norwegian (Blagojevic, 2004), Finnish (Crismore, Markkanen, Steffensen, 1993), Persian (Faghih and Rahimpour, 2009), Spanish (Mur-Duenas, 2011), and Italian (Molino, 2010). Thus, considering the studies conducted on metadiscourse in genre types and the comparative usages of metadiscourse in English and other languages, the present study which will focus on the use of metadiscourse in research articles by Turkish non-native writers and English writers is believed to be a contribution to the field.

More specifically, studies were also conducted on the elements of metadiscourse dimensions, such as hedging (Hunston and Thompson, 2000; Hyland, 1995, 1999, 2001; Lewin, 2005; Wishnoff, 2000); hedging and boosting (Hu and Cao, 2004), directives (Swales, 1998; Hyland, 2002), self-mention (Hyland, 2001; Molino, 2010), and directives (Swales et al, 1998; Hyland, 2002b). As can be seen from the studies conducted, examining metadiscourse elements in English research articles written by Turkish academicians can prove fruitful.

Considering Turkish written text, astudy byFidan (2002) focused on Hyland's (1998) metadiscourse elements in Turkish texts in the fields of Psychology, Linguistics, and Medical Sciences. More specifically, in terms of a comparative study, Algı (2012) conducted a study where she investigated the use of hedges and boosters in L1 and L2 argumentative paragraphs, written by students. Another study was conducted by Bayyurt (2010). The aim of this study was to investigate metadiscoursal features in essays written in Turkish and in English to discover how Turkish university students use hedges and intensifiers.

Furthermore, Kafes (2009) conducted a study comparing English research articles written by Turkish non-native speakers of English in terms of authorial stance. He analyzed authorial stance in research articles by Turkish, Spanish non-native speakers of English and native speakers of English. In his study, it was found that all the writers were aware of stance and knew the importance of certainty, doubt and skepticism in their articles. No significant difference between the non-natives was found, but for the use of *may*. However, the results show that English academic writers use significantly more modal verbs in their articles compared to non-native speakers. These studies are an incentive to investigate interactional metadiscourse use in English research articles by Turkish non-native speakers of English and native speakers of English. As a result, the present study can show whether Turkish academic writers reflect their cultural writing style in the use of interactional metadiscourse elements.

Moreover, carrying out a comparative study of metadiscourse use in English research articles written by Turkish and American academic writers and Turkish articles by Turkish writers can be useful in terms of improving the academic writing of Turkish writers and, in particular, for academic writing courses offered in MA and PhD programs. By analyzing English research articles for metadiscourse elements of Turkish and English

writers, similar and different usages can be found and some suggestions for academic writing courses can be made. As a consequence, the aim of this study is to explore the use of interactional text markers in English research articles written by Turkish and American writers and in Turkish research articles by Turkish writers. With this aim in mind, the research questions for the study are presented below.

Research Questions

1. What kind of interactional metadiscourse markers are used in:
   - 1.1 Turkish research articles on teaching foreign language written by Turkish Academic Writers (TAW)?
   - 1.2 English research articles on teaching foreign language written by Turkish Academic Writers (TAW)?
   - 1.3 English research articles on teaching foreign language written by American Academic Writers (AAW)?

2. Is there a significant difference in the use of interactional metadiscourse markers in:
   - 2.1 English research articles and Turkish research articles on teaching foreign language?
   - 2.2 Turkish research articles and English research articles on teaching foreign language written by TAW?
   - 2.3 English research articles on teaching foreign language written by TAW and AAW?

Significance of the Study

The purpose of this study is to explore the use of interactional text markers in English research articles written by English and Turkish writers and to contribute to genre studies and the teaching of academic writing. It can be beneficial to show how to establish a relationship as a writer with the reader in the texts of both cultures. In addition, identifying the use of interactional metadiscourse markers in both academic languages, as well as determining academic metadiscourse markers in Turkish and comparing them to those in English can contribute to the field of linguistics and applied linguistics since very few

contrastive studies have been found on the interactional metadiscourse use of Turkish and American academic writers (Algı, 2012; Can, 2006; Doyuran, 2009; Kafes, 2009). Moreover, investigating the use of metadiscourse in both languages can generate further studies on metadiscourse use.

English is certainly accepted as the international community language (Vassileva, 1998). It is also considered as a common language for academic sharing. Therefore, Turkish academic writers need to write their research articles in English in order to share their studies with academicians internationally, and it is important for them to have internationally published articles to further their careers. Furthermore, different languages and different writing traditions show variations to an important degree and this may lead to cross-cultural misunderstanding in scientific communication (Kreutz and Harres, 1997; Vassileva, 2001; Ventola, 1997).

Each culture might have its own norms, values, languages as well as ways of communication (van Dijk, Ting Toomy, Smitherman, Troutman, 1997); thus, what may be acceptable in one language may not be in another (Hyland, 2005). L1 and L2 writers can have different methods for organizing their ideas and interacting with their readers, and these patterns can be transferred from the native language to the foreign language (Chesterman, 1998). Regarding this, the problems that non-native academic writers experience while writing in a foreign language for publications have been shown in the field of applied linguistics (Flowerdew, 1999; Kaplan and Baldauf, 2005; St. John, 1987) and science (Benfield and Feak, 2006; Benfield and Howard, 2000). As a result, contrastive studies can assist teachers in making students sensitive of the differences between the students' native culture and the culture of the discourse of the community the text refers to (Hyland, 2005). The current study can contribute in showing learners the differences between Turkish and English advanced and academic writing and helping them build on their own voice whilst writing.

Finally, this study may help in an understanding of the differences in Turkish and English writing traditions and how Turkish academic writers transform their native writing background whilst writing in English. Thus, this study can make suggestions as to how these differences can be used in forming the writing curriculum of MA and Ph.D programs in Turkey. Moreover, combined with further studies, this study may provide ideas for the development of an advanced writing syllabus in the teaching of ESP (English

for Specific Purposes), EAP (English for Academic Purposes) and of EFL (English as a Foreign Language) learner, and an academic writing syllabus.

Scope and Limitations of the Study

This study was conducted with research articles on teaching a foreign language written by American and Turkish Academic writers from refereed journals. It was assumed that this study would display promising results; nonetheless, the findings may not necessarily be generalized to all American and Turkish academic writers and are limited to the academic writers' articles analyzed in this study and in the field of *teaching a foreign language*. In other words, the findings cannot be generalized across disciplines.

Moreover, in each culture and academic discipline, each writer bring his/her own academic writing style. Individual differences of the writers may prevent the findings of this study to be generalized.

Definitions of Terms

Since in the literature related to this study, some terms has been defined by some scholars, it is important to define these terms in this section to have consistency and to avoid confusion.

The terms 'Metadiscourse' has been defined by many researchers; however, in this study, the definition of Hyland (2004) is preferred. According to Hyland (2004: 134) metadiscourse "…. refers to the linguistic devices writers employ to shape their arguments to the needs and expectations of their target readers."

The term 'Interactional Metadiscourse Markers' is defined as the ways the writers communicate with their readers (Hyland, 2005)

The terms 'Research articles" refers to internationally accepted articles which describe experimental research and have standards universally accepted.

CHAPTER TWO
LITERATURE REVIEW

Writing is one form of communication and helps the writers and readers share their ideas and experiences. Since writing is considered to be a tool of communication, it means that it should also provide an opportunity for interaction. Writing does not merely mean the expression of ideas which the audience read, it is a tool which enables writers to engage with readers, direct questions, guide throughout the text, and perhaps, to ask questions.

One field which communicates through writing is the world of academia. Academic writers aim to publish their work and share it with colleagues and others who are interested in their field. Thus, academic writing includes interaction and interaction can be provided through the use of metadiscourse.

Definition of Metadiscourse

Writing is an important part of human communication. It helps to share and express ideas. While doing these things, writers tend to establish a relationship with their readers. This is true also for academic writing. Academic writing has received a great deal of attention, especially in respect of the construction of a relationship with readers (Hyland, 2001). Readers always have the chance to disagree with the ideas or refute the claims of a writer, and this makes them active; therefore, writers need to argue their claims persuasively. As a result, the importance of the relationship between the reader and writer comes into being (Hyland, 2001). The use of metadiscourse elements can help writers to establish this relationship and engage their readers with the text because metadiscourse elements in a text show writer's attitudes towards readers, help to engage readers with the text and organize the discourse (Zarei, 2011). It plays a key role in organizing the discourse and engaging the audience; therefore, it has become vital in persuasive writing (Fuertes-Olivera et al., 2001).

Metadiscourse has been defined by many scholars. For example, Mauranen (1993) prefers the term metatext to metadiscourse and defines it as 'text about the text itself', adding that it includes elements that function 'beyond the propositional content'. Dahl (2004) defines metadiscourse as 'overtly expressing the writer's acknowledgement of the reader' (p.1811). Hence, metadiscourse is concerned with the relationship between

the reader and the writer and with the writer clearly stating awareness of the communication situation itself.

Metadiscourse helps writers put forward their claims and give readers the opportunity to actively participate in the reading process. Hyland (2004) defines metadiscourse as, "linguistic resources used to organize a discourse or the writer's stance towards either its content or the reader" (p.109). Therefore, the writer involves the reader in the text by using metadiscourse elements. The use of metadiscourse elements helps a writer to achieve a coherent, reader-friendly text and gives opportunity to 'convey his personality, credibility, audience-sensitivity and relationship to the message'. (Hyland, 2001, p.156). In short, metadiscourse is seen as essential in establishing communication, supporting the claim of the writer and constructing a relationship with the reader (Hyland, 2001).

According to Vande Kopple (1985) there are two levels while writing. At one level the writer provides information about the topic of the text and at this level propositional content is expanded. At the other level, which is the metadiscourse level, the aim of the writer is not to provide information, but to help readers organize, classify, interpret, evaluate, and react to such material. Therefore, metadiscourse is defined as discourse about discourse or communication about communication (Vande Kopple, 1985).

On the whole, the standard definition of metadiscourse focuses on readers and how they may 'organize, classify, interpret, evaluate, and react' (Vande Kopple, 1985, p. 83) to information presented in the text (Halliday, 1973; Mauranen, 1993; Hyland, 1998, 1999; Hyland and Tse, 2004).

Metadiscourse Taxonomy

The use of metadiscourse cannot be random because it is bound to the norms and expectations of particular cultural and professional communities, and writing is defined as a culturally-situated social activity and rhetorical context with writers' observations of appropriate *interpersonal* and *intertextual* relationship being the two important factors on which effective use of metadiscourse depends (Hyland, 1998). Although Hyland focuses on two factors of metadiscourse, a variety of metadiscourse taxonomies have been proposed (Beauvais, 1989; Crismore, 1989; Mauranen, 1993; Nash, 1992; Vande Kopple,

1985). First, the earlier taxonomies will be discussed and then the taxonomy of Hyland and Tse (2004) will be presented in detail, since this study takes the taxonomy of Hyland and Tse (2004) as a basis.

Metadiscourse is seen as one of the significant rhetorical features and strategies in producing discourse (Chambliss and Garner, 1996; Hyland, 1996, 1998). The first inclusive functional classification of metadiscourse was presented by Vande Kopple (1985). Two main categories were suggested; textual and interpersonal. Textual metadiscourse is also referred to as metatext (Bunton, 1999; Mauranen, 1993) and fulfills Halliday's textual function by organizing the text and directing the reader.

Crismore and Farnsworth (1989) state that people often use metadiscourse while using a language because they select options within three semantic systems suggested by functional linguist Halliday (1973). Metadiscourse performs the textual and interpersonal functions of language. According to Halliday (1973), there are three macro-functions of language: the ideational (expressing referential information about the world), the interpersonal (showing how authors or speakers interact with their readers and listeners), and the textual (shaping language into a connected text). In general, metadiscourse taxonomies are based on these three macro-functions of language of Halliday (1973) such as Vande Kopple (1985), Crismore, Markkanen and Steffensen (1993), Mauranen (1993), Bunton (1999), and Hyland and TSe (2004) ; however, the metadiscourse taxonomy by Adel (2006) is not based on Halliday's macro functions.

Elements included in the textual category help the writer organize what he wants to express or tell in such a way that what he tells makes sense in a context and fulfills its function as a message (Halliday, 1973). These elements consist of themes, information, and cohesive devices (Vande Kopple, 1985).

Elements included in the interpersonal category focus on constructing a relationship. Halliday (1973, p. 58) defines the interpersonal category as being concerned with:

> '…language as the mediator of role, including all that may be understood by the expression of our own personalities and personal feelings on the one hand, and forms of interaction and social interplay with other participants in the communication situation on the other hand.'

Vande Kopple (1985) states the reason for the importance of interpersonal metadiscourse use is it being the precise layer of the text where the writer's personal attitude into the text demonstrates the degree of commitment toward the current proposition. These elements aim at social meanings. They help writers to reveal their personalities in order to evaluate and react to the ideational material, which is concerned with the content ofthe language and its function. Moreover, they enable writers to show what role in the situation they are choosing and to indicate how writers expect readers will react to the ideational material (Vande Kopple, 1985). Crismore and Farnsworth (1989), state that interpersonal function is related to the setting up of social relationships with people. The use of interpersonal language in written work mediates different role relationships which writers construct with readers. In other words, the presence of the writer depends on the interpersonal function (Halliday, 1973). Vande Kopple's (1985) original categories were developed based on Halliday's major functions of language and can be seen in Table 2.

Table 2: Vande Kopple's Metadiscourse Classification

The Textual Function: Textual Metadiscourse
1. Text Connectives (used to connect particular blocks of information to one another) * Sequencers (first, next, in the third place) * Logical/Temporal connectors (however, thus, at the same time) * Reminders (As I noted earlier) * Announcements (I will now develop the idea that, as we shall see in Chapter Six) * Topicalizers (There are/is, as for, in regard to)
2. Code Glosses (used to help readers grasp the meanings of words, phrases, or idioms) * Defining * Explaining * Delimiting
3. Action Markers (used to make specific the discourse act performed by the author: I hypothesize that, to sum up, for example, my purpose is)
4. Narrators (used to let readers know [to inform] who said/wrote something: Mrs. Wilson announced that, according to Jane, Brown notes that)
The Interpersonal Function: Interpersonal Metadiscourse
5. Modality Markers (used to assess certainty and uncertainty of propositional content and the degree of commitment to that assessment. * Hedges (perhaps, possible, might, would, seem, tends) * Emphatics (clearly, undoubtedly, it's obvious that, certainly) * Attributors (according to Einstein)-if used to guide readers to judge or respect the truth value of propositional content as the author wishes
6. Attitude Markers (used to reveal author attitudes toward the propositional content: surprisingly, I find it interesting that, it is fortunate that)
7. Commentary (used to draw readers into an implicit dialogue with the author) * Comments on reader moods, views, reaction to propositional content (you may not agree that) * Comments on reading procedures (If X, you can skip this chapter; you might wish to read the last section first) * Comments on anticipation for readers (the following material may be difficult at first) * Comments on author/reader relationships (my friends, dear reader)

Based on the categories that Vande Kopple (1985) suggests, Mauranen (1993) prefers a narrower range by referring to metadiscourse as metatext. Her categories also borrow from Crismore and Farnsworth (1989). The categories include connectors (representing connections between propositions in text), reviews (clauses containing an explicit indicator that an earlier stage of the text is being repeated or summarized), previews (clauses including an explicit indicator of something that,in a later stage of the text, is being foreseen) and action markers (indicators of discourse acts performed in the text) (Bunton, 1999). Finally, Bunton (1999) took the categories of Mauranen (1993) as a basis and improved on them (see Table3). As shown in Table 3, Bunton (1999) divides his taxonomy into two dimensions: Text references and Level. Text references seems as dimension based on Halliday's (1973) and Vande Kopple's (1985) taxonomy. Different from all the mentioned taxonomies on Metadiscourse, Adel (2006) suggest a metadiscourse taxomony which is not based on Halliday's three macro-function. The model suggested by Adel can be seen in Table 4.

Table 3: Bunton's metadiscourse categories (1999)

TEXT REFERENCES Explicit references to other parts of the linear text, further defined by the direction of the reference as well as by the level (in terms of both scope and distance): Direction	LEVEL
• Previews look forward, anticipating, summarizing or referring to a later stage of the text: • Overviews look in both directions, referring to the current stage of the text in overall terms: • Reviews look back, repeating, summarizing or referring to an earlier stage of the text.	**Scope** of the text segment referred to: • Thesis (the thesis as a whole) • Chapter (one or more chapters) • Section (one or more sections) • Paragraph (one or more paragraphs) • Sentence (one or more sentences) **Distance** to the text segment referred to: • Chapter (in a different chapter) • Section (in a different section of the same chapter) • Local (within the same section) • Immediate (immediately preceding or following)
NON-LINEAR TEXT REFERENCES Explicit references to tables, figures, charts, plates or appendices. INTER-TEXT REFERENCES Explicit references to other texts, especially of other authors TEXT ACT MARKERS Explicit indicators of discourse acts being performed in the text (to be distinguished from Research Acts that are performed independently of the text). TEXT CONNECTORS Connectors that show relationships between different parts of the text (to be distinguished from Propositional Connectors that show relationships within the subject matter and which exist independently of the text). TEXT GLOSSES Explicitly indicated explanations of what particular terms or symbols in the text mean.	

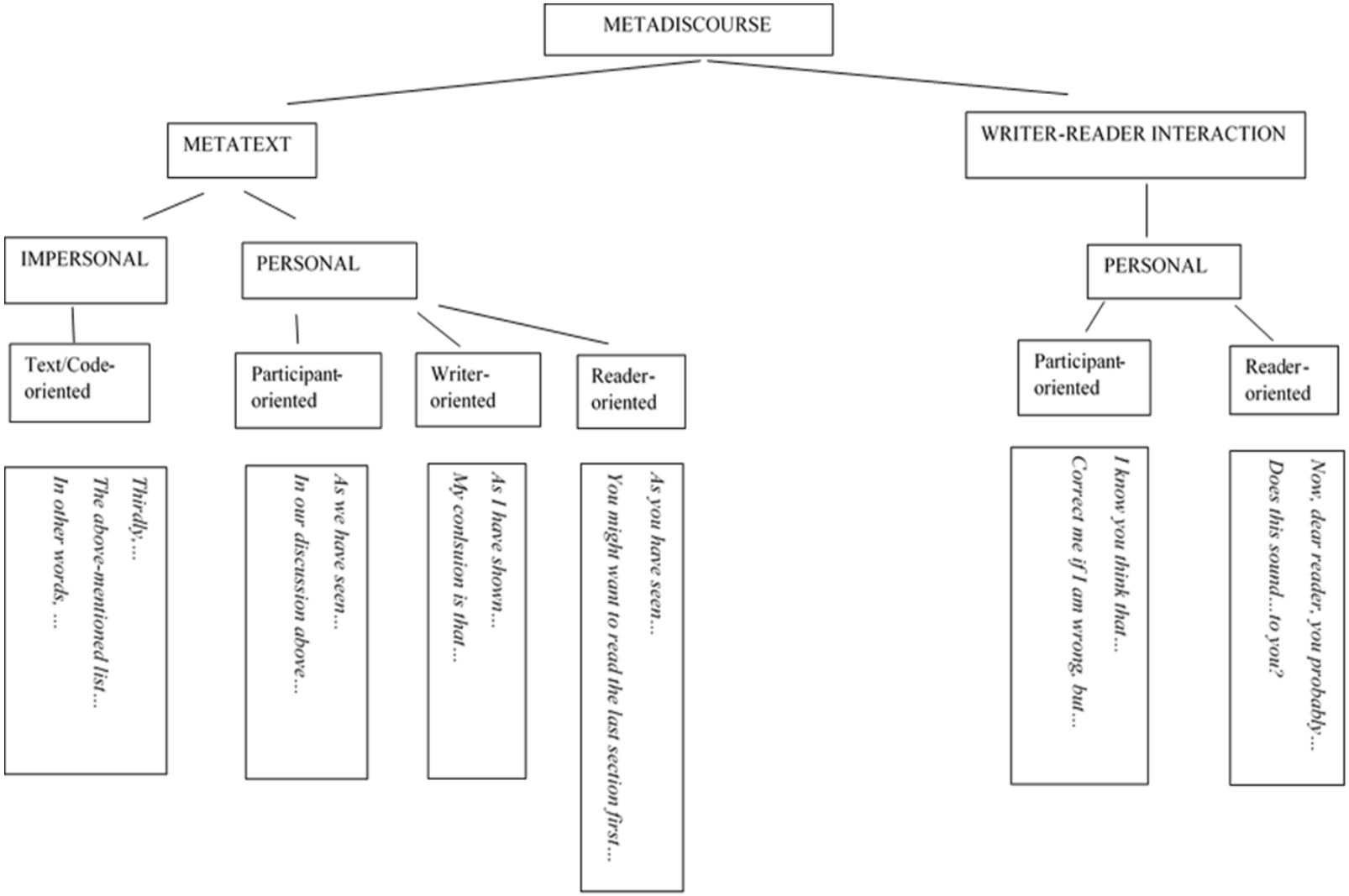

Figure 1: Personal and impersonal configurations of ‘metatext’ and ‘writer-reader interaction’. Adel (2006; 38)

As Figure 1 shows, Adel (2006) divides metadiscourse into two types: *metatext* and *writer-reader-interaction. Metatext* refers to the speech act of the writer and reader. In other words, writers may tend to make comments on their own discourse actions. To illustrate, they may explicitly introduce the tpic, state or an aim. Moreover, *metatext* may refer to the organization, wording, or the writing of it; this means it may display the aspect if the text itself. On the other hand, *writer-reader interaction* refers to the use of linguistic expressions used by the writer with the purpose of engaging the reader to the text (Adel, 2006; 36-37). This taxonomy of Adel (2006) shows that Adel pays more attention to the relation among the text, writer and reader.

As can be seen from Tables 1 and 2, Bunton's (1999) taxonomy is similar to Vande Kopple's. In Bunton's taxonomy, both interpersonal and textual metadiscourse elements can be found, but under similar titles such as *text connectors.* Nonetheless, it has six categories and text references includes the level of and distance to the text where the directive, for example, refers; however, Vande Kopple (1985) did not include these in his taxonomy while Hyland and Tse (2004) did in their suggested taxonomy (see Table 1). The present study is based on the metadiscourse taxonomy of Hyland and Tse (2004) because most studies used this taxonomy (see Table 4).

Moreover, Hyland and Tse's taxonomy (2004) is very similar to Vande Kopple's, albeit with more subcategories based on research they had conducted. They conducted the study on metadiscourse elements in the written work of postgraduates. The corpus consists of six disciplines: Applied Linguistics, Public Administration, Business Studies, Computer Science, Electric Engineering, and Biology. According to Hyland and Tse (2004), metadiscourse shows how writers are aware of a text as discourse and how they use the language to include a text, a writer and a reader. Based on the results of their study and literature, they formed a metadiscourse taxonomy.

In this taxonomy, there are two main dimensions: interactive and interactional. In Table 1(see *Introduction*), the elements can be seen. Interactive resources act as a guide to the reader through the text, while interactional resources aim at involving the reader in the argument. Interactive resources are mainly, 'transitions, frame markers, endophoric markers, evidential, and code glosses'. Interactional resources are, 'hedges, boosters, attitude markers, engagement markers, and self-mentions'. Both dimensions will be discussed in detail below. This study is based on the metadiscourse taxonomy

suggested by Hyland and Tse (2004) because it is the most recent taxonomy in the literature and it is more reader-friendly and as Hyland (2004) states the categories in the other taxonomies may overlap; but this taxonomy attempts to avoid it.

Interactive Resources

The interactive dimension is concerned with the awareness of the writer of a participating reader and it is related to how the writer searches for ways to express the knowledge, interests, rhetorical expectations and processing of abilities (Hyland, 2005). The writer aims at designing and constraining a text to satisfy the needs of readers and the writer expresses arguments to recover preferred interpretations and goals in the use of this dimension.

Transition markers, frame markers, endophoric markers, and code glosses are the categories of interactive dimension (Hyland, 2005). Transition markers consist of conjunctions and adverbial phrases. Adverbial phrases give the readers the opportunity to comprehend the pragmatic connection between steps in an argument.

Frame markers present text boundaries and elements of schematic text structure. The elements under this heading function to sequence, label, predict, and shift arguments by providing a clearer discourse to readers.

Expressions referring to other parts of the text are called endophoric markers. These markers help readers through the discussion. Evidentials are defined as ‘metalinguistic representations of an idea from another source’ by Thomas and Hawes (1994, p. 129). The last category in this dimension is code glosses. Code glosses present extra information by rephrasing, explaining what has been said to ensure the reader is able to understand what the writer intends to express.

Interactional Resources

The second dimension is *interactional resources.* This dimension is related to the ways a writer communicates with readers. It can be by both intruding and commenting on their message. The writer aims at expressing ideas explicitly and involving the readers by allowing them to respond to the revealed text. By using interactional resources, the writer has the opportunity to express himself with the help of textual ‘voice’ or community-recognized personality. Also, he can comprise the ways he expresses judgments and clearly connects to the readers. The interactional dimension considers

metadiscourse as evaluative and engaging, expressing solidarity, expecting objections and responding to an imaginary dialogue with others. Interactional resources are a developed form of what Vande Kopple (1985) calls the interpersonal category.

Hyland (2005) extends the second dimension of the taxonomy by adding subcategories for engagement markers. He divides interactional dimension into two: Stance and Engagement. Stance is a "*textual voice* or community recognized by personality" (p.176). In other words, it is the way a writer expresses him/herself. According to Biber et al. (1999), stance can be constructed by the use of paralinguistic, non-linguistic, and linguistic devices. Hyland and Tse (2004) stated the linguistic devices for constructing *stance* as *hedges, boosters, attitude markers and self-mentions.*

On the other hand, engagement is the connection of the writer and readers by "recognizing the presence of the readers, pulling them along with their argument, focusing their attention, acknowledging their uncertainties, including them as discourse participants, and guiding them them to interpretation" (p.176). Hyland (2005) categorizes accepts *directives, reader pronouns, personal asides* and *questions* as devices used for engagement. All the main categories of the taxonomy (see Table 1) will be discussed below.

Hedges, boosters, attitude markers, self-mentions, and engagement markers are considered to be interactional resources. Hedges are used as tools which aid the writer show his decision to recognize alternative voices and viewpoints. They reserve complete commitment to a proposition. The use of hedging gives writers the chance to take stances and to develop their research claims with an appropriate amount of certainty and confidence, while protecting the writer against possible reader criticism (Swales et al, 1998).

Boosters help writers give an end to alternatives, prevent conflicting opinions and show certainty in what they want to say. *Clearly, obviously,* and *demonstrate* are some examples of boosters (Hyland, 2005).

When writers want to present their affective attitude to propositions, they use attitude markers (Hyland, 2005). Attitude markers are used when surprise, agreement, importance, obligation, frustration and similar emotions need to be shown. Writers use subordination, comparatives, progressive particles, punctuation, text location signaled

by verbs (*agree, prefer*), sentence adverbs (*unfortunately*), and adjectives (*remarkable*) to show their attitude toward the proposition.

Another category of interactional dimension is *self-mention.* Self-mention in general is considered to be the choice of the writer to take a particular stance and to situate authorial identity (Hyland, 2001).

The last category is engagement markers. They are used in explicitly addressing readers by centering their attention or including them as discourse participants (Hyland, 2005). By using engagement markers, writers have the choice to highlight or downplay the presence of their readers in the text.

Hyland (2005; p.54) identifies two main purposes for the use of engagement markers:

1. The first acknowledges the need to adequately meet readers' expectations of inclusion and disciplined solidarity, addressing them as participants in an argument with reader pronouns (*you, your*, inclusive *we*) and interjections (*by the way, you may notice*).
2. The second purpose involves rhetorically positioning the audience, or pulling readers into the discourse at critical points, predicting possible objections and guiding them to particular interpretations. These functions are mainly performed by questions, directives (mainly imperatives such as *see, note*, and *consider* and obligation modals such as, *should, must, have to* and so on), and references to shared knowledge.

As can be seen from the categories of interactional resources, interactional markers center their attention more directly on the participant of the interaction. By using these markers, the writer provides readers with an acceptable persona and a tenor in line with the norms of the community.

Metadiscourse has been studied in many various fields and types of texts, such as casual conversation (Schiffrin, 1980), Darwin's *Origins of the Species* (Crismore and Farnsworth, 1989), company annual reports (Hyland, 1998), post–graduate dissertation (Bunton, 1999), introductory course books (Hyland, 1999), slogans and headlines (Fuertes–Olivera *et al.*, 2001), metadiscourse in academic writing: a reappraisal (Hyland and Tse, 2004), and metadiscourse use (Kuhi and Behnam, 2011). There have also been

studies on metadiscourse in different languages and disciplines (Mauranan, 1993; Valero-Garces, 1996; Breivega et al. 2002).

The use of metadiscourse in academic texts has received attention too, and this study focuses on metadiscourse use in research articles; as a result, academic writing, research articles and metadiscourse as well as certain related studies will be discussed below.

Academic Writing

One basic approach in teaching writing is the genre approach. This approach means the common features shared by a specific text type. It is also defined by Hyland (2005) as a term that helps 'grouping texts together, representing how writers typically use language to respond to recurring situations' (p.87). Although similarities are expected in a specific genre, it is also flexible and shows variety. Not only similarities, but also differences that texts share are vital (Swales, 1990).

Academic writing/texts are considered as genre because they have features in common and variety. Where variety occurs in academic writing is the use of metadiscourse (Hyland, 2005). Hyland (2005) states that academic writing is, in general, seen as a unique form of argument, since the presentation of truth, empirical evidence or flawless logic are the basics.

Academic writing, in the traditional sense, is considered as objective, matter of fact oriented and only marginally characterized by authorial presence, commitment and open argumentation (Breivega et al., 2002). Nonetheless, previous research has shown that academic writing also has a pragmatic aspect, includes context-bound factors and is a genre in which writers clearly present subjective elements in their works (Bazerman, 1998; Swales, 1990; Hyland, 1998). Therefore, research on academic discourse is the basis by which expert writers within a discourse community communicate with their peers (Dahl, 2004). Moreover, Hyland (2001; p.25) argues that:

> Academic writing presupposes the active role of readers and that the engagement of an audience is an important constitutive element, not only of a writer's argument, but also of a disciplinary context. Writing is a social act, and every successful text must display its writer's ability to engage appropriately with his or her audience.

As can be seen, in academic writing, engaging the reader in a text is vital, and the use of metadiscourse elements allows writers to achieve this goal. Interactional resources, in particular, can be used in academic writing, to include the construction of a wise, discipline-defined balance of apprehension and assertion, as well as a suitable relationship to one's data, argument and audience, so writers can use interactional metadiscourse markers in their texts (Hyland, 2005).

Metadiscourse is seen as academic rhetoric and can be influenced by the culture of the writer (Halliday, 1994). Academic writing norms change from culture to culture and show traditional writing habits and rhetorical preferences which exist in different writing cultures (Blagojevic, 2004). Thus, writers can transfer their writing norms while writing in a different language. Abdi (2002) sees it as a rhetorical means and subjective, so he states that metadiscourse is culture bound. To illustrate, using boosters can be acceptable in certain cultures; however, other cultures may consider them to be inappropriate. Because of this, when exploring metadiscourse, interactional elements can assist in identifying underlying cultural constraints (Abdi, 2002). Metadiscourse has a vital place in English academic discourse, so if non-native speakers of English neglect the use of metadiscourse elements, the text can mislead readers as they progress through the text and make the task of processing it more difficult (Blagojevic, 2004).

Furthermore, since academic writers write in English to communicate and to share their work with other academicians worldwide, it is significant to follow the metadiscourse use in English academic discourse because, if it is different from English academic discourse, misunderstandings may occur between writers and readers (Blagojevic, 2004). To sum up, since academic writers aim at sharing their work with others and, therefore, have to use the widely-used language of English, it is important, in an EFL context, to raise awareness of metadiscourse use in research articles and to teach EFL writers its appropriate use.

Research Articles

Academic communication is seen as a social activity which aims to facilitate the production of knowledge (Hyland, 1998). Data must be organized by writers and writers must organize observations into meaningful patterns for readers. Therefore, part of an academic's competence includes familiarity with the conventional discursive practices of a particular disciplinary community (Swales, 1990).

Research articles are part of a discipline's methodology because they make certain that information is expressed in ways that match its norms and ideology. Swales (1990) and Connor (1996) consider research articles as genre. Because of this, if writers want to publish and influence their fields of study, they must have the knowledge of these genres.

Writers aim at producing texts which address active readers, and at informing and persuading readers of the truth of their statements. The use of metadiscourse can help writers; first, to assist readers in processing text, to encode relationships between ideas and to order material, so that readers can find the materials appropriate and convincing. The second aim of using metadiscourse is attending the need to focus on the participants of the interaction (Hyland, 1998).

In research articles, writers aim at providing metadiscourse knowledge construction through managing interaction between writers and readers who have shared cultural, academic, and rhetorical practices by using metadiscourse markers. Through metadiscourse, it is possible for writers to strengthen their claims and to have them accepted by their readers (Hyland, 2005).

Metadiscourse use has received much attention from scientific researchers and in scholarly writing (Abdi, 2002; Abdi, Rizi, and Tavakoli, 2010; Dahl, 2004; Gillaerts and Van de Velde, 2010; Hyland, 2005b; Hyland and Tse, 2004; Peterlin, 2005). Academic writers, apart from reporting their findings in an objective or impersonal way, also actively use rhetorical strategies placed in their disciplines and socio-cultural settings to organize arguments, provide evidence and evaluate claims to persuade their readers (Abdi et al, 2010; Bazerman, 1988; Vande Kopple, 1985). Hyland (1998) states that in research writing, it is significant to orient the reader to secure rhetorical objectives. The writer needs to make linguistic choices, so that an audience will recognize these choices as persuasive. In other words, effectiveness in making these

choices is based on their cognitive and cultural value to the community. Therefore, metadiscourse can be considered as a means of facilitating social interaction between reader and writer in research articles (Hyland, 1998). In his study, he concludes that the findings support the belief that metadiscourse is a universal feature of professional rhetorical writing in English (Hyland, 1998).

Studies, specifically concentrating on one element of metadiscourse taxonomy in research articles, were conducted. Some of the studies focused on hedging (Hunston and Thompson, 2000; Hyland, 1999, 2001; Lewin, 2005; Wishnoff, 2000), hedging and boosting (Hu and Cao, 2011), directives (Swales, 1998), self-mention (Hyland, 2001b; Molino, 2010), and directives (Swales et al., 1998; Hyland, 2002). Furthermore, Zeyrek (2003) conducted a study with psychological articles written in Turkish and investigated the effect of metadiscourse elements on rhetoric structures of the articles. She found that Turkish writers used metadiscourse markers in all parts of the articles (introduction, findings, discussion and conclusion). Furthermore, the findings displayed that connectors were used as metadiscourse markers. Although the study did not focus on affixes, the researcher found that some affixes in Turkish showed tense, mood and aspect such as *–maktAdır*.

Contrastive studies received attention, having been studied in various languages, comparing English texts with Norwegian (Blagojevic, 2004), Finnish (Crismore et al., 1993), Persian (Faghih and Rahimpour, 2009), Spanish (Mur-Duenas, 2011), Italian (Molino, 2010).

A summary of the studies focusing on metadiscourse marker use in written texts can be found in Appendix D. This table summarizes the focus of the following comparative studies discussed. Moreover, to present a clearer picture of the results of these studies, Table 4 is displayed.

Table 4: Findings of Studies on the Use of Metadiscourse Markers

		Interactional Markers					
			Hedges	**Boosters**	**Attitude Markers**	**Self-mention**	**Engagement Markers**
Blagojevic (2004)	ERAs by English-Norwegian Writers	used more in ERAs by English writers	more in Norwegian	More in English	More in English	More in English	
Dahl (2004)	ERAs by English-French-Norwegian Writers	English and Norwegian: similar use--French less					
Mur-Duenas (2011)	English RAs by AAWs and Spanish RAs by Spanish Academic Writers	used more in ERAs by AAWs	more in ERAs by AAWs	More in ERAs by Spanish	More in ERAs by AAWs	more in ERAs	More in ERAs by Spanish AWs
Zarei (2011)	English RAs by native speakers and Persian RAs by Persian Academic Writers	More in ERAs with few differences	More in Persian RAs	More in English RAs	More in Persian RAs	No difference, almost never used	more in ERAs
Akbaş (2014)	Turkish and English Student essays by Turkish MA writers		varied in English	varied in Turkish	more in Turkish texts	Not used in Turkish texts but in English texts	
Algı (2012)	Turkish and English Student essays by Turkish students		Variety of hedges in L1 and L2, but slightly more in L2	Variety of boosters in L1 and L2, but slightly more in L2			
Bayyurt (2010)	Turkish and English Student essays		Used more in L2				
Can (2006)	English Essays by bilingual Turkish students and monolingual American students--Turkish Essays by bilingual and monolingual Turkish students	All of the students used, but frequency changes			• AWs used more • TWs used in Turkish essays more compared to English essays		
Doyuran (2009)	only Turkish RAs		used in TRAs				
Erkoç (2010)	English MA thesis by Turkish students		used in theses				
Kafes (2009)	ERAs by Spanish-Turkish-American Writers		AAW: may NNS: can	Must: used more by all groups			
Fidan (2002)	only Turkish RAs	used in RAs					
Ünsal (2008)	only English RAs	used in RAs					

One contrastive study on metadiscourse use was conducted by Zarei (2011). Zarei investigated the use of metadiscourse in two disciplines, applied linguistics and computer engineering in two languages, Persian and English. The corpus was analyzed according to the taxonomy of Hyland and Tse (2004). The results show that metadiscourse resources are used differently in both languages and disciplines. Applied linguistics uses more interactive elements than interactional ones while computer engineering uses interactional elements more often. Also, it was found that Persian computer engineering texts use more interactive resources compared to those in English. This shows that for Persian, the comprehensibility of the text is more important than the relationship with the reader.

Another contrastive study was conducted by Blagojevic (2004). The study was conducted on English academic articles written by English and Norwegian native speakers. This study is based on the belief that metadiscourse use varies in academic writing, from culture to culture. The corpus consists of 30 English academic articles by English and Norwegian native speakers. Three disciplines were investigated: sociology, psychology and philosophy. It was found that Norwegian writers, when writing in English, use a high score of metadiscoursal elements compared to English native speaker texts. The use of interpersonal metadiscourse is the same in both languages and the use of textual metadiscourse is higher in English academic articles.

Dahl (2004) investigated the effect of language on metadiscourse use. Three languages were examined: English, French, and Norwegian. Three disciplines were investigated in these languages for metadiscourse use: economics, linguistics, and medicine. The results of the study show that the most important variable in metadiscourse use was language in the economics and linguistics articles. It was found that Norwegian and English have a similar pattern and that they use more metadiscourse than French. When medical articles were examined, it was found that very little metadiscourse was used across all the languages. Dahl states that English and Norwegian represent writer responsible culture, whereas French represents reader responsible culture.

Finally, metadiscourse use in academic texts has been investigated in Persian, Norwegian and French. However, regarding the literature, few studies could be found

comparing interactional metadiscourse use in English research articles written by Turkish non-native speakers of English and by native speakers of English (Akbaş, 2014; Can, 2006; Ünsal, 2008). Fidan (2002) for example, conducted a study investigating Hyland (1998) metadicourse taxonomy only in Turkish academic texts. She compares the use of these markers in research articles in different fields: Psychology, Linguistics, and Medical Sciences. More specifically, in terms of a comparative study, Algı's (2012) study focuses on the use of hedges and boosters in L1 and L2 argumentative paragraphs written by students. Also Doyuran (2009) and (Erkoç, 2010) focused on the use of hedging and booster devces in texts. Kafes (2009) compared these two speakers in terms of academic writing. Kafes analyzed authorial stance in research articles by Turkish, Spanish non-native speakers of English and native speakers of English. In his study, it was found that all the writers were aware of stance, knowing the importance of certainty, doubt and skepticism in their articles. No significant difference between the non-native speakers was found, but for the use of 'may'. However, the results show that English academic writers use significantly more modal verbs in their articles compared to non-native speakers. Finally, Bayyurt (2010), in her study, aimed at investigating metadiscoursal features in essays written in Turkish and in English to discover how Turkish university students use hedges and intensifiers.

To sum up, academic writers have the need to persuade their readers by providing evidence from their data and literature. To engage their readers in their articles, they can use interactional metadiscourse elements in their texts. The use of interactional resources can also vary according to languages. Academic writers can use different metadiscourse elements in different languages, but when writing in English, since it is the universal language of science, a common sharing on metadiscourse elements should exist.

CHAPTER THREE
METHODOLOGY

Introduction

The aim of this study is to investigate the interactional metadiscourse elements in Turkish research articles by Turkish academic writers, and English research articles by both Turkish and American academic writers. The focus of the study is to discover what kind of interactional metadiscourse elements are used in these articles and how they are used. The purpose is to conduct an in-depth study on all of the interactional metadiscourse elements and their usage in research articles and to compare them with regard to certain Turkish and American academic writers.

In the light of this aim, this comparative study is based on a qualitative research method. The data in qualitative studies consists of documents, texts, pictures or using participants. Thus, it allows for the examination the data in more detail. Moreover, in a qualitative research method, the researcher has the opportunity to examine data in general, and add upcoming categories to existing ones. In a qualitative study, the aim is not to generalize the intent to a population. However, it is an in-depth exploration of a central phenomenon, and in this study, the central focus is interactional metadiscourse elements used in research articles. Since the aim of this study is to examine research articles in terms of the use of metadiscourse elements, a qualitative approach was followed. The data analyzed in the study was collected through documents, or more specifically, research articles with experimental designs. Interactional metadiscourse elements in these articles were detected and analyzed in terms of their usage and frequency. In this sense, this study is of a qualitative research design.

More specifically, in this study an ethnographic design has been used. Ethnographic design is applied when the researcher aims to describe, analyze and interpret a culture-sharing group's shared "*patterns of behavior, beliefs and language that develop over time*" (Creswell, 2005; 436). In this study, it was expected to find out a common pattern within the writer groups in terms of the language they use. Moreover, in ethnographic design, the researcher reaches to conlcusions about the sharing cultures by collecting and examing documents about the groups in order to understand culture-sharing behaviors, beliefs and language. Since the purpose of this study is to investigate the use of interactional mteadiscourse markers of American and Turkish writers in their

articles, and report the findings objectively, this study may be called as *realistic ethnography*.

Data Collection

Before the present study was conducted, a pilot study on interactional metadiscourse markers was carried out. In this part of the methodology chapter, first the pilot study followed by the data collection and finally the analysis process for the main study will be presented.

Pilot study

The aim of the pilot study was to investigate the use of interactional metadiscourse elements in English research articles written by Turkish non-native speakers of English and native speakers of English. The study was carried out with data consisting of eight English research articles written by Turkish non-native speakers of English and native speakers of English in the field of natural science and social science. More specifically, the articles were chosen from the fields of Physics and Education. While analyzing the data, the taxonomy of Hyland and Tse (2004) was taken as a basis.

Data Analysis in the Pilot Study

The data was analyzed manually, taking Hyland and Tse (2004)'s metadiscourse taxonomy as a basis. The data was analyzed manually to discover more elements of interactional resources and also because, when Turkish literature on metadiscourse use was researched, only a few studies were found. Thus, there was a need to discoverthe interactional resources manually. In total, eight research articles by English and Turkish writers were manually coded to examine the metadiscourse signals and to classify more subcategories.

Results of the Pilot Study

In total, eight research articles were investigated in this pilot study. 229 interactional metadiscourse items were found in the whole of the data. 197 were in English and 32 were in Turkish research articles.

As it can be seen from Table 5, English writers use many more interactional elements in their research articles compared to Turkish writers. 12 hedge markers were found in Turkish research articles which can be interpreted as cultural reasons; however, most of the engagement markers used in Turkish articles were directives. This may show that Turkish writers prefer directives to lead their readers throughout their texts. Most of these directives were, in fact, implied. To illustrate, they use passive 'Tablo 1'de gösterilmektedir" (X is shown in Table 1).

Table 5: Interactional Items in Turkish and English Research Articles (Pilot Study).

Interactional Resources in RA	**Turkish**		**English**	
	Fr.	**%**	**Fr.**	**%**
Hedges	12	6	46	23.3
Booster	2	1	11	5.5
Attitude markers	6	3	26	13.1
Engagement markers	12	6	40	20.3
Self-mentions	0	0	74	37.5

Moreover, the finding that interactional elements are less frequent in Turkish articles may show that Turkish academic writers may not pay as much attention as English writers in establishing an interaction with their readers. This may also explain why Turkish writers write about their works as if writing a report. There is almost no interaction, and merely reporting in their studies. In summary, as can be seen from Table 2, Turkish writers use less interactional metadiscourse markers and they prefer not to use self-mentioning at all compared to English academic writers.

When the disciplines were compared within the languages, differences were also noted. When Turkish Physics and Education research articles were compared, it was seen that the Education research articles include more interactional resource markers compared to the Physics research articles. Moreover, in Table 6, it can be seen that the second research article on Physics used no interactional metadiscourse elements, and

the first Physics research article made use of only one hedge and two engagement markers. This may be the result of the topic differences of the articles chosen. Also, boosters were preferred only in the first Education research article.

Table 6: Interactional Metadiscourse Markers in Turkish Physics and Education Research Articles (Pilot Study)

Interactional Resources in Turkish RA	**Physics RA 1**	**Physics RA 2**	**Education RA 1**	**Education RA 2**
Hedges	1	0	6	5
Booster	0	0	2	0
Attitude markers	0	0	1	5
Engagement markers	2	0	3	7
Self-mentions	0	0	0	0

Table 6 shows that Turkish writers use more interactional metadiscourse elements in Education research articles than in Physics articles. The reason for this can be the field itself, in other words field-specific, because Physics articles tend to describe a kind of reaction of elements. This is why the writers writeabout their studies including less interactional metadiscourse markers.

The English research articles were also compared in terms of their disciplines for interactional metadiscourse use. The results are shown in Table 7.

Table 7: Interactional Metadiscourse Markers in Turkish Physics and Education Research Articles (Pilot Study)

Interactional Resources in English RA	**Physics RA 1**	**Physics RA 2**	**Education RA 1**	**Education RA 1**
Hedges	9	4	28	5
Booster	1	0	10	0
Attitude marker	4	8	3	11
Engagement markers	8	4	22	6
Self-mentions	1	73	0	0

Table 7 shows that research articles concerning Education use more interactional metadiscourse markers compared to articles on Physics. Research articles on Education use more hedges and engagement markers compared to other sources. In addition, no self-mentions are used in these articles. The reason for this finding may be that they do not describe an experiment, or because of the different writing conventions of journals. However, it can be explicitly seen that in the second Physics article, the use of self-mentions is the writers' preference because of their frequency. Moreover, boosters are not frequently used in three of the articles, but are noticeable in the first Education article.

To summarize the findings of the pilot study, English writers tend to use more interactional elements compared to Turkish writers. They use all types of interactional resources more frequently than Turkish writers. When the disciplines are compared in both languages, it can be seen that Education research articles include more interactional resource elements than Physics research articles, and no self-mention use was found in the Education research articles.

Based on the data collection, data analysis processes and the findings of the pilot study, the processes of the current study were developed. None of the articles used in the pilot study are included or analyzed in the present study. Furthermore, since almost no interactional metadiscourse markers were detected in the Natural Science articles, it

was decided to analyze articles on language teaching for the present study. Moreover, the elements uncovered in the pilot study were taken as a basis for the present study. All these issues are discussed and presented below.

Data collection of the present study

This study was carried out based on certain documents (Creswell, 2005; Karasar, 1995; Yıldırım and Şimşek, 2005). This analysis model is used to describe a past or existing event or situation as it occurs. While conducting the document analysis, the researcher examines records and sources that were previously kept or formed. Furthermore, documents are a good source of text data for qualitative studies because they enable the researcher to reach the data without the necessary transcription of observation or interview data. By using documents, the researcher has the opportunity to collect data consisting of the language and the words that the participants pay considerate attention to. In addition, the document analysis technique allows the researcher to collect data from the past to the present. Therefore, since the current study examines research articles written by Turkish and American academic writers, in terms of interactional metadiscourse elements, this study was carried out based on the document analysis model.

The sampling type applied in this study is homogenous sampling. In homogenous sampling, participants or sites own a similar trait or characteristic and the researcher purposefully chooses samples from a subgroup having defining features. In this study, data consists of English research articles written by Turkish and American writers and Turkish research articles written by Turkish academic writers. One characteristic that the writers should share is that of being American or Turkish. All the collected research articles include experimental studies. Also, the articles should describe a study conducted in one field; teaching a foreign language, more specifically English.

In various genres, the use of metadiscourse markers have been investigated such as casual conversation (Schiffrin, 1980); Darwin's *Origins of the Species* (Crismore and Farnsworth, 1989); company annual reports (Hyland, 1998b);post-graduate dissertation (Bunton, 1999); introductory course books (Hyland, 1999b); slogans and headlines (Fuertes–Olivera, Velasco-Sacristan, Arribas-Bano and Samaniego-Fernandez., 2001).

The present study focused on the use of interactional metadscourse markers in academic writing, particularly research articles including experimental studies. The reason why academic writing and research articles were chosen as data set for this study is although academic writers report their studies objectively in their articles, writing has also a pragmatic aspect and writers may present subjective elements in their texts (Bazerman, 1998; Swales, 1990). Furthermore, research on academic discourse is considered as basis for expert writers who need to communicate with their peers in their professional fields. Finally, most academic writers write in English to be internationally recognized for their professions; therefore, there is a need to show interactional elements in their articles (Blagojevic, 2004).

The research articles are from one discipline; teaching a foreign language. The corpus includes 50 English research articles written by Turkish academic writers, 50 English research articles written by American academic writers, and 50 Turkish research articles written by Turkish academic writers. In total, 150 research articles are examined for interactional text markers. 50 articles for each category were selected because of practical reasons, in other words, online availability was the reason for this choice. Each element of the articles was examined for interactional metadiscourse markers.

The research articles were collected from refereed journals, published both online and as hard copies. This would enable the research to collect articles with similar writing conventions and language use. The journals were based on teaching and language teaching. The English research articles by Turkish academic writers were selected from refereed journals published internationally because it was important to include articles written in English and accepted internationally. This would show that the language of these articles were acceptable and follow a consistent writing convention. To sum up, the articles and journals were chosen considering these the following factors. All articles were:

- published between the years 2007-2012.
- on the field of teaching and English language teaching.
- from refereed international journals (all English articles).
- from journals published both online and as a hardcopy.

- from journals cited in Social Sciences Citation Index and British Education Index (all English articles by AAWs and TAWs except 8 articles by TAWs)

The American writers' biographies and related websites were checked to establish if their educational backgrounds and professional careers took place in the USA. Writers who studied and who still work at a university in the USA were selected for the present study. Native speakers of English who work outside their country were also selected. The status of the native speakers was determined based on the biographical information on their personal or institutional websites. All sections in the collected research articles were analyzed for interactional metadiscourse elements.

Data Analysis

Data was analyzed using a qualitative computer program and statistics. These kinds of programs provide features which aid data analysis. Computer analysis is selected when the data is over 500 pages in length and when the researcher needs a detailed analysis of every word or sentence related to the research question. This helps with data storage, and the organization ofthe data assists a researcher to assign labels or codes to the data, allowing for data searches and the locating of specific texts or words (Creswell, 2005). As a result, the data was analyzed electronically on computer using a qualitative data analysis computer program, NVivo 10. NVivo 10 is software, which can be used to analyze data which has been collected through qualitative and mixed method research. This enables a researcher to analyze the data from various source forms, such as documents, videos, audio records and so forth. It offers a complete toolkit for rapid coding via exploration, severe management and analysis.

NVivo10 assists in the locating of interactional metadiscourse elements and their frequency. Moreover, using this program avoids common problems in qualitative data analysis because a researcher does not need to use color coding, or manual analysis. Also, it prevents the loss of data and eases data analysis and difficulties reaching sources of data. The data can be analyzed in a more organized way. Finally, NVivo provides an opportunity for concept mapping of visual diagrams of categories found during data analysis.

While analyzing the data, a descriptive analysis (which is based on frequency use) was used because the researcher used certain predetermined categories for coding the interactional metadiscourse markers. The metadiscourse taxonomy of Hyland and Tse (2004) was used for coding. Hyland and Tse's taxonomy (2004) was chosen for this study because it was a recent, simple, clear and comprehensive model (Abdi et al., 2010). This taxonomy was preferred for the present study because it was the most recent suggested metadiscourse taxonomy and more reader-friendly compared to Vande Kopple (1989) and Bunton's (1999). Also, Hyland and Tse (2004) borrowed from these taxonomies so it maybe stated that the present taxonomy used is based on these taxonomies. This taxonomy consists of two main categories; interactive resources and interactional resources. Each category has its own subcategories. This study only focuses on coding interactional metadiscourse markers during the data analysis. The interactional metadiscourse markers can be seen in Table 1.

The data was analyzed based on this taxonomy (Hyland and Tse, 2004). However, certain additional markers were added to the taxonomy for both the English and the Turkish data according to the pilot study carried out in 2012. The markers which were analyzed in the data sets were determined after some stages.

First, the pilot study was conducted. All articles were analyzed line by line to find interactional metadiscourse markers. Each marker detected in the articles manually were added to the list for English and Turkish. In this pilot study, a number of markers were identified as interactional metadiscourse markers; a list of the words and patterns from the pilot study can be found in Appendix A. This list shows the first determined markers in the pilot study.

Second, the related literature was analyzed to find out the most frequently used interactional metadiscourse markers in English and in Turkish. The markers from the literature were added to the list. Then the first analyses of the three data sets were carried out. The pdf and word files were opened in the NVivo program and the whole article was searched for the specific marker in the list. Each found marker was coded to the related category of the taxonomy. At this stage, while searching for the particular marker, other markers were detected within the article, so each recently detected marker was added to list again. After all 150 articles were analyzed in this way, the marker list was finalized. The final version of the list can be seen in Appendix B.

Finally, the whole data was analyzed with the last version of the interactional metadiscourse marker list in Appendix B. No other markers were added during this stage. After the analyses were completed, the figures and tables were formed for per 100.000 words of occurrence of the marker for each data set: English research articles (ERAs) written by American academic writers (AAWs) and Turkish academic writers (TAWs), and Turkish research articles (TRAs) written by Turkish academic writers (TAWs) (see Appendix C for referencs of data sets).

Although the data for the pilot study was English research articles by American academic writers and Turkish research articles by Turkish academic writers (2 data sets), in this main study, three sets were collected. The additional set was English research articles by Turkish academic writers. The reason for the addition of this data set was to investigate whether Turkish academic writers transfer their Turkish academic writing habits and conventions while writing in English, or whether they do the opposite. For the pilot study, research articles were collected from Natural Science and Social Science articles (particularly, educational). Since it was found that Social Science articles include more interactional metadiscourse markers, which coincides with the study of Hyland (2001), it was decided to collect research articles on the topic *teaching a foreign language* in the main study in order to compare the use of interactional metadiscourse markers (IMMs) of American academic writers (AAWs) and Turkish academic writers (TAWs).

In total, 150 research articles were analyzed in terms of interactional metadiscourse markers according to the taxonomy of Hyland and Tse (2004) and the additional markers from the pilot study that was carried out. The data was coded according to this taxonomy by the researcher in each section of the articles: Abstract, Introduction (literature review), Methodology, Results, and Conclusion.

In addition to the researcher, in order to build reliability into the coding process, an additional English instructor was asked to code 30% of the data.Initially, the researcher and the English instructor worked on the taxonomy together, coding a number of sample articles from each category; English research articles by AAWs and TAWs, and Turkish research articles by TAWs.

The reliability analysis was run on NVivo 10. However, in order to do this, two NVivo programs were needed, so the second coder was asked to code the trial version

on NVivo 10 which can be downloaded for 15 days from the official website. After copying the project created on the researcher's program to the second coder's program, the second coder coded all of the data using the coding list prepared by the researcher, based on the taxonomy of Hyland (2005) and the additional codes from the findings of the pilot study. The program calculated the Kappa Coefficient of the coding comparison for each code in the data, and showed agreement for both coders' codes.The reliability for the Turkish research articles by Turkish academic writers was found to be 89; for the English research articles by Turkish research articles it was 91; and for the English research articles by American academic writers it was again 91. The mean percentage of the agreement was found to be 91. After this, the researcher and the second coder got together to discuss the codes which they could not agree on and another version of the interactional metadiscourse markers was created, with the first analysis of the data being carried out.

To compare the findings from the English research articles by the AAWs and the TAWs and the Turkish research articles by the TAWs, a word count of the articles for each group was conducted. Then the number of occurrences per 100,000 words was found for each data set (Table 8). The occurrences of interactional metadiscourse markers in each data set were compared by means of frequencies per 100,000 words (Hyland and Tse, 2004, Hyland, 2004; 2005; Algı, 2012).

Table 8: Number of Words in Research Articles

Total Number of Words in the Articles	**American Academic Writers**	**Turkish Academic Writers**
English Research Articles	475.930	331.248
Turkish Research Articles		251.550

After the data analysis, models were created based on the nodes and codes found during the analysis. The models created on the NVivo reveals the relationship between the interactional metadiscourse markers coded.

On the result models and in the tables, it can be observed that some markers are displayed as "0" frequency for 100.000 words. However, this means that the markers in

the tables and on the models are used in the data sets, but once or twice, so the frequency count for 100.000 words of these markers is calculated as "0". These markers may be considered as having very low frequency in the data sets.

After the frequencies of each interactional metadiscourse marker in every article were found, a statistical test was applied to find out whether there were any significant differences in the use of interactional metadiscourse markers in English research articles by American Academic Writers (AAWs) and Turkish Academic Writers (TAWs) and Turkish research articles by TAWs. Since the frequencies of each marker was found and needed comparing, a *binomial test* was run. A binomial test is a non-parametric test conducted when the distribution and numbers are not normal. A binomial test is most commonly-used in situations where the null hypothesis is that two categories are equally likely to occur (Howell, 2007). This test is used to compare two sample ratios to find out whether there is a difference and whether this difference is significant. Hypotheses for each subquestion of research question two were constructed and the test was run. If the result of the test was found to be between -1.96 and +1.96, at a 0.05 significant level, it would show a significant difference occurred between the variables.

To sum up, 50 English research articles written by AAWs, 50 English research articles written by TAWs and 50 Turkish research articles written by TAWs were analyzed in terms of interactional metadiscourse markers based on the Hyland and Tse (2005) taxonomy. A data analysis was carried out on an NVivo 10, enabling the researcher to study the markers in a more organized way. The next section presents the findings of the data analysis.

CHAPTER FOUR
RESULTS AND DISCUSSION

Overview of the Study

The aim of this study was to investigate the use of interactional metadiscourse markers in English research articles on the teaching of a foreign language written by American academic writers (AAWs), by Turkish academic writers (TAWs) and in Turkish research articles by Turkish academic writers (TAWs) considering the metadiscourse taxonomy of Hyland and Tse (2004) and to contribute to genre studies and the teaching of academic writing. More specifically, this study aims to find answers to the research questions presented below:

1. What kind of interactional metadiscourse markers are used in:
   - 1.1 Turkish research articles on teaching a foreign language written by (TAWs)?
   - 1.2 English research articles on teaching a foreign language written by Turkish Academic Writers (TAWs)?
   - 1.3 English research articles on teaching a foreign language written by American Academic Writers (AAWs)?
2. Is there a significant difference in the use of interactional metadiscourse markers in:
   - 2.1 English research articles and Turkish research articles on teaching a foreign language?
   - 2.2 Turkish research articles and English research articles on a teaching foreign language written by TAWs?
   - 2.3 English research articles on teaching a foreign language written by TAWs and AAWs?

The findings of the study will be presented below in the order of the research questions of the study.

Results and Discussion

What kind of interactional metadiscourse markers are used in the Turkish research articles on teaching a foreign language written by TAWs?

Fifty Turkish research articles written by Turkish academic writers (TAWs) were analyzed considering the metadiscourse taxonomy by Hyland and Tse (2004) with the results presented in Figure 2.

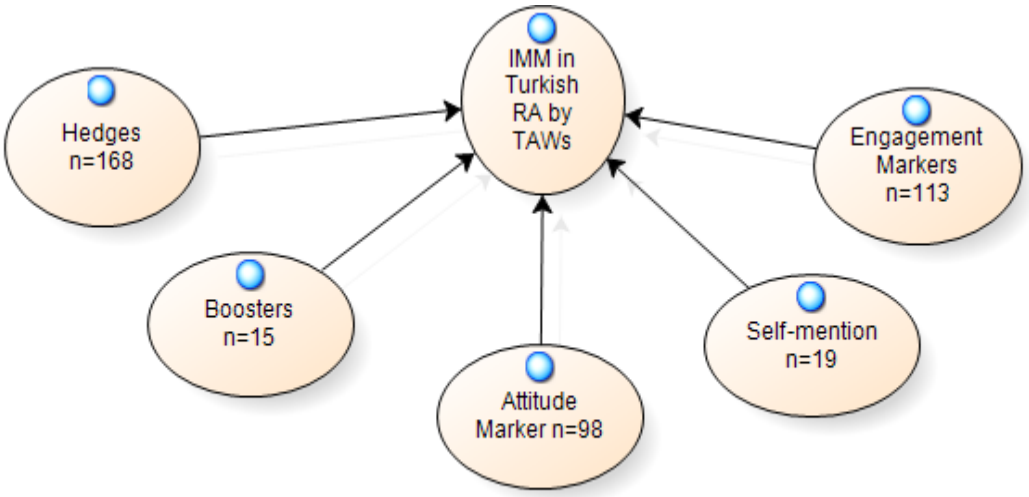

Figure 2: Interactional Metadiscourse Markers in Turkish RA by TAWs

As can be observed from the NVivo model, the TAWs used markers from all the interactional metadiscourse categories that Hyland (2005) defined. The TAWsalso used all the categories. However, certain markers were found to have more frequency in occurrence than others. The model shows that theTAWs preferred to use hedges and engagement markers more than other categories. The findings for each category will be presented below.

Hedges

Hedges can be defined as 'communicative strategies for reducing the force of statements' (Hyland, 1998: 1). Thus, academic writers may use hedges to express their certainty about the proposition they are making and open a discussion with readers. Considering this definition, hedges were analyzed in the collected Turkish research articles.

To begin with, while writing research articles, the TAWs used hedging more frequently than the other categories. In Turkish, hedging can be expressed by modality, which can be found as various morphological, lexical and syntatctic devices (Kerimoğlu 2010). *–AbIl-Ir* is used as a possibility/ability modal in Turkish (Erguvanlı Tylan and Özsoy, 1993; Aksu-Koç, 1988), and it is the most common morpheme found in the data for expressing hedging. Besides this morpheme, adverb usage was detected in the data for hedging. The findings in this category in theTurkish research articles are presented in Figure 3.

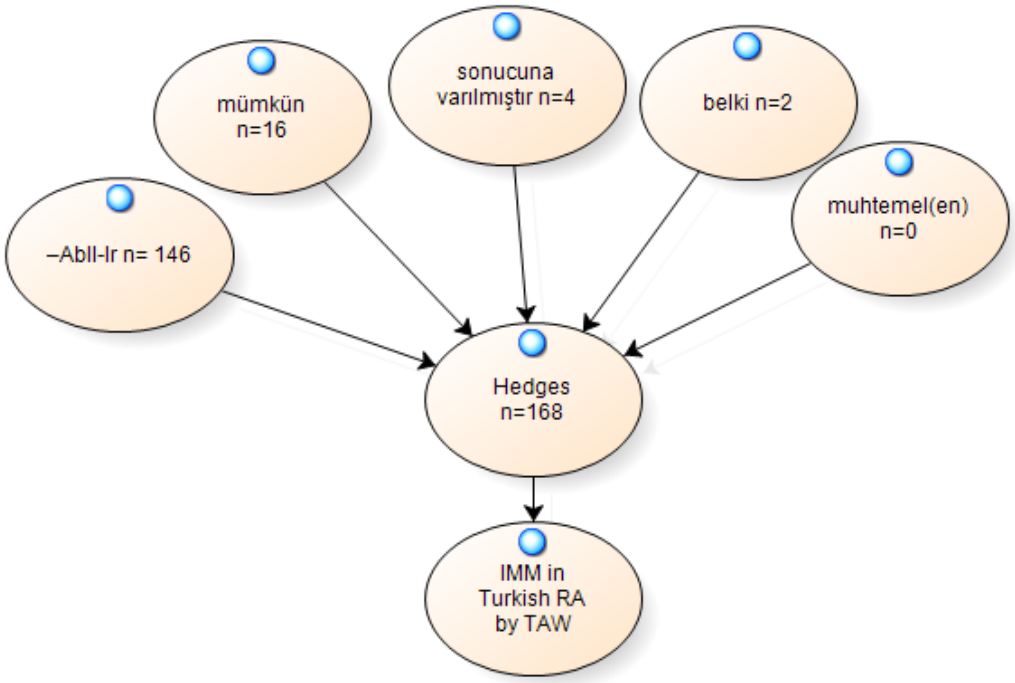

Figure 3: Hedges used in TRAs by TAWs

The model shows that the TAWs tended to use hedges quite often in their research articles with 168 occurrences for every 100,000 words. Figure 3 shows that the TAWs preferred to use *–AbIl-Ir* the most to show their degree of commitment to a proposition (Hyland and Tse, 2004). This was found to be the most commonly-used modality marker in the data of Algı's study (2012). Using this morpheme shows that the writer can expect different ideas about the proposition. An example (1) from the data is shown below:

(1) …Hatta ulusal televizyon kanallarının (Atv ve Kanal D) yayınladığı ve özellikle çocukların dikkatini çeken programları ve ulusal gazetelerin (Sabah, Hürriyet ve Milliyet gibi) dağıtımını yaptıkları İngilizce eğitim kitaplarını örnek göstere*biliriz*...

(Akalın and Zengin, 2007: 186)

(We *can* show the programs, especially, those which attract children and are broadcast on national TV channels, and in English educational books that are distributed by national newspapers, as examples.)

Example (1) shows that Akalın and Zengin put forward the idea that national TV channels and newspapers contribute to the motivation to learn English. However, it can be observed that they are not completely certain that these are the only reasons, and that they are open to different ideas on this topic from readers.

(2) …….Bu iki strateji de dilbilgisi öğretimi ve öğrenilen dilbilgisi kurallarının uygulanmasına yönelik stratejilerdir. Bu bağlamda, sözcük öğretimi ve dilbilgisi öğretiminin ders kitaplarında önemli bir kapsama sahip olduğu sonucu çıkarıl*abilir*...

(Can, 2012: 9)

(These two strategies are used for teaching grammar and practising those learnt grammar rules. In this respect, it *can be concluded*that coursebooks pay a lot of attention to vocabulary teaching and grammar teaching.)

Another example was used by Can (2012). While discussing the findings of his study, he puts forward the idea that coursebooks can train learners in terms of vocabulary and grammar. Nevertheless, he does not show exact certainty about this result, rather claiming it and showing that he accepts that this cannot be the only finding of the results of his study.

The second most commonly-used structure used for hedging is the adverb ‘mümkün’ (possible) in the data. 16 occurrences were found in every 100,000 words of the Turkish research article data. Some examples from the data are presented below:

(3) Uzun (1988), Türkçe deyimlerin derecelerinin belirlenmesine yönelik çalışmasında, deyimlik anlam yapılanması içindeki göstergelerin taşıdıkları anlam değerlerini ölçüt olarak almış ve deyimlerde üçlü bir derecelenmenin

varlığını ortaya koymuştur. Buna göre tam ya da birinci derece deyimler, yarı ya da ikinci derece deyimler ve üçüncü derece deyimlerden söz etmek *mümkündür*.

(Akkök, 2009)

(Uzun (1988) put forward the existence of triple degrees in idioms in his study on identifying Turkish idiom degrees based on idiomatic meaning construction signs. According to this, *it is possible* to talk about first degree idioms, half or second degrees idioms and third degrees idioms.)

The first example shows that the writer makes a claim based on the study of Uzun (1988), and expresses this by using *mümkün* (possible). Here, hedging by the use of *mümkün* enables the writer to open a discussion where the readers may also join in after what they have read.

(4) …Söz konusu araştırmacıların görüşlerini Tablo (1)'de özetlemek *mümkündür*.

(Akkök, 2009: 62)

(*It is possible to* summarize the ideas of the researchers in Table 1.)

Akkök (2009) uses hedging in this example with the adverb *mümkün*. From the entire data of the Turkish research articles, Akkök (2009) is the article which has the most occurences of *mümkün*. This finding may show that Akkök (2009) has a preference to mark hedging, and it is the use of this Turkish adverb that helps her to present a stance in her writing.

(5) …Sergilenen tutumlara göre, sınıf arttıkça dört becerinin aynı anda eşit önceliğe sahip olmadığını görmek *mümkün*...

(Kaçar and Zengin, 2009:68)

(Considering the attitudes shown, *it is possible to* see that the four skills do not have the same weight of priority as the class gets higher.)

Other writers who use*mümkün* are Kaçar and Zengin (2009). In example (5) above, they use it to comment on a finding of their study and they also open this finding for discussion on the part of the readers.

The third item that was used most in the Turkish data for hedging was ‘sonucuna varılmıştır’ (it was concluded that). It occurred four times in every 100,000 words of the data. It is in the passive voice, so this may suggest thatthe TAWs preferred to sound less assertive in their research articles. Below is an example:

(6) …Bu sonuçlar ki kare sonuçlarını desteklemiş ve ikinci modelin, gözlenen değişkenlerden elde edilen veri kovaryans matrisi ile geçerli modelin kovaryans matrisinin birbiriyle uyumunun iyi olduğu *sonucuna varılmıştır*…

(Cesur and Fer, 2011:88)

(These results support the chi-square results, and it *was concluded* that the data covariance matrix and the covariance matrix of the current model have a good fit based on the data obtained from the second model observation.)

Although statistical analysis presents more reliable results, the writers in example (6) make their proposition more discussable with their readers.

Belki (perhaps) was used twice in the data and *muhtemelen* (probably) was not detected during the data analysis. The TAWs preferred to use *–AbIl-Ir and mümkün* more than the other elements of hedging.

Boosters

Second, the Turkish research articles were analyzed in terms of boosters used. Figure 3 shows the use of boosters in Turkish research articles by the TAWs.

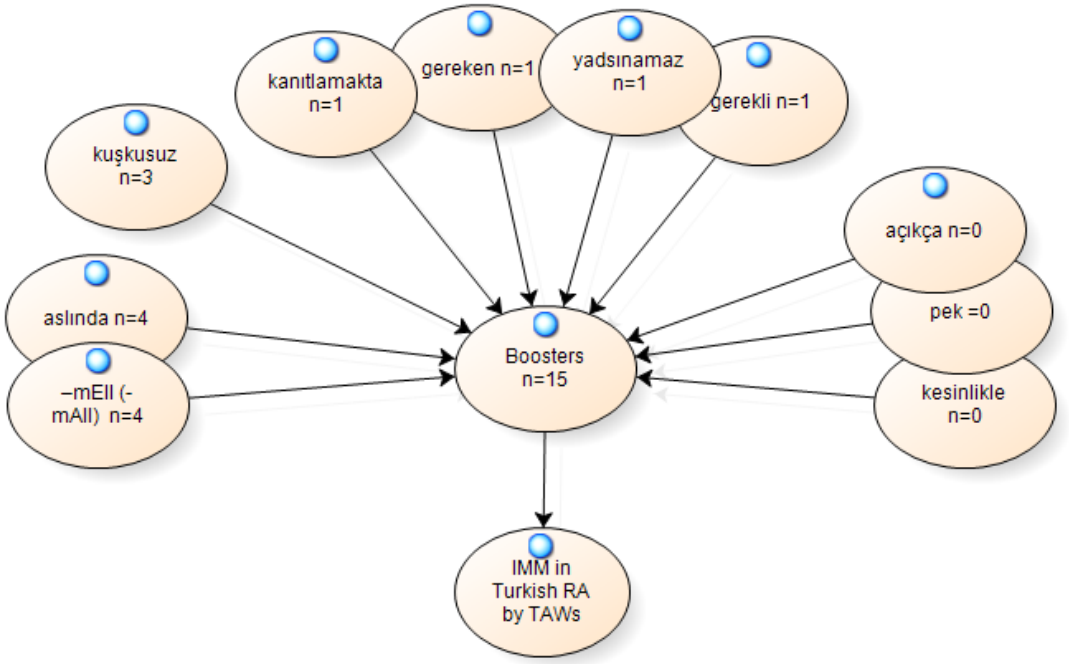

Figure 4: Boosters used in TRAs by TAWs

Figure 4 shows that the TAWs did not generally prefer to use boosters in their research articles. In every 100,000 words of the Turkish data, 15 occurrences of booster elements were found. All these elements of boosters were identified in the Turkish research articles during the pilot study data analysis and the data analysis of this main study.

In the Turkish research articles, the most common booster was identified as the suffix *–mElI (-mAlI)* (must). This suffix is used to express speaker generated obligation according to Göksel and Kerslake (2005). In addition, it is used when the suffix has a 3rd person singular subject, and a more impersonal meaning is transferred to readers. Emeksiz (2008), however, states that this suffix may be the least preferred to express obligation/necessity in written texts in Turkish with most writers using it in the passive form with a generalized meaning (Example 7). Nonetheless, it had four occurrences for every 100,000 words in the data.

(7) Dolayısıyla kelime öğrenme, kelimenin tanımını ya da karşılığını ezberlemek yoluyla değil, öğrencinin kelimeyi anlamlı öğrenmesi amacıyla, uygulanan aktiviteyle etkileşimde bulundurarak öğrenmesi gibi daha etkili yöntemlerle gerçekleştirilmeye başlamıştır. Bu nasıl gerçekleştirilebilir? … *Şu*

açıktır ki; öğrencilere uygulanacak kelime öğretim tekniği öğrencileri olabildiğince farklı kanallardan uyarabilecek çoklu duyusal (multi-sensory) bir yaklaşım *olmalıdır*.

(Baturay, Yıldırım and Daloğlu, 2007: 242)

(Therefore, vocabulary should not be learnt by memorizing the definitions of words. Vocabulary teaching starts with the purpose of learning in a meaningful and effective way, such as using interactional activities. How can this be achieved?...*It is obvious* that the vocabulary teaching method applied for students *must be* a multi-sensory approach that can stimulate students from different aspects.)

In this example (7), it is displayed that the modality suffix *–mElI (-mAlI)* is in the 3rd person singular and the writers here express a strong necessity on the type of approach that should be followed for teaching vocabulary. By using *açıktır ki (it is obvious that)*, they emphasize their full commitment of the proposition to the readers.

(8) Yine araştırma bulgularına göre, öğrenenlerin yeni öğrenilen bir kelimeyi ve o sözcüğün kullanılabileceği bir durumu zihinlerinde canlandırarak öğrenmeleri stratejisini; yeni kelime ve kelime gruplarını ilk karşılaştığı yerleri (kitap, tahta ya da işaret levhası gibi) hatırlama tekniğini; yeni öğrenilen kelimeleri akılda tutmak için kelimenin telaffuzuyla öğrenenin aklına getirdiği bir resim ya da şekil arasında bağlantı kurma stratejisini kullanmaları *sağlanmalıdır*…

(Cesur and Fer, 2011:90)

(According to the findings of the study, students *must be equipped* with strategies where they have to image the situation in their minds, where they can use recognition techniques (e.g. books, boards, signs), wherelearners make connections with the pronunciation of the new word or pictures or shapes…)

Two of each *–mElI (-mAlI)* were in passive form for every 100,000 words. In other words, the TAWs used this suffix as a booster both in the 3rd person singular and in the passive form with the same frequency.

The occurrence for *aslında* (in fact) was found to be four times in every 100,000 words, which is the same as *–mElI (-mAlI)*. These two elements were the most common devices used in marking boosters in the Turkish data. The writer uses these elements to show that he/she is certain about the proposition. An example (9) can be seen below:

(9) …Bu da, Ergenç'in (1998:207) de belirttiği gibi, yabancı dil öğrenme sürecinde dillerin (anadili ile hedef dil) "... karşı karşıya gelmesi ..."ne neden olmaktadır. *Aslında* böyle bir karşı karşıya gelme durumunun altında, öğrencinin, henüz bilmediği ve alışma aşamasında olduğu duruma geçerken, bildiği ve alışık olduğu durumdan yola çıkma eğilimini göstermesi yatmaktadır…

(Altıkulaçoğlu, 2010:46)

(This causes a situation called 'face to face' by Ergenç (1998:207). In fact beneath this face-to-face situation lies something else. The student shows a tendency to use his previous knowledge and habits to adapt to the new state in his life.)

Considering the example, it can be concluded that the writer is certain that there is another reason for the situation the learner experiences and the writer states this certainty by using *in fact*. However, there may also be certain situations where the writer uses this booster with a little hedging; the marker *–AbIl-Ir*. By using this suffix with *aslında*, the writer shows that he is certain of the state, but that he is still open to discuss it. An example is presented below:

(10) …Sonuç olarak, hedef dilden sapan, öğrencinin kendisinin oluşturduğu, anadili ile hedef dilin arasında yer alan bir ara dil ortaya çıkmaktadır. *Aslında,* ara dilin, öğrenme sürecinde yaşanan doğal bir olgu olduğu, başka bir biçimde ifade etmek gerekirse, tıpkı anadilini edinen çocuklar gibi, yabancı dil öğrencilerinin de bir sistem kurdukları ve bu sistemde hedef dile ait deneyler yaptıkları *söylenebilir*…

(Altıkulaçoğlu, 2010: 40)

(As a result, interlanguage occurs when the language of the learner deviates from the target language and the learner forms a language between the target and his first language. *In fact*, it *can be stated* that interlanguage is a natural phenomenon which belongs to the learning process; in other words, like children who acquire

their first language, foreign language learners form a system and they conduct experiments in this system with the target language.)

These elements were followed by *kanıtlamakta (prove), gereken (necessary/what is needed), yadsınamaz (undeniable)* and *gerekli (necessary)* with one occurrence for each in every 100,000 words of the data. In the pilot study, *açıkça (clearly), pek (pretty),* and *kesinlikle (certainly)* had been detected, so these elements were added to this study. However, no occurrences for these elements were found in the data. The reason for this different result can be, first of all, the topic of the chosen articles for the pilot study and writer preferences.

Considering the suffixe–*mElI (-mAlI)*, it can be said that it was the most commonly-used marker for boosters. This finding is in line with the findings of Doyuran (2009), who studied these markers in research articles in Geological Engineering and Linguistics and who found that epistemic modality was the most frequently-used device to mark hedging in Engineering. Similarly, *AbIl-Ir* was a common suffix to express hedging. Epistemic modals are used to tone down the proposition and to adjust the degree of certainty on the writer's part (Tarantino, 1991) and were frequently used in the data of Doyuran (2009) as well as in the present study.

Attitude Markers

Third, the TAWs used certain attitude markers in their research articles. As Hyland (2005) states, attitude markers enable writers to express their affective attitude toward a proposition. The occurrence of these markers in the data was 98 in every 100,000 words. Attitude markers are the third most-used markers of the interactional discourse markers in the data of this study. The overall scene for the use of attitude markers is presented in Figure 5.

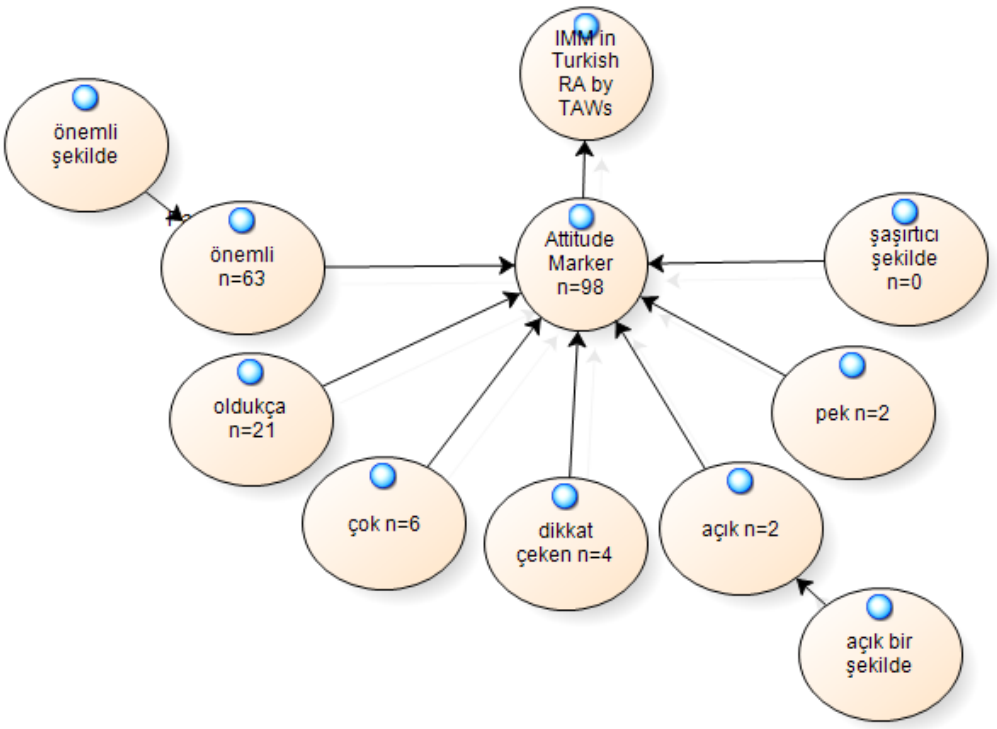

Figure 5: Attitude Markers in TRAs by TAWs

Figure 5 shows that the most-commonly used attitude marker by the TAWs is *önemli* (important), occurring 63 times for every 100,000 words. *Önemli* is also used as *önemli şekilde* (importantly). This is followed by *oldukça* (quite). *Oldukça* was used 21 times by the TAWs. Çok (much) and dikkat çeken (salient) were used in similar frequencies. *Açık* (Clear) - *açık bir şekilde* (clearly) and *pek* (pretty) were used twice, but*şaşırtıcı şekilde* (surprising) could not be found in the Turkish data. *Pek* was usually used with *çok* (much) to make the meaning stronger.

Attitude markers are used to state a writer's attitude to propositions and Hyland (2005) claims that attitude markers are most explicitly expressed by the use of attitude verbs, sentence adverbs and adjectives, and the findings of the study related to the use of adjectives is exactly as Hyland (2005) describes. *Önemli* (important) was the most common adjective used to express the importance of the proposition. The writers used it to convey the importance of the message. *Önemli* was used in 38 articles out of 50. With regard this, it can be said that most of the TAWs preferred to use *önemli* to mark the importance of the propositions they are stating. For example, Ertürk and Üstündağ (2007) state that knowledge is an important part of life by using the word *önemli.*

(11) Bilgi, insan hayatının her anında ve her alanda *önemli bir rol* oynamaktadır…
(Ertürk and Üstündağ, 2007:29)
(Knowledge has *an important role* at every moment and in every field of human activity.)

In the example below, Gömleksiz and Özkaya (2012) also emphasize (in example 12) that English education in schools of foreign languages is very important.

(12) …Bu yönleriyle de, yabancı diller yüksekokullarında verilen temel İngilizce eğitimi *büyük önem* arz eder.
(Gömleksiz and Özkaya, 2012:498)
(Considering these features of these schools, English education in schools of foreign languages needs to be paid *great importance*.)

The second most commonly-used attitude marker in the Turkish data was *oldukça,* with a combination of an adjective or adjective+noun pattern. It was used in 24 articles. Almost half of the TAWs preferred to use *oldukça* to set their attitude toward the propositions they put forward in the articles. They used it to emphasize the proposition. This adverb may be used to increase the reliability of a proposition.

(13) …Diğer yandan, çeşitli nedenlerle öğrenciler arasında ayırım yapmak, öğrenme ortamının niteliği açısından *oldukçaciddi sorunlara* yol açabilir…
(Turanlı, 2007:46)
(On the other hand, discrimination among students for various reasons can cause *quiteserious problems* in terms of the quality of the learning environment.)

In the example (13) above, it can be realized that Turanlı (2007) uses *oldukça* to emphasize his attitude toward the situation, which creates a serious problem in the learning environment. By using *oldukça (quite),* he expresses the degree of the seriousness of the problem on the writer's part. Another attitude marker used by the TAWs in their research articles to emphasize attitude was found to be*çok* (much). It was detected in 10 articles and with 6 occurrences for every 100,000 words. An example is

presented below. *Çok* is used here to emphasize the meaning of the comparison that is made.

(14) …Öğretim aracının tasarımı başarıyı kullanılan teknolojiden de çok daha fazla etkiler…

(Baturay, Yıldırm and Daloğlu, 2007:243).

(The design of the teaching material affects success much more than the technology that is used.)

Self-mention

Self-mention is another element of interactional metadiscourse markers defined by Hyland (2005). Self-mention is expressed through the use of first person pronouns and marks the presence of the author in the text (Hyland, 2005). Self-mention was analyzed in the Turkish data both as the suffixes –mız,-im, -ık, as well as ben (I), benim (my), biz (we), and bizim (our). Figure 6 shows the results for the self-mention markers.

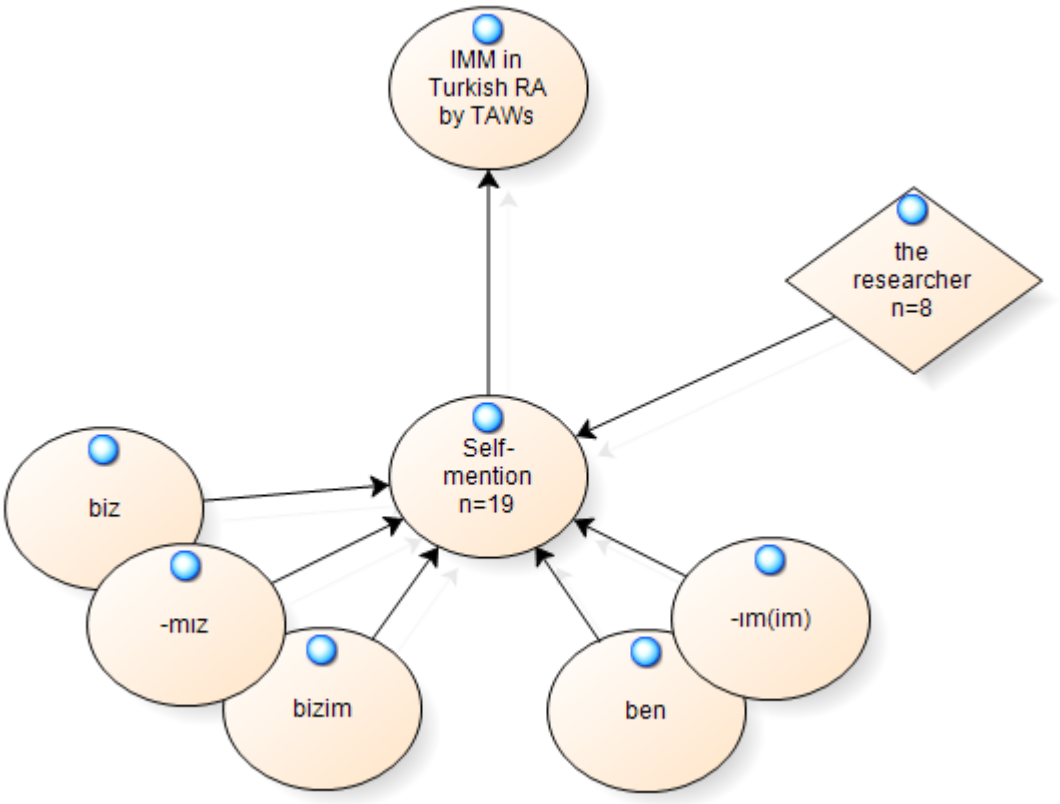

Figure 6: Self-mention Markers in TRAs by TAWs

It can be observed that 19 occurrences of self-mention were found for every 100,000 words, being detected in 13 articles. On the other hand, it was also observed that some of the TAWs preferred not to use self-mention markers and instead used 'the researcher' to describe what they did in their articles. In 11 of the articles, the writers referredto themselves as 'the researcher'. In most of the articles, the TAWs preferred not to use any of the self-mention markers and reported their study using the passive voice. Thus, this may mean that the TAWs preferred not to express their presence in their articles. Another point that may explain the reason of this finding may be objectivity. It may be taught to researchers to establish objectivity in their texts can be achieved by the use of passive voice. Writers who use the first person pronouns announce themselves as the writer in the text (Example 15), perhaps because they want to build a relationship with their readers and point to themselves as critical to meaning, establishing commitment to their words (Hyland, 2002). However, the first person pronouns found in the study were usually used to express who the doer was rather than to express commitment to the proposition. Examples (15-16) are presented below:

(15) Yaptığı*mız* ön araştırmada ortaya çıkan sonuca göre yabancı dil ağırlıklı liselerde okuyan öğrencilerin de yabancı dili tam olarak istedikleri seviye de öğrenemedikleri belirtilmiştir.

(Doğan, 2008:53)

(According to the results in the pilot study we conducted, it was stated that students who studied at high schools operating intensive English programs could not learn the language to the level they wanted.)

(16) Çalışma*mız*ın konusu olan bilgisayar destekli öğrenici derlemleri ise, ikinci dil edinimi araştırmalarında öğrenici aradilini çalışmaların odağına yeniden yerleştiren yeni kaynak olarak görülmektedir (Granger, 2008).

(Can, 2009: 18)

(Computer-based student collection, which is the topic of our study, is seen as a new resource which focuses on learner interlanguage in second language acquisition research.)

Engagement Markers

Finally, engagement markers are devices that help the writer to involve their readers in the text. The Turkish research articles were analyzed for engagement markers. It was found that engagement markers were used by the TAWs. Hyland (2001; 556)) emphasizes two purposes for writers engaging their readers: (1) to include readers as participants in an argument by the use of second person pronouns to influence interpersonal solidarity and membership of a disciplinary in-group; (2) to position the reader more rhetorically, recognizing the role of readers as critics and directing them to specific interpretations with questions, directives, and references to shared knowledge at critical points. Considering the findings presented in Figure 7, it can be said that the TAWs used engagement markers for the second purpose Hyland (2001) states, because the most frequent uses were the directives and the reader pronouns.

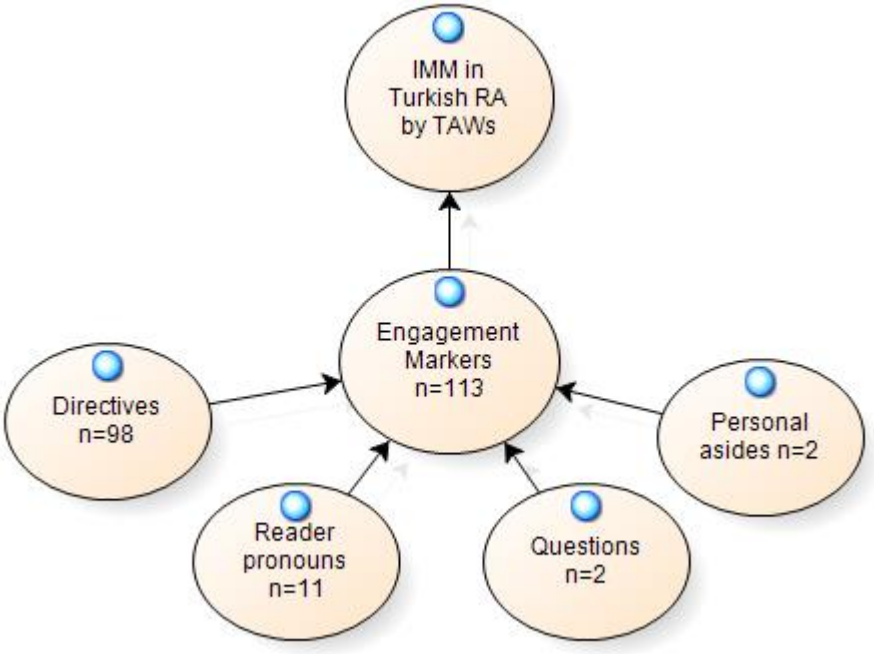

Figure 7: Engagement Markers in TRA by TAWs

The data analysis results show that the TAWs engaged their readers with their texts mostly by using directives (n=98). Besides directives, they also used reader pronouns (n=11), questions and personal asides, although not as frequently as directives. The engagement markers used by the TAWs will be presented in detail below. 'Directives' is the first category that will be presented. Figure 8 shows which directive markers the TAWs used in their articles.

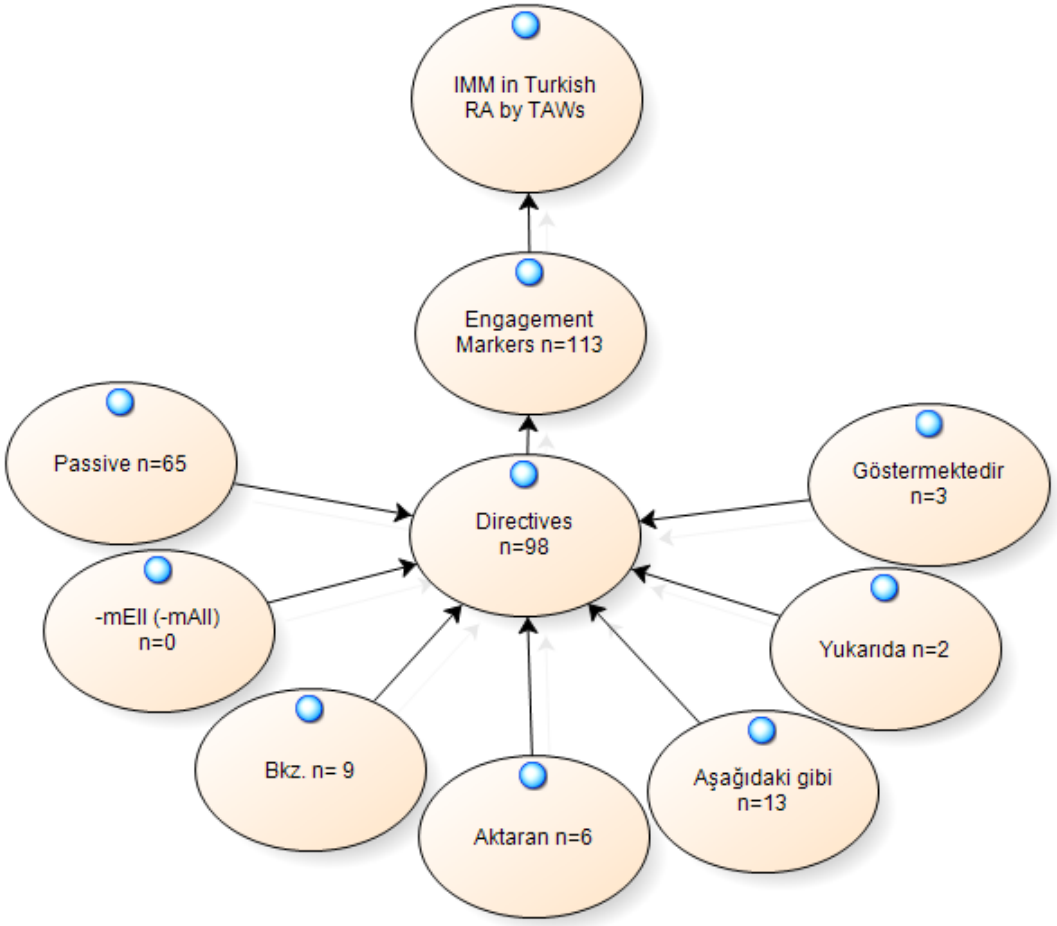

Figure 8: Directives in TRAs by TAWs

98 directive markers were used in the Turkish data. According to Hyland (2005), directives are markers that engage readers with the text by directing them to pay attention to what is written. Mostly, imperatives are used according to Hyland and Tse (2004). However, in the Turkish data, imperatives were used less and the TAWs directed their readers in a more implied way, by using the passive voice. Instead of telling readers to 'See Table 4', the TAWs preferred to use the passive voice and implied that the readers should consider 'Table 4' for the related discussion. With example (17) below, the finding can be understood more clearly.

(17) (Tablo 2'de görüldüğü gibi, İngilizce öğretmenliği öğretmen adayları; öğretmenlerin hazır yapılmış planları kullanmayı tercih ettikleri görüşüne …)

(Oğuz, 2009:463)

(As can be seen in Table 2, English Language Teacher Training candidates prefer to use ready-made lesson plans…)

In example (17) from the Turkish data, the writer (Oğuz, 2009) implies that the reader should check the table for the results or findings the writer is explaining. Instead of stating this in parenthesis *(See Table 2*), Oğuz (2009) prefers to engage the reader with the table and the findings by using the passive. While referring to the tables in the research articles, the TAWs also preferred to direct their readers to them by stating the place of the tables, such as *aşağıdaki gibi* (as below/following) and yukarıda (ki gibi) (as above). Figure 8 shows that the TAWs directed the readers most of the time using (as below/following) and yukarıda (ki gibi) (as above) and *aşağıdaki gibi*. Another way the TAWs used to lead readers to the figures or information in the text was the use of the verb *göstermektedir* (shows). It appeared three times for every 100,000 words in the data.

-mElI (-mAlI) (should/must/necessary) is the suffix in Turkish used to state what the reader should do to be engaged with the text. Unfortunately, no example of it was found in the data. The TAWs used *Bkz-bakınız (see)* to lead their readers to the related part of their articles, other articles or information in their articles. For example, if they wanted readers to go to the appendices for extra information, they stated it by using *(See Appendix A)*. When they cited information from other resources, the TAWs stated this by *aktaran* (cited in). It occurred six times for every 100,000 words and in five Turkish articles.

The second most commonly-used engagement marker used in the TRAs was reader pronouns. These were found in 11 articles with 11 occurrences for every 100,000 words. All of these occurrences were the *inclusive we,* in Turkish *biz, bize,* and the suffixes *-mız, -ız*. Figure 9 shows the findings.

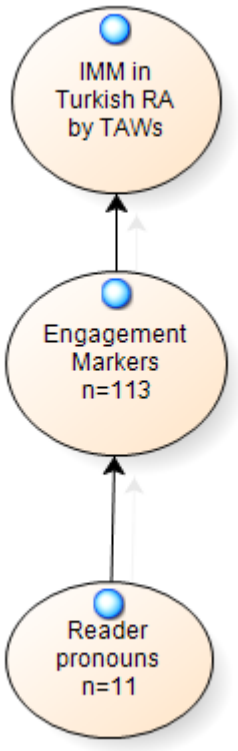

Figure 9: Reader Pronouns in TRAs by TAWs

Reader pronouns were used in cases where the writer had to attract the readers' attention to a particular topic of concern to both writer and reader. An example (18) is demonstrated below:

(18) …Ülke*miz*de ve yurtdışında yapılan birçok araştırmanın sonuçları yabancı dil kaygısının diğer kaygılardan farklı olduğunu ve yabancı dil öğrenme sürecinde oldukça etkili olduğunu göstermektedir…

(Öner and Gedikoğlu, 2007:145)

(In *our* country and abroad, results of most research conducted show that foreign language anxiety is different from the other anxieties and quite effective in the language learning process.)

Öner and Gedikoğlu (2007) use the possessive suffix *–miz* to refer to Turkey and, by so doing, they attract the readers' attention to the subject matter.

(19) …Bu durum *bize* özellikle dolaysız stratejilerden "Bellek stratejilerinin" ve "Bilişsel stratejilerin" kullanımı konusunda Türk öğrenci gruplarının bilinçlenmesi ve bilinçlendirilmesi gerektiğini göstermektedir…

(Ünal, Onursal-Ayırır, and Arıoğlu, 2011:481)

(This situation shows *us* that Turkish learners need to be trained for awareness and consciousness about the use of 'Memory strategies' and 'Cognitive strategies'.)

In the example (19) above, the writers use *bize* to include the reader in the discussion and show that both writers and readers are involved in the subject matter stated here. As can be seen in the extracts from the data, the TAWs used reader pronouns to engage readers and they only use the inclusive 'we'.

Asking readers questions in the article is another way of attracting readers' attention to the text. In the Turkish data, such questions were used in three articles by writers, and there were two occurrences for every 100,000 words. Similarly, the use of personal asides was found quite often in the data, with two occurrences for every 100,000 words, and in four articles. Thus, it can be concluded that Turkish academic writers prefer not to ask questions or use personal aside elements while trying to engage their readers with their texts. The reason for this may be that questions and personal asides express the will of the writer to interact with the reader in a more explicit way, and that the TAWs may have thought that the use of these devices would seem more informal.

The data analysis for Turkish research articles written by Turkish academic writers shows that the TAWs tended to interact with their readers while writing about the subject; teaching a foreign language. All of the categories that Hyland and Tse (2004) refer to were found in the data, although the density of use of these categories exhibits differences in terms of frequency of use. The TAWs used hedging more than boosters while stating a proposition. Boosters were the least frequent category found in the data. This was followed by self-mention markers. This finding, the less frequent use of boosters and self-mention, implies that the TAWs preferrednot to seem authoritative while stating a proposition. They may have thought that what is important is the proposition rather than the writer, andthat what they stated and found in their research was open to discussion. The frequent use of hedging and attitude markers can support

the idea of being open for discussion, and that what is important is the proposition itself. Furthermore, it was found that the TAWs tended to engage their readers by using engagement markers under the topic of teaching a foreign language. However, instead of the use of imperatives or other elements in this category, the TAWs tended to use the passive voice while leading their readers and attracting their attention to the proposition they make.

Next, regarding the first research question of the study and its second sub-question, the results of the English data written by the TAWs will be presented.

What kind of interactional metadiscourse markers are used in English research articles with regard to the teaching of a foreign language written by TAWs?

Fifty English research articles (ERAs) written on the teaching of a foreign language were analyzed in terms of interactional metadiscourse markers used by Turkish academic writers. In total, 491 interactional discourse markers for every 100,000 words were found in the data. Figure 10 shows the categories found in the data and their frequency of occurence.

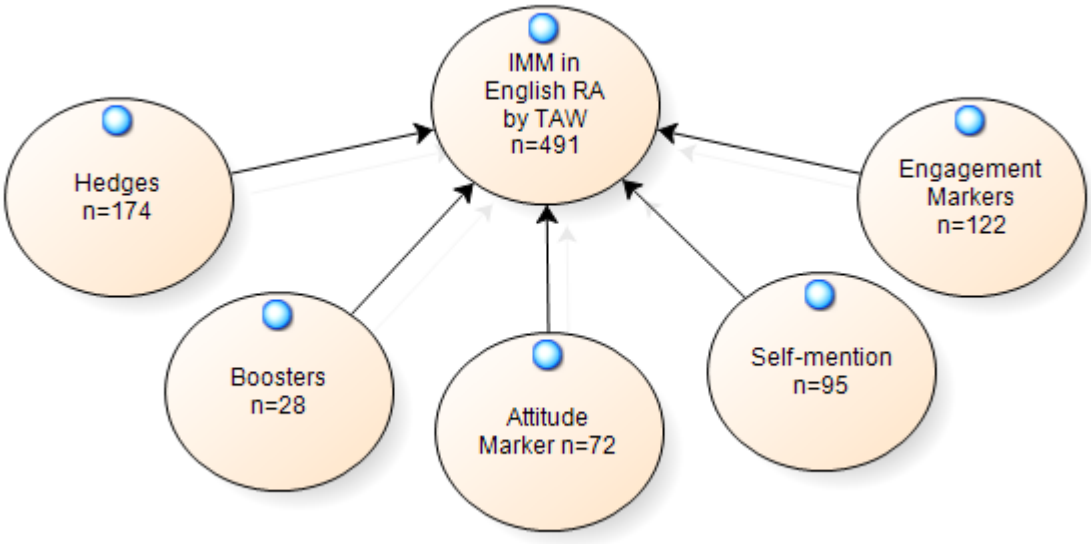

Figure 10: IMMs in English Research Articles written by TAWs

Figure 10 shows that hedges (n=174) were used the most in the English research articles written by the TAWs. This is followed by engagement markers (n=122), self-mention (n=95), attitude markers (n=72) and boosters (n=28) for every 100,000 words in the data. The TAWs preferred to use boosters in the English research articles less than

other categories. The findings for each category will be presented below in this order: hedges, boosters, attitude markers, self-mentions and engagement markers.

Hedges

To begin with, the most frequent marker found in the ERAs by the TAWs was hedges. It was found that the TAWs used hedging devices with 174 occurrences for every 100,000 words. Figure 11 shows which words the writers preferred to use in their texts. There were basically three categories found for hedging: use of modal verbs, verbs, and adjectives and adverbs. As Figure 11 shows, the TAWs used modal verbs the most, followed by verbs that express hedging and then adjectives and adverbs.

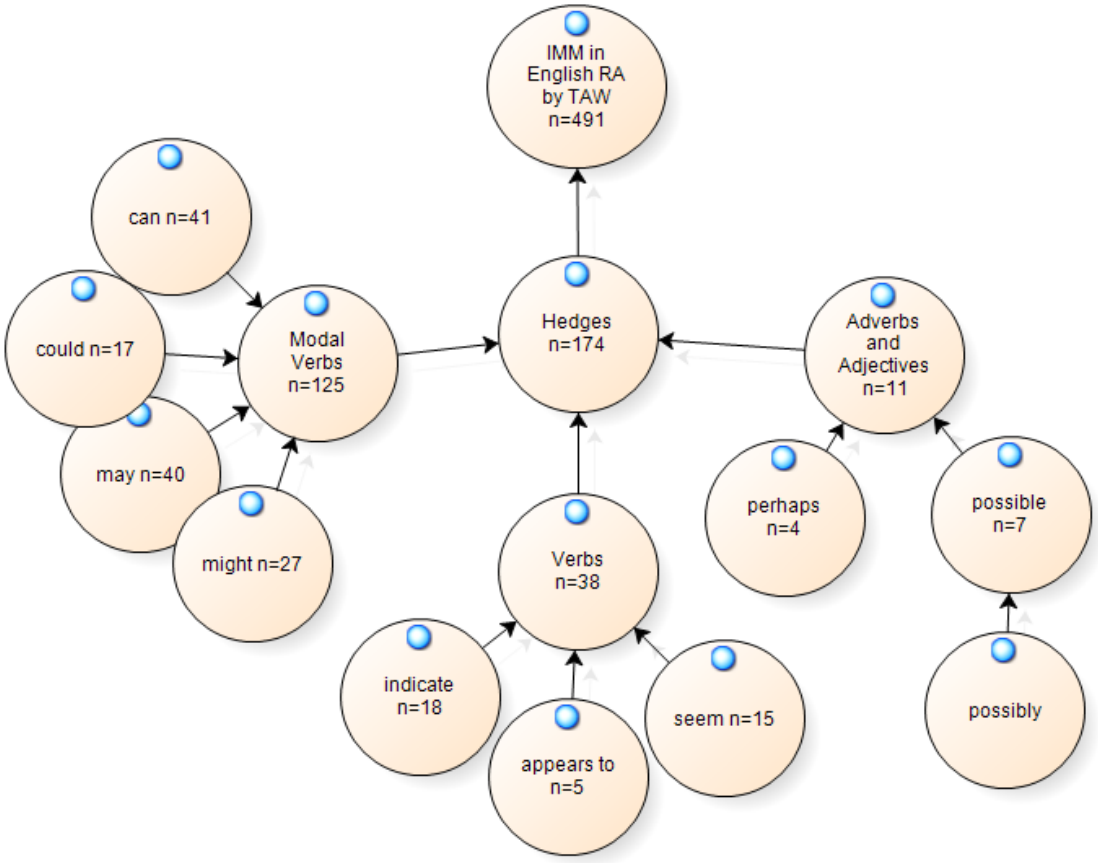

Figure 11: Hedges in ERAs by TAWs

The most frequent occurrence was *can* and *may* and most of the writers used these for hedging in their articles. Figure 12 shows the number of articles in which modal verbs occurred. These were detected in 42 English research articles written by the TAWs. *May* was found in 36 articles, *might* in 28 and *could* in 23 articles.

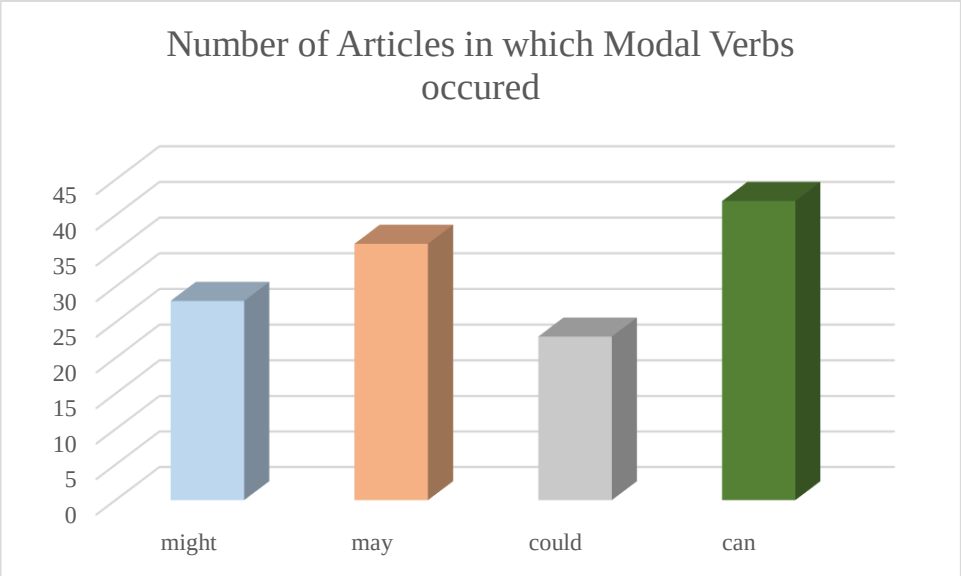

Figure 12: Number of Articlesin which Modal Verbs Occurred

The use of *can* was quite common in the data. This finding contradicts what Vold (2006- medical research aticles) and Biber, Leech, Conrad and Finegan (1999) state. They support the idea that *may* is the most frequent epistemic modality marker in academic texts. However, this does not hold true for the TAWs and the research articles on the teaching of English. The reason why TAWs used *can* a bit more frequently may be the frequent use of the modal verb "can" in spoken English. Dafous, Nunez and Sancho (2008) conducted a study on the use of personal pronouns and modal verbs in university lectures, and they found that *can* was the third most frequently used modal verb whereas was the third most frequently used modal verb whereas *may* was the eleventh. This may suggest that the frequent use of *can* in spoken English may affect the choice of TAWs. Another explanation may be the suffix *–AbIl-Ir*. *–AbIl-Ir* is the only suffix in Turkish, which can used to express possibility and other functions of modality; however, modality can be expressed in Turkish but it cannot be marked as clearly as in English (Kılıç, 2013; Cinque, 2001). Turkish does not have a class of modals as in English because of the syntactic structure of Turkish. Furthermore, when compared with can, *may* is a little bit more complicated in meaning because *can* has a single meaning discernable in all uses (Kılıç, 2013). Considering these reasons, it may be possible that TAWs translate *–AbIl-Ir* as *can* rather than *may.*

Examples 20 and 21 show the use of *can* for hedging to express possibility on the researcher's part. They used it to soften their claims and, in Example 21, by using

the passive form, the writer tried to use a more face-saving strategy to the argument put forward.

(20) These results *can* provide insights into assisting teachers in focusing attention on the selection of the most suitable literary texts with students' preferences and perceived difficulty of literature in mind.

(Yılmaz, 2012: 88)

(21) These results *can* be questioned from the L1 influence perspective. It should be remembered that, although both SF patterns and sense-contingent argument preferences exist in the participants' L1 and L2, there is a potential problem area where not all the English polysemous verbs function in the same manner in Turkish. The different L2 verb senses sometimes call for different L1 verbs, but only to be followed by the same argument structure, while other verbs act in an identical way to their English polysemous counterparts. This duality *can* lead to overgeneralizations in the acquisition of SF patterns.

(Uçkun, 2012: 370)

Examples 20 and 21 show us that the writers expressed the possibility of their propositions, encouraging their audience to think and discuss. In academic texts, *may* is usually preferred to express possibility and to create a discussion on a topic. However, the data of this study reveals that *can* was used a little more frequently. Examples 22 and 23 show how the writers express possibility using *may*:

(22) Nevertheless, the popular belief that children are more successful language learners than adults is an unrealistic one that *may* discourage many adult language learners; if teachers themselves are biased against older learners, this view *may* indirectly be transmitted to students, whose self-confidence and progress *may* be negatively affected.

(Altan, 2012:487)

(23) Eight TCs said they felt nervous because English speakers have different dialects and accents and that they found it difficult to recognize words in different dialects. Listening to a speech about an unfamiliar topic *may* also cause anxiety. An interesting finding was that the number of TCs who said that they lacked vocabulary and grammatical knowledge was quite low (3 TCs).

(Bekleyen, 2009: 670)

Nonetheless, in example 24, it can be noticed that the writer uses *can* to show a non-assertive stance for presenting the last discussion regarding the results of the study.

(24) With regard to these results, we *can* conclude that literature facilitates FL learning, as almost 80% of the students said that the study of literature was personally rewarding and that students should be encouraged to take literature courses. Our conclusion is that students should be provided more exposure to literature courses, thereby maximizing language learning.

(Yılmaz, 2012:91)

The reason why writers tend to use *can* and *may* with almost the same weight may be that *can* may be used more frequently preferred than *may* because by using *can* the writer does not essentially bind himself on a weak assumption about the proposition, but by using *may* the writer, whether he is aware of the truth of the proposition or not, marks a weak possibility about the proposition (Seibel, 1980). This can explain why the use of *can* and *may* was similar in terms of their frequency in the data. Another explanation why the TAWs used *may* and *can* more frequently, compared to *could* and *might,* is the multi-functionality of *can* and *may*. Moreover, Seibel (1980: 16) puts forward that may can be used for a weak guess or a prediction or "at least an assertion that the speaker, although he does not know if a proposition is true or not, has no compelling reason to believe that it is (or was or will be) false in the actual world". Also, Rezzano (2004) states that *may* and *can* are the most prolific tools used to express low degree of certainity in academic writing. As a result, the explanations of Seibel (1980) and Rezzano (2004) may show the reason why *can* and *may* were used more frequently compared to *might* and *could*.

The second way that the TAWs tended to express hedging in their research articles was by the use of epistemic verbs such as *seem, appear to* and so forth. They used these verbs to express the possibility of propositions, or to open discussion about the proposition. The data shows that the TAWs usually preferred to use *indicate* and *seem* to express hedging. *Appear to* was less frequently used. Figure 13 shows in how many of the articles these verbs occurred.

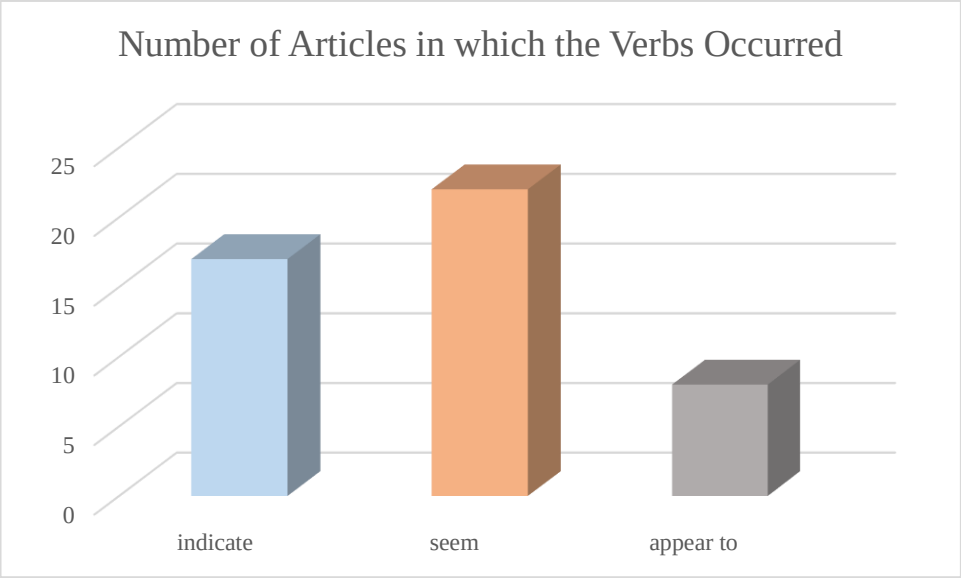

Figure 13: Number of Articles in which the Verbs Occurred for Hedging

As Figure 13 shows, *seem* appeared in more articles compared to other verbs, but *indicate* was used more frequently. This may imply that some of the writers tended to use the verb *indicate* more than the others in the same research article through conscious choice. Writers use epistemic verbs since they indicate stance with the appropriate choice and use of verbs and degree of distance (Swales, 1990). Below can be seen examples of the use of epistemic verbs.

(25) Analysis of the interview protocols *indicated* that female trainee teachers and male trainee teachers had different perceptions of teaching English as a profession and had different reasons for being in the ELT department.

(Erten, 2009: 86)

Here, in this example (25), the writer signals the degree of certainty of the claim which is made based on the data analysis the researcher conducted and expresses less commitment with the use of *indicate.* Another example (26) including the verb *seem* is presented below. The writer uses the verb *seem* for the same reason Erten (2009) uses *indicate* in the research article.

(26) Furthermore, the findings regarding students'‟ disagreement *seem* to reveal the socio-economic differences among the parts and is indicative of these students'‟ eagerness towards language learning.

(Devrim and Bayyurt, 2010: 17)

Finally, in terms of hedging, the category least used was adjectives and adverbs to express certainty of the proposition on behalf of the researcher. The TAWs tended to

use adjectives and adverbs the least in the data to express hedging. Also, the variety of these adjectives and adverbs was also less. The most frequent of these words were *perhaps and possible(ly).*TheTAWs preferred not use these words as often as modal verbs and epistemic verbs and this may be because lexical verbs express a more overt and precise commitment to the proposition than adverbs and adjectives (Hyland and Milton, 1997).

Overall, the data analysis shows that the TAWs used hedge markers while writing English research articles on the teaching of English and they tended to use modal verbs the most, compared to epistemic verbs and adverbs.

Boosters

Writers use boosters to express the certainty of a proposition and have the need to convince readers of the true value of the proposition (Vazquez and Giner, 2009). Boosters can be markers such as *clearly*, *certainly*, or modal verbs can also be used as boosters. The English research articles written by the TAWs were analyzed in terms of boosters and it was found that the TAWs tendednot to use boosters often in academic writing. The boosters that were identified in the collected data are presented in Figure 14. This illustration exhibits that there were three main categories of boosters: modal verbs, adverbs and adjectives and verbs. The TAWs preferred to use adjectives and adverbs more frequently than the other sub-categories while writing English academic texts.

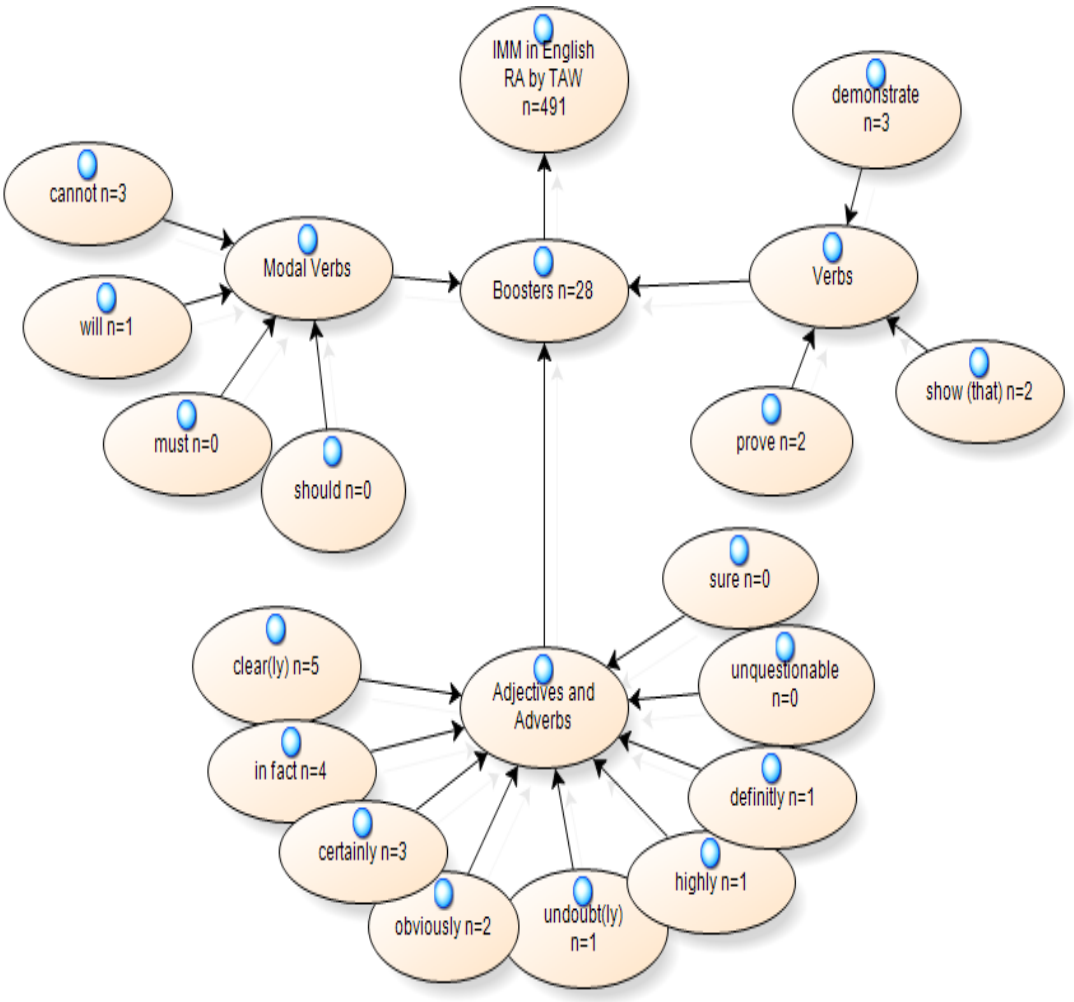

Figure 14: Boosters in ERAs by TAWs

Modal verbs as boosters occurred the least frequently. *Cannot* occurred only three times and *will* only once in 100,000 words. Although the use of *must* was expected in the study, no occurrence was found in the data. Although in the study of Kafes (2009), *must* was found to express obligation, it was found to be the least commonly used modal verb in his data by both the AAWs and the TAWs. This can be explained by the strong function of *must.* It may explicitly tell the reader that the authority is the writer and no other versions of the proposition can be accepted.

Despite the infrequent use of *must*, another strong modal verb *cannot* was used as the most frequent booster marker.In example 27, it can be realized that the writer uses *cannot* to express the impossibility of the proposition and shows his authority for this proposition.

(27) Finally, metacognition emerged as an important factor in the present investigation. This study, however, *cannot* explain the process of acquisition of metacognitive behaviors.

(Erten, 2009: 89).

(28) Thinking and reflecting together with a supervisor or a mentor on a teaching performance will make the teacher candidates more conscious of their own practices and help them develop professionally. For this purpose, teacher education programs *will* play a significant role in supporting and strengthening the role of cooperating teachers as teacher educators who are more aware of interactive reflective teaching practices.

(Akcan and Tatar, 2010: 166)

In example 28 above, it can be observed that the writers take the proposition seriously and express its certainty. The writers display quite a high degree of confidence for the claims they make about the importance of the role of teacher education programs.

In the ERA data, boosters were marked by the use of adverbs and adjectives. The reason why the TAWs tended to use adverbs more than modal verbs can be the ease of use of the adverbs. They can be used in clause structure (Quirk, Leech, and Svartvik, 1972).The most frequent device was *clear(ly)* and patterns using it. It occurred five times for every 100,000 words in the the ERA data written by TAWs, and it is followed by *in fact* with four occurrences.

(29) It *is clear from* this data that lack of time and access to computer facilities are significant barriers to IALT in Turkish university contexts, much more so than low levels of student or teacher interest or skills.

(Çelik, 2012:8)

(30) English has also become the medium of instruction in some newly-established, and *in fact* mushrooming, private universities, starting with Bilkent University, the first private university in Turkey.

(Altan, 2012: 484)

In examples 29 and 30, it can be seen that the writers show a strong position toward the proposition they state. Although Altan (2012) uses *in fact* more like a transition for elaboration, the main idea is to support the proposition before *in fact* in a much stronger way.

The final category by which the TAWs expressed boosters was by the use of verbs such as *prove,* and *show (that)*. The verbs occurring most often were *demonstrate*, followed by *show (that)* and *prove*.

(31) The findings *demonstrate* important issues about the nature, functions, benefits, and problems of the mentoring experienced by the faculty students at the particular department, such as the need for developing selection criteria and training programmes for mentors and organising regular meetings and seminars regarding the partnership programme for mutual understanding and sharing opinions. Drawing on the data, recommendations and implications are suggested.

(Yavuz, 2011:43)

(32) In addition, the students at the lower level of critical thinking scores could only produce one question at comprehension level and above. The findings *show that* the questions students in the lower score group asked are questions at knowledge level. The questions at higher levels can have a more positive effect on their critical approach to reading.

(Şeker and Kömür, 2008:397)

To summarize the findings related to boosters, the data analysis for the ERAs by the TAWs shows that the TAWs use booster devices although they appearless frequently in the data compared to the other interactional metadiscourse markers in the data. The most frequently used device was adverbs and adjectives to make a claim and the least was model verbs.

Attitude Markers

Attitude markers were identified in the ERAs data by the TAWs. 72 occurrences of attitude markers were found for every 100,000 words in the data. Most devices were found in this category. However, not all of them were frequent in the data; thus, the four most frequent devices will be discussed in this section. The other devices can be observed in Figure 15. The most frequent devices for attitude markers were found to be*important* with 33 occurrences. The adjective and adverb form of *surprising* had six occurrences which are far fewer than *important*. *Noteworthy* and *crucial(ly)* were used

with the same frequency. The other devices, which can be found in Figure 15, had occurrences of less than five.

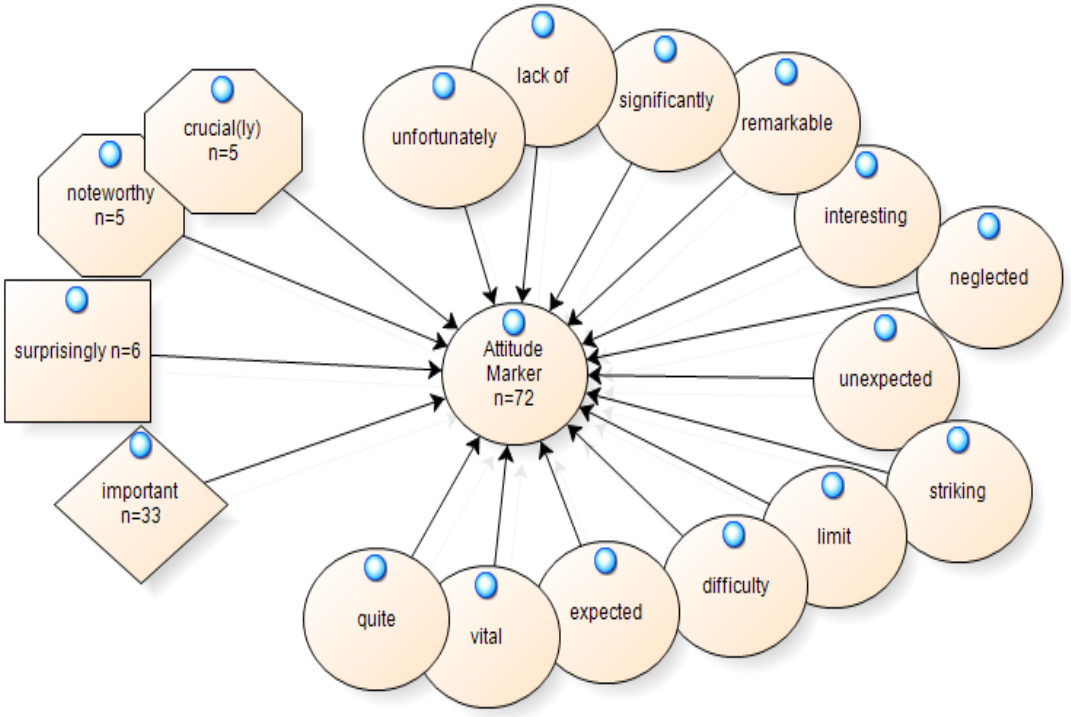

Figure 15: Attitude Markers in ERAs by TAWs

Important was found to be the most frequent device used as an attitude marker. Most of the TAWs chose to use this adjective; it was noted in 36 articles. The explanation for this finding can be the writers' choice to seem more reliable and to emphasize the importance of certain parts in his or her study. On the other hand, writers could also express the importance of the propositions they are making by using synonyms for*important,* but they did not.The reason for using *important* rather than its synonyms (such as vital or crucial) isbecause it is one of the most commonly-used adjectives. Another explanation can be that *important* is one of the adjectives that a non-native speaker meets during the early stages of learning English. Example 33 shows that the writer makes an attitude clear toward the proposition by using the adjective *important.*The writer believes that the studies about to be mentioned have a vital role in research, and this is stated using this adjective.

(33) Two *important* studies were conducted with Japanese writers. Kubota (1998a) found that half of the Japanese subjects used similar patterns in terms of organization and the location of main ideas in their L1 and L2…. Hirose (2003),

on the other hand, found that English major Japanese students organized both their L1 and L2 essays the same way, using a deductive pattern.

(Uysal, 2008:185)

(34) Since the Village Institutes Experiment, the issue of rural teacher preparation seems to have been neglected in teacher education curricula. It is *not surprising*, therefore, that teachers who go to small, rural areas soon identify concerns about a lack of preparedness for work in these areas.

(Kızılaslan, 2012,: 245)

Example 34 displays an example from the data where *surprising* is used. The writer states his attitude about the proposition that the conclusion made is an expected one by using *not surprising*.

Self-mention

Fifty English research articles on the teaching of English were analyzed in terms of whether the TAWs used self-mention devices in their articles or not. It should be noted that some writers prefer not to mention *self* using pronouns, but use the term*the researcher*. The findings are presented in Figure 16.

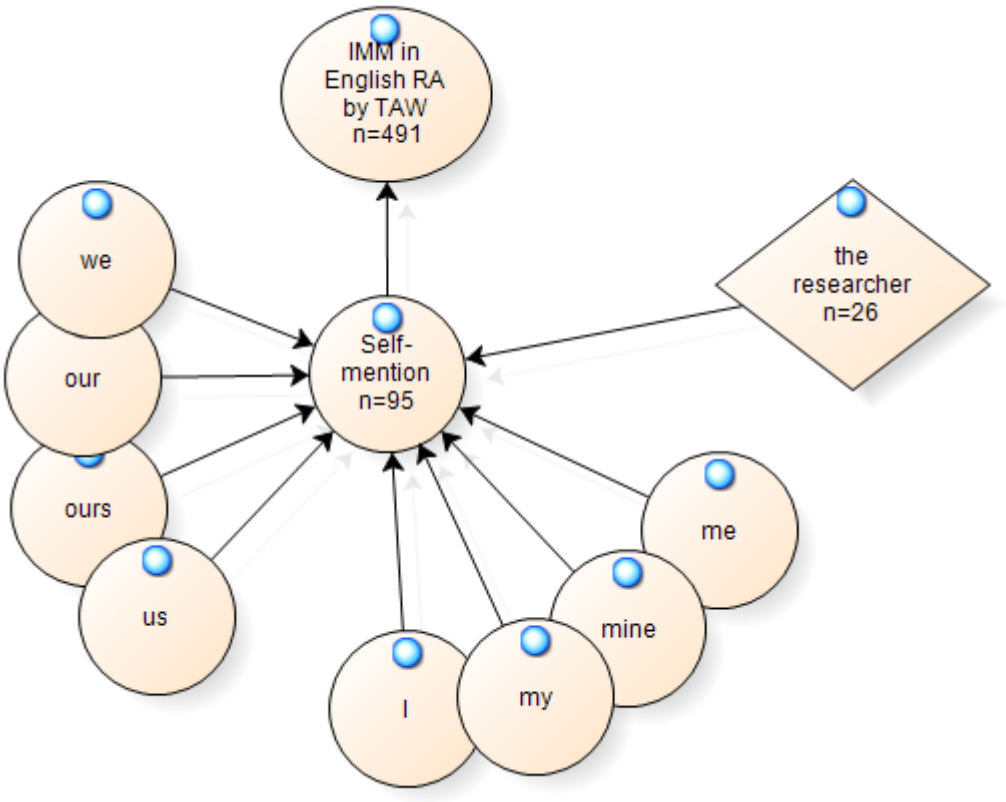

Figure 16: Self-mentions in ERAs by TAWs

Figure 16 shows that the TAWs tended to use self-mention devices in their research articles. There were 95 occurrences found for every 100,000 words in the data. Moreover, 25 occurrences were found for the term*the researcher* in the data. This finding may mean that the TAWs used first person pronouns to show their presence in their articles. This category was also analyzed in terms of whether there were any TAWs who preferred to use self-mention devices in a more implied way. For this, the number of articles where these devices were used was identified. The findings for all three categories are displayed in Figure16.

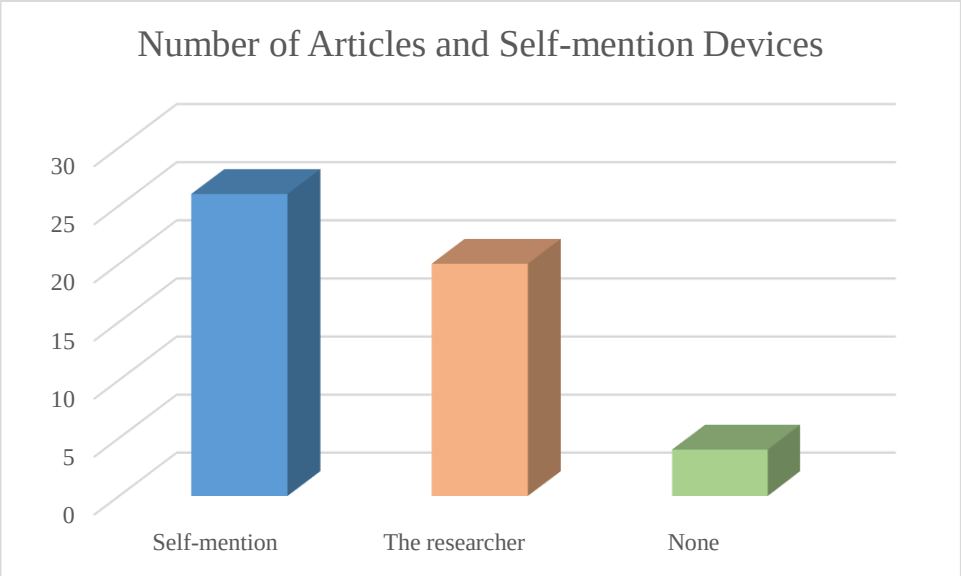

Figure 17: Number of Articles and Self-mention Devices

Figure 17 shows that the TAWs used self-mention devices in 26 research articles, and *the researcher* pattern was detected in 20 articles. This shows that almost all of the writers preferred to mention themselves and mark their presence in their texts whether by using self-mention devices or *the researcher* pattern, and in only 4 articles was there no use of either category. Self-mention enables writers to represent themselves to readers and explicitly display their role in the discourse by using first person pronouns (Hyland, 2001b; Kuo, 1999; Tang and John, 1999). Considering this, it can be said that most of the writers studied, in particular, used both first person pronouns and the pattern*the researcher* to explain the methodology and results of their studies. Only very few of the writers used these devices to impose their authority on the proposition or to establish interaction with their readers.

Engagement Markers

Engagement markers were analyzed in fifty English research articles by the TAWs. Four categories for engagement markers were investigated in the articles: directives, reader pronouns, questions and personal asides. The findings are presented in Figure 18.

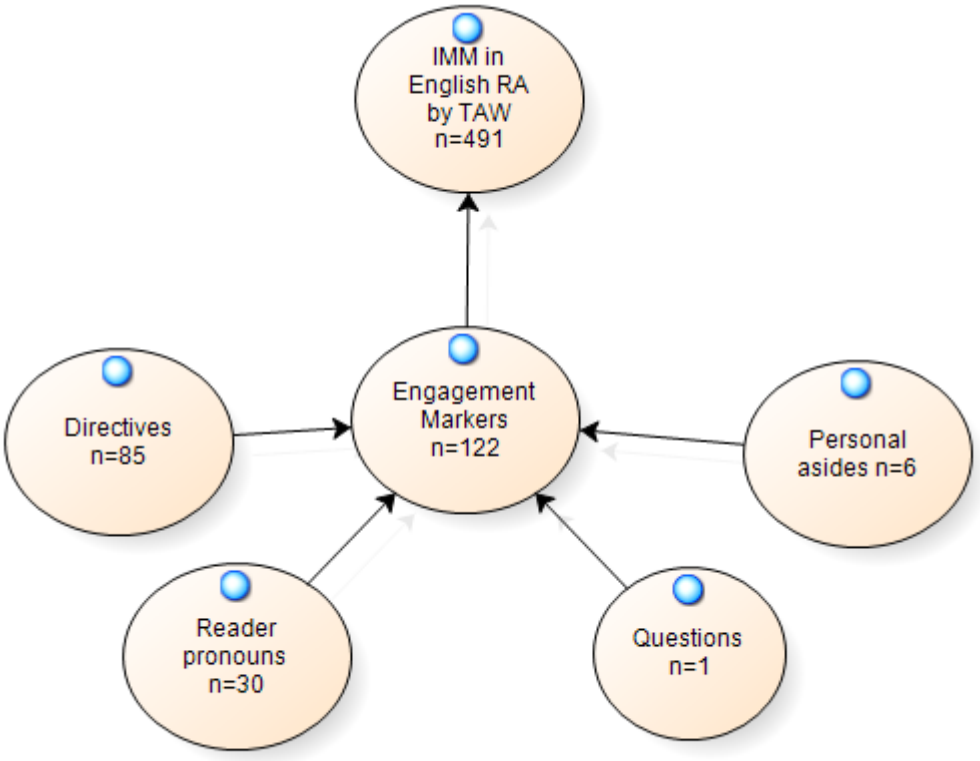

Figure 18: Engagement Markers in ERAs by TAWs

Figure 18 shows that the most frequently used engagement markers in the ERAs were directives. These occurred 85 times in 100,000 words. This can be supported by the finding of Hyland (2001). He found that directives were the most frequently used device to initiate reader participation in academic texts by native speakers of English.

While writing academic texts, the TAWs also chose to use reader pronouns to engage their audiences with their articles. There were thirty occurrences of reader pronouns. The least frequent marker was *question.*The TAWs tended to ask questions in their research articles to engage their readers with the text. Each sub-category will be presented in detail below.

First, the findings relating to the use of directives will be presented. The use of directives was analyzed under four sub-categories: imperative form of verbs, modal verbs, passive voice and the pattern of to be+adjective+to. The most frequent use was the imperative form of the verbs (n=49) and the passive voice (n=23). The least occurring was the use of modal verbs and the pattern of be+adjective+to. Figure 19 presents the findings on the use of directives in the ERAs by TAWs.

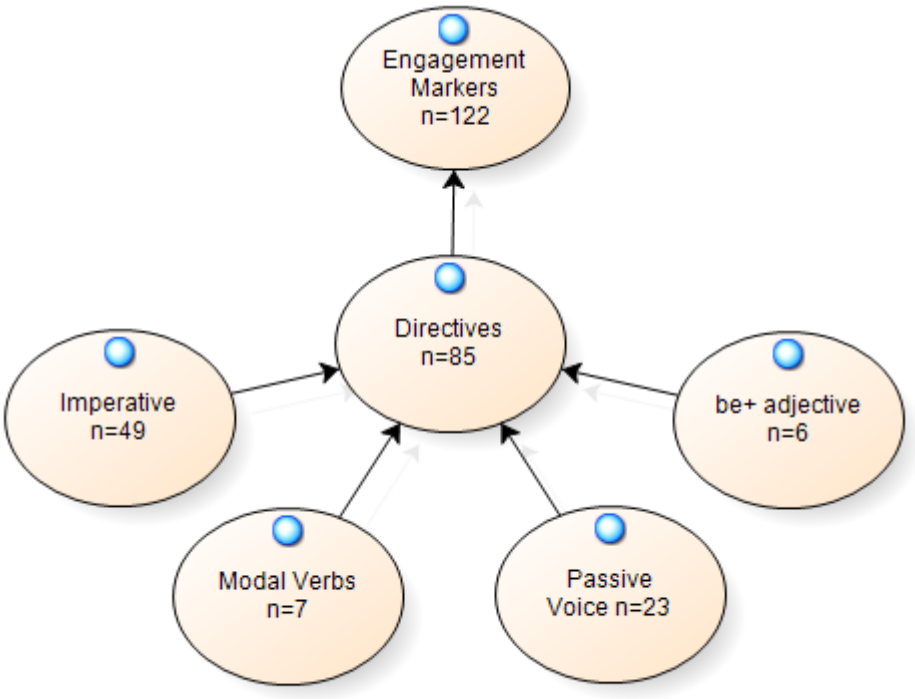

Figure 19: Directives in ERAs by TAWs

The TAWs used the imperative form of verbs while leading their readers and engaging them to the proposition. As presented in Figure 19, the most frequent use was the imperative form of the verbs, and the most frequent verb used by the writers was *to see*. It occurred 37 times in every 100,000 words. The verb occurred in 30 articles, meaning it was the most preferred of all. This matches the finding of Hyland (2002b). In his study, he investigated the use of directives and found that in the corpus studied, imperative use was the most common directive. In the present study, the TAWs generally used this verb to lead their readers to a source that they cited or to lead them to a related table, figures or appendices. An example (35) is presented below:

> (35) In 1985, Kachru presented the Three Circles Model of World Englishes – i.e. inner, outer and expanding circles. This model attempts to explain the use of English around the world in three concentric circles, which represent the changing distribution and functions of the English language (*See* Figure 1).
>
> (Devrim and Bayyurt, 2010: 5)

Another common verb in imperative form was *to note that*. The writer, in example 32, asks readers to pay attention to the proposition that is about to be made considering the information given previously. Hyland (2001a) expresses that writers use these kinds of imperatives to focus reader attention and to emphasize important points instead of directing readers to certain points in the academic text.

(36) Similarly, 41.67% of the TNSs and 20% of the ENSs speaking to the contradicting teacher employed criticism. This finding was contrary to the findings of Murphy and Neu's (1996) study, which revealed that English native speakers did not produce the speech act of criticism when complaining to a professor. *Note that* their study did not have students interacting with an interlocutor.

(Deveci, 2010:36)

Another way by which the TAWs led their readers in their texts was by using the passive voice. This was found to be the second most-frequently used method of directing readers, both within and outside of the text. The use of the passive voice seems quite an indirect and polite way of tellingreaders where to refer to in an academic text. Below can be seen an example of this use of the passive voice:

(37) The results revealed a significant positive relationship between the two scales ($r = 0.52$, $p<0.01$), suggesting the TCs with higher levels of foreign language classroom anxiety tend to have higher levels of FLLA, *as shown* in Table 1.

(Bekleyen, 2009: 668)

The TAWs also used modal verbs to direct their readers in their academic texts. The TAWs' texts included seven occurrences for every 100,000 words. In example 34, the writer attracts the attention of readers to pay importance to the proposition stated. The example is presented below:

(38) It is especially reported by Rovai and Jordan (2004) that such students, particularly dependent learners, frequently need direction and reinforcement from a visible professor; otherwise they are easily lost during the course. However, it *should be noted* that in this study working individually did not result in student frustration.

(Şimşek, 2008: 206)

Finally, the pattern to be+adjective can be used to engage readers to the text (Hyland, 2005). This pattern had six occurrences for every 100,000 words in the data.

(39) The diversity of the literature classroom can in turn inhibit the pace of teaching and learning on the part of both students and teachers. Thus, *it is important to note* that these students should be introduced to the wide range of literary texts suited to their individual needs and interests.

(Yılmaz, 2012: 87)

In example 39, it can be observed that the writer attracts the readers' attention to the proposition and guides the readers to an interpretation on the side of the writer (Hyland, 2005). The writer here may imply that what he states can be objected to by the readership.

Directives have been considered to be'bold-on-record-face-threatening' acts by Brown and Levinson (1987) because they claim greater authority for the writer over readers. The use of directives may seem a violation of the conventional fiction of democratic peer relationships built into the research articles.

Another sub-category for engagement markers is the use of reader pronouns, which include the pronouns *you*, and inclusive *we*. Figure 19 displays the findings for this category in the data.

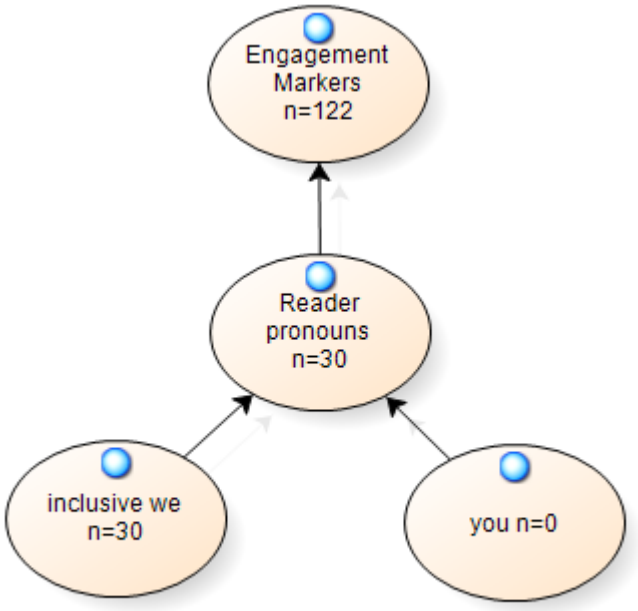

Figure 20: Reader Pronouns in ERAs by TAWs

Figure 20 shows that the TAWs used the inclusive *we,* with no occurrences for the pronoun *you* found in the data. It appeared thirty times for every 100,000 words in the research articles. Hyland (2001a) explains this avoidance of *you* by stating that writers generally tend to avoid the strong bound with their audience that *you* implies, and therefore try to minimize any implication that the writer and reader are not closely-related, considering the same disciplinary community. By using the inclusive *we*, the writer may imply to the readers that they can act together and that they, the readers, are as important as the writer. This finding matches the finding of Hyland (2001a). In example 40, the writer engages the readers with the text by asking them to examine Table 1, which can be seen as a polite way of leading the readers.

(40) Before interpreting the pausing results of the speech group, a descriptive analysis of the speeches is presented in Table 1. From this table, *we* can observe how much time each participant spent in her speech, the number of occurrences of to-infinitives and the number of to-infinitives in each participant's speech.

(Bada and Genç, 2008: 1943)

(41) By drawing attention to the same problem and underlying the claim that something is wrong with how cohesion is viewed, Witte & Faigley (1981) underscore that cohesion can be better taught if it is better understood. They also stress the fact that not adequate training is given in most college writing classes. Given this lack of adequate training on this issue and its benefits, *we* do have some studies with promising results.

(Kafes, 2012:90)

Instead of addressing the reader separately, by using the *inclusive we* the writer emphasizes the idea that the reader and the writer are bound (Hyland, 2001). Hyland (2001; 559) also states that the inclusive *we* is used to "express peer solidarity and membership of a disciplinary in-group which is, in this example, readers who are interested in teaching a foreign language.'' An example (41) from the data of the present study can be found above.

Another category that was identified in the ERAs by TAWs was the use of personal asides. These had six occurrences for every 100,000 words. Writers use personal asides when they want to strengthen the dialogue between themselves and

readers; they interrupt texts and state their ideas about the situation stated in the text. They do this to show readers that they are interacting and want to build a relationship "that is not dependent on an assessment of what needs to be made explicit to elaborate a position" (Hyland, 2001). Two examples are displayed below:

(42) *It is true to point out* that to achieve this aim, trainers need to receive a 'trainer-training programme' in order to update their knowledge and increase their awareness of what innovation represents for practising teachers.

(Kırgöz, 2008: 1861)

(43) Some participants also shared that they would not feel safe and secure, especially in the eastern and south-eastern regions, due to the terrorism problem Turkey has faced for many years. *It is true that* one of the most serious problems in these regions is the terrorist activity menacing society and social life there.

(Kızılaslan, 2012: 249)

As it can be seen from the examples above, the writers needed to express their feelings on the topic, and they did this by interrupting the text and using the pattern *it is true that*. In this way, they tried to create a connection and interaction with their readers.

Finally, the sub-category for engagement markers used least was *questions.* When writers need to engage their readers with what they are writing about, they can ask them direct questions. By doing so, they draw readers' attention to what they are about to state (Hyland, 2001). Unfortunately, questions only occurred once for every 100,000 words in the English data.

To summarize the findings related to English research articles written by Turkish academic writers, it can be stated that the TAWs used all of the interactional metadiscourse markers defined by Hyland and Tse (2004), although the use of these markers in terms of the sub-categories shows differences in their occurrence. Hedges have the highest frequency, followed by engagements markers and self-mentions, while boosters were the least-used markers in the data.

The analysis results for the third sub-question of the first research question will be presented below.

What kind of interactional metadiscourse markers are used in English research articles on the teaching of a foreign language written by AAWs?

Fifty English research articles written by American academic writers were analyzed in terms of the use of interactional metadiscourse markers according to the taxonomy Hyland and Tse (2004) suggest. Figure 21 displays the findings for this research question.

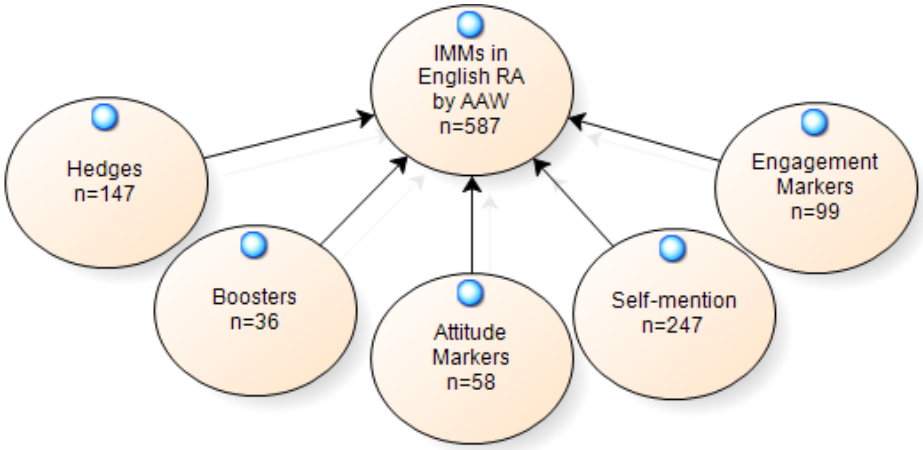

Figure 21: Interactional Metadiscourse Markers in ERAs by AAWs

The AAWs used interactional metadiscourse markers from all of the categories with the total number of occurrences for the markers found to be 587 for every 100,000 words in the data. Figure 21 shows that the most common interactional metadiscourse markerused by the AAWs was self-mention, with 247 occurrences for every 100,000 words. The second most-frequent marker was hedges, followed by engagement markers, attitude markers and lastly, boosters. All the categories and the findings relating to them will be presented in turn below.

Hedges

English research articles were analyzed for the use of hedges by the AAWs. Hedging can be achieved by using epistemic modal verbs, verbs, adjectives and adverbs. The data was analyzed according to these structures. Figure 22 presents the findings related to the use of hedging on the part of the AAWs.

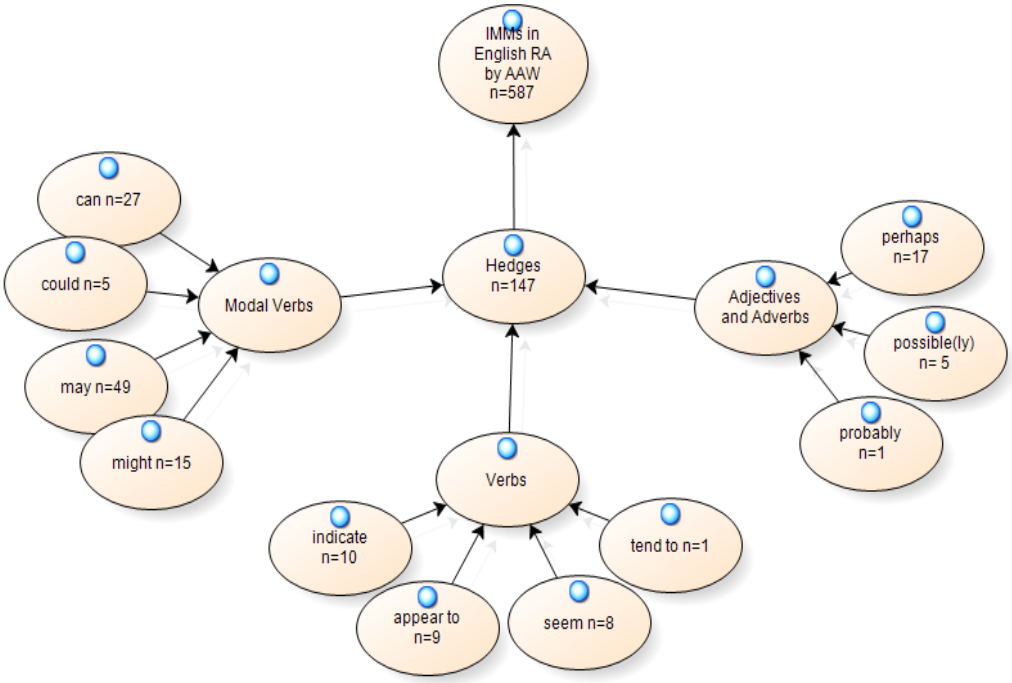

Figure 22: Hedges in ERAs by AAWs

As Figure 21 shows, the most frequent hedging was the use of epistemic modality. Next, the AAWs tended to use epistemic verbs and the least frequent occurrences were the use of adjectives and adverbs.

Considering the use of modal verbs, data analysis results show that the AAWs tended to use *may* the most frequently compared to other modal verbs. It has 49 occurrences in 100,000 words in the collected data. The second most frequent modal verb found in the English data is *can*. The least is *could* with only 5 occurrences.

Example (44) displays a sample from the data showing the use of *may* for hedging. As can be seen, first, the writers make an assumption based on the results of their data analysis and they try to show a connection between their data and their hypothesis. They then use *may* to show that what they say facilitates a discussion with readers about how the writers can benefit from feedback they receive, and when reviewers can improve themselves more compared to writers. By using *may* and *it is possible that*, writers tend to express a non-assertive stance in this part of the article.

(44) The results of this study *may* also be explained in light of sociocultural theory discussed above. *It is possible that* reviewers of peer papers improve more than the revisers because the reviewers are likely determine the level at which the peer review occurs. Specifically, reviewers often determine the aspects of

> writing that the peer review will focus on and most likely provide instruction for the writer that falls within their (the reviewer's) ZPD. If the writer's own ZPD is not at the level of the reviewer, he or she *may* not get feedback that scaffolds learning and therefore *may* not benefit as much from the review (Nassaji&Swain, 2000). Thus reviewers *may* be able to learn more from the feedback they give than writers can learn from the feedback they receive.
>
> (Lundstorm and Baker, 2009:38)

Epistemic verbs are the second most frequently used to mark hedging in the English research articles. As Figure 22 shows, the verbs *indicate, appear,* and *seem* are the verbs most-commonly used to express hedging in the English data by the AAWs. By using these verbs, the writers show the uncertainty of their propositions or tend to open discussions with the readers or colleagues in the same field of research. In example 45, Robert and Cimasko try to make an assumption based on comments they received from the participants of their study. Using the verbs *indicate*and *appear to*, they show that this finding was not explicitly stated by the participants, but that it is an assumption made considering the participants' comments.

> (45) Other comments *indicate* that this writing sample hit another sensitive nerve for professors, an issue that *appears to be* more related to their experience with students who are native writers. These comments generally came from older professors, presumably those who have had the longest experience in teaching both NSs and NNSs.
>
> (Robert and Cimasko, 2008: 136)

The final category for hedging is the use of adjectives and adverbs. The most frequents were,*probably, possible(ly)* and *perhaps*.

> (46) *Perhaps* the best example of equivalence research is Reid's (1992) study in which she examines differences in essays written in English by native speakers of Arabic, Chinese, Spanish, and English in order to determine if differences in the production of cohesive devices exist between and among the language backgrounds.
>
> (Crossley and McNamara, 2011:273)

In this example, as Hyland (1998) suggests, writers do not use hedges just to soften the interpersonal imposition, but also as a means for the likely negative outcomes

of overstatement or a claim. In example 46, it can be understood that the writers put forward their attitude towards the proposition they make. They think that the best study to explain equivalent research is Reid's (1992); however, they attempt to soften this claim by using *perhaps*.

Overall, it can be said that the AAWs used hedging in their research articles regarding the teaching of English and most of the time they made use of epistemic modality and verbs, rather than using of adjectives or adverbs. Next, the findings for boosters in the English research articles by the AAWs will be presented.

Boosters

Boosters are used to display a commitment and confidence on the writer's part in his or her statement (Hyland, 1998). The findings of this study reveal that the AAWs used boosters in writing their research articles about the teaching of writing, though not as frequently as they used other metadiscourse markers for interaction between themselves and readers. The most common items used as boosters are shown in Figure 23.

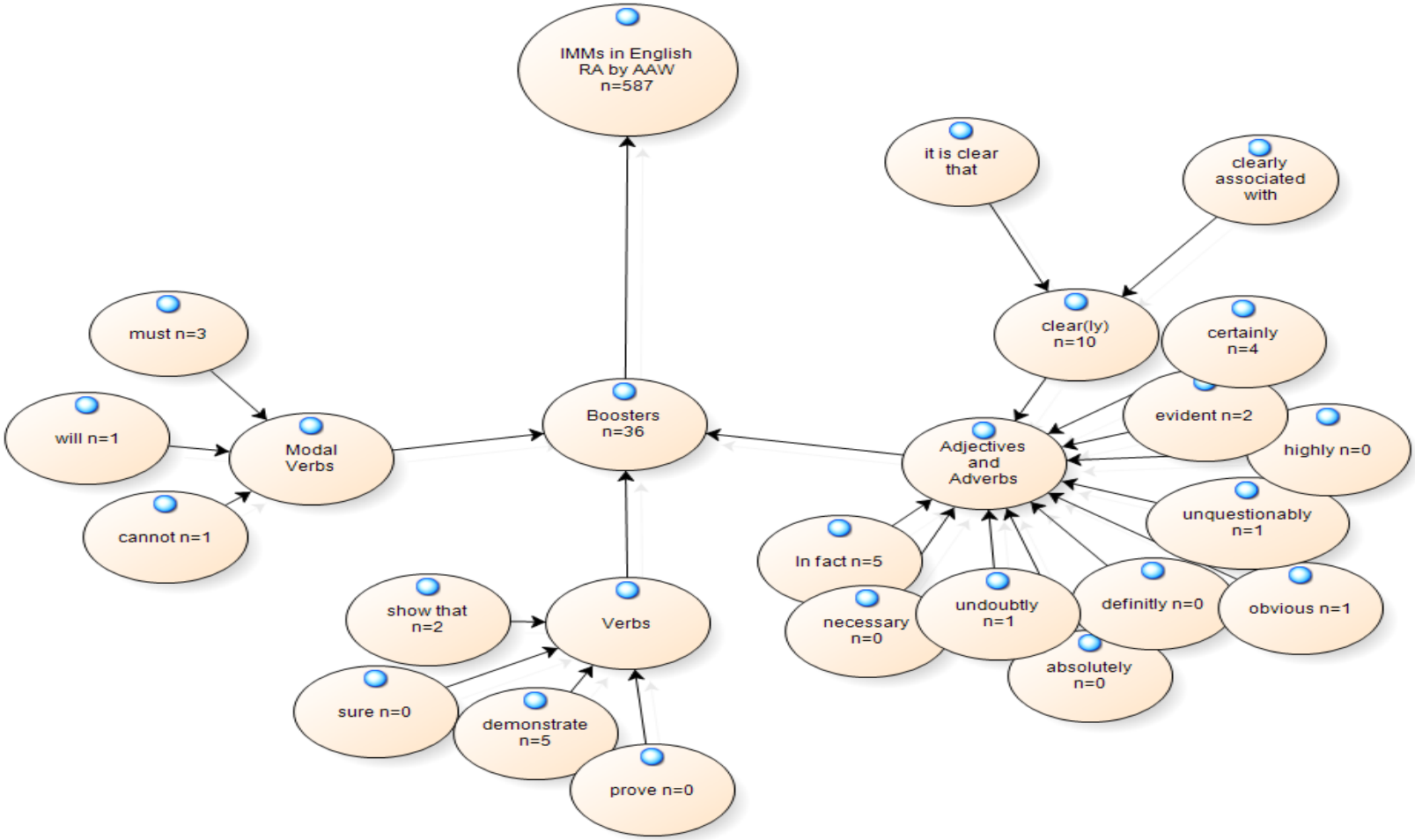

Figure 23: Boosters in ERAs by AAWs

Figure 23 shows that the AAWs preferred to use adjectives and adverbs more frequently compared to the use of modal verbs and verbs. To start with the use of modal verbs, it can be concluded that the AAWs tended to use the modal verb *must* as a booster, although it is usually used to express obligation and necessity (Coates, 1993; Collins, 1991). However, it can also be used as an epistemic modal which expresses knowledge and belief about certainty, probability and logical possibility (Bublitz, 1992; Lyons, 1977) and in this data *must* was used to show certainty about a statement made. Example 47 shows certainty about the belief of the author on how to approach teachers' knowledge. Here the writer expresses that it is necessary to consider the teachers' knowledge as scaffolding and makes the role of the teacher clearer by the side of the writer.

(47) The lack of knowledge and the cultural mismatch between teachers and their ethnically diverse students often lead to the latter's underperformance, a phenomenon well documented in research (Phuntsog, 1999). For the trend to be reversed, teachers' cultural knowledge *must be seen* as a permanent feature of instruction, necessary for building meaningfulness and sense-making through effective scaffolding.

(Pawan, 2008:1460)

An example for *will* can be given too, since it is used to show certainty in the collected data as well. In this example, although *will* seems to be used for prediction about the future of the project, the writer, in fact, expresses his certainty about the project's success based on the findings of the research he conducted.

(48) Much has been gleaned from the literature review and the Perkins Project, which *will* serve to improve future initiatives for the retention and completion of nursing students who are linguistically challenged in English.

(Campell, 2008: 103)

Another way to express boosting is the use of epistemic verbs such as *show* and *demonstrate* which are found to be the most frequently used markers compared to *sure* and *prove.* The reason for this finding may be the attitude of the writers to the statements they make. It may be that they do not want to show a high degree of certainty by using *sure* and*prove* which are strong verbs unlike*show and demonstrate.*

(49) Also, the present data *cannot truly demonstrate* whether or not respondents actually possess the levels of knowledge and classroom implementation they are claiming. This data in reality represents what FL instructors think they know about each T/H/A, as well as the extent to which they believe that each T/H/A informs their teaching.

(Hubert and Bonzo, 2010: 525)

It can be seen from Example 49 that the writers express a high certainty about the statement they make by using *cannot, truly,* and *demonstrate.* They show that they are quite sure about the fact that the data they collected cannot be used for their claim.

Finally, the AAWs used a variety of adjectives and adverbs for boosting. As Figure 23 shows, the most frequent occurrence belongs to *clear* and toits related patterns, such as *it is clear that, and clearly associated with.* Examples are presented below:

(50) In an assessment of the roles that language brokering plays in the preceding examples, *it is clear* that L1 use changes expectations for both the content and the 'doing' of in-school writing, highlighting the fact that writing is shaped by classroom interaction.

(Kibler, 2010: 132)

(51) There is *clear evidence* here that teachers' practices reflected their beliefs that learning is enhanced when learners are engaged cognitively, when their expectations are met, and when order, control and flow of the lesson are maintained.

(Phipps and Borg, 2009:387)

Figure 23 shows the findings related to the use of boosters in the ERAs by AAWs. It indicates that the AAWs mostly preferred to use adjectives and adverbs followed by epistemic verbs for boosting. They used them to show how certain they were about the propositions they were making. The findings relating to the use of attitude markers in the ERAs by AAWs will be presented next.

Attitude Markers

Writers use attitude markers to express their perspectives or evaluations of the propositional content. As Prechts (2003) suggests, attitude markers deliver a message and state the writer's point of view. Attitude markers were analyzed in 50 English research articles written by the AAWs. The findings are presented in Figure 24.

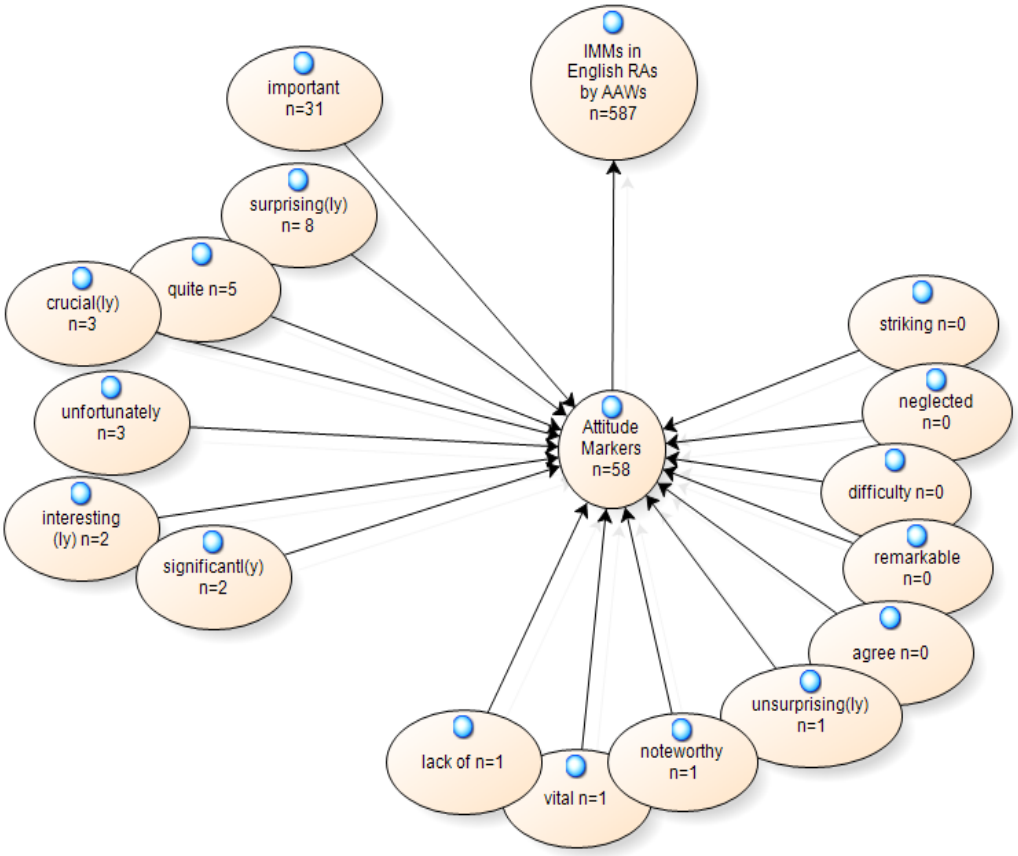

Figure 24: Attitude Markers in ERAs by AAWs

As the figure shows, the AAWs used *important* 31 times for every 100,000 words in the data. This adjective is the most commonly-used in the collected data. This is followed by *surprisingly,* and *quite.* To the left of the figure, the markers that are used the least can be seen so, occurring only once or twice in the data. It can be concluded that the AAWs preferred to use *important* rather than its synonyms, such as *significant, vital, remarkable and noteworthy.* The reason for this can be the extensive

use of the adjective *important* in daily life and it being far more common than its synonyms. Some examples are presented below:

(52) This study represents an *important* first step in better understanding emotions and emotion regulation, and suggests several new avenues for further research.

(Bown and White, 2010: 441)

(53) This work raises intriguing possibilities for expanding work on depth of vocabulary knowledge. In recent years, researchers have paid increasing attention to the notion of vocabulary depth. It is *important* because it has been shown to make a unique contribution (i.e. beyond vocabulary breadth) in predicting reading comprehension (Qian 1999).

(Corrigan, 2007:237)

(54) The most *significant* recent developments in this direction have been those of Coxhead (2000). Her development of the AWL has had a significant impact on EAP teaching and testing because it collects words that have high currency in academic discourse by applying specific criteria of frequency and range of distribution in a 3.5-million-word corpus of academic writing representing a broad spectrum of disciplines.

(Simpson-Vlach and Ellis, 2010: 489)

Moreover, from the figure, it can be observed that the AAWs tended to use the adjective/adverb and negative forms of *surprising* such as *surprising, surprisingly,* and *unsurprisingly*. Examples 55, 56, and 57 show the use of *surprising* from the data.

(55) …Because of these specialized conditions in implementing school programs and policies for ELs, *it is not surprising* to learn that primary language instruction has significantly diminished in Californian schools.

(Olson, 2007:122)

(56) …Previous studies of error evaluation have tried to establish hierarchies of error types, often coming to conflicting conclusions about which error types belong where on the hierarchy. *Thisis not surprising*, considering the wide array of tasks and the different performance contexts (written vs oral) in which these studies have been carried out…

(Roberts and Cimasko, 2008: 134)

(57) Turning to Research Question 3, there were *surprisingly* few differences in the borrowing by students with different levels of language ability, at least as judged by the language scores on their essays…

(Weigle and Parker, 2012:129)

As can be observed, the pattern *it is not surprising* occurred in the data, being preferred more than the use of *unsurprisingly*. Perhaps the reason for this is that the patterns in Example 55 and 56 seem more formal and are therefore preferred in research articles.

The findings related to attitude markers may indicate that the AAWs had a high tendency to engage with their readers using attitude markers, using a variety of adjectives, adverbs and related patterns.

Self-mention

Writers prefer to make their presence explicit in their texts to draw their readers' attention and to include them in the discourse (Hyland, 2005). Self-mention pronouns were analyzed in the collected data and Figure 25 summarizes the findings.

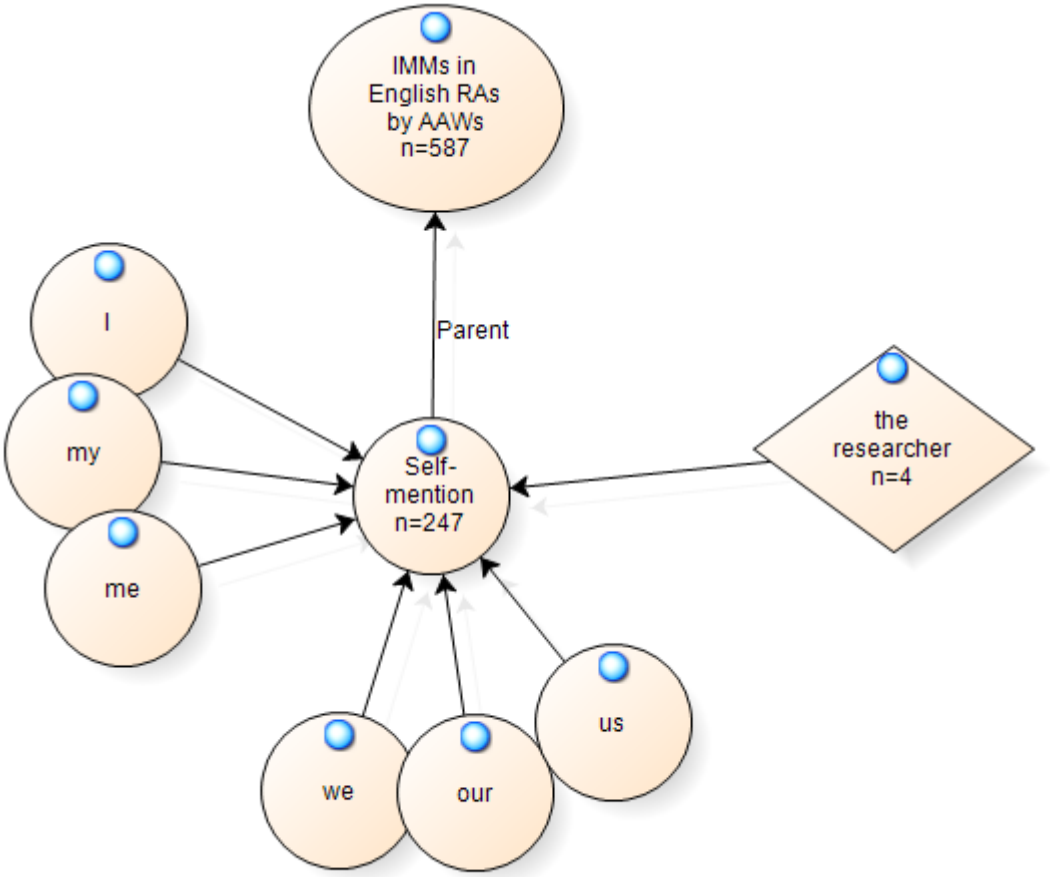

Figure 25: Self-mention in ERAs by AAWs

As can be seen, there are 247 occurrences of self-mention for every 100,000 words and four occurrences of *the researcher*. This may mean that the AAWs preferred to use self-mention pronouns more than *the researcher* because they wanted to more explicitly state their presence in their texts and show force with their statements. As Ivanic (1998) suggests, first person pronouns are the most powerful expression of self-representation. As in example 58, the writers show what attitude they have towards the proposition and what they believe.

(58) *We* believe the quantitative results that demonstrated that learners increased their beliefs in the importance of learner independence are related to their dissatisfaction with how much they had learned in study abroad thus far and their 'shock' in finding that communication with Americans did not come as naturally as they had expected.

(Amuzie and Winke, 2009:375)

Besides announcing the writer to the readers, the use of first person pronouns enables writers to attract readers' attention to the proposition content and to show that the source is the writer him/herself (Hyland, 2002). Example (59) displays an example from the data:

(59) In addition to individual BFI social factors, *we* also felt it was important to establish which cognitive factors play a role in hybrid-learning success. For this reason, *we* employed the SILS measure as the appropriate estimate for the level of verbal and abstract intelligence of each participant. SILS, a test administered in English, consists of two main subsets: vocabulary and abstraction.

(Arispe and Blake, 2012:454)

However, the use of *the researcher* may not show such strong power as first person pronouns do. By using *the researcher,* it seems that the writers want more attention to what is being stated rather than to who is stating it. They want to emphasize that the act is delivered by them, but what matters is the proposition itself. Perhaps, that is why the term is commonly-used in methodology sections of research articles. For this use of *the researcher,* an example is presented below:

(60) Andrea was asked to write a 3000-word paper as if it were a term assignment for a credit-bearing course. She was told that both *the researcher* and one of her master's course teachers would read the paper and assign a grade to it and return it to her.

(Stapleton, 2010: 298)

In summary, the AAWs tended to frequently use first person pronouns, showing that they intended to make their presence explicit in their texts and used self-mention markers more than other interactional discourse markers. They preferred to engage their readers by focusing their attention on themselves rather than the content. In the following part of this study, findings related to engagement markers will be discussed.

Engagement Markers

Writers aim to attract their readers' attention and try to construct an interaction between them. For this, as so far discussed, they use interactional discourse markers and one group is engagement markers according to Hyland and Tse's taxonomy (2004). Fifty English research articles were analyzed in terms of what kind of engagement markers the AAWs used, with the findings being summarized in Figure 26.

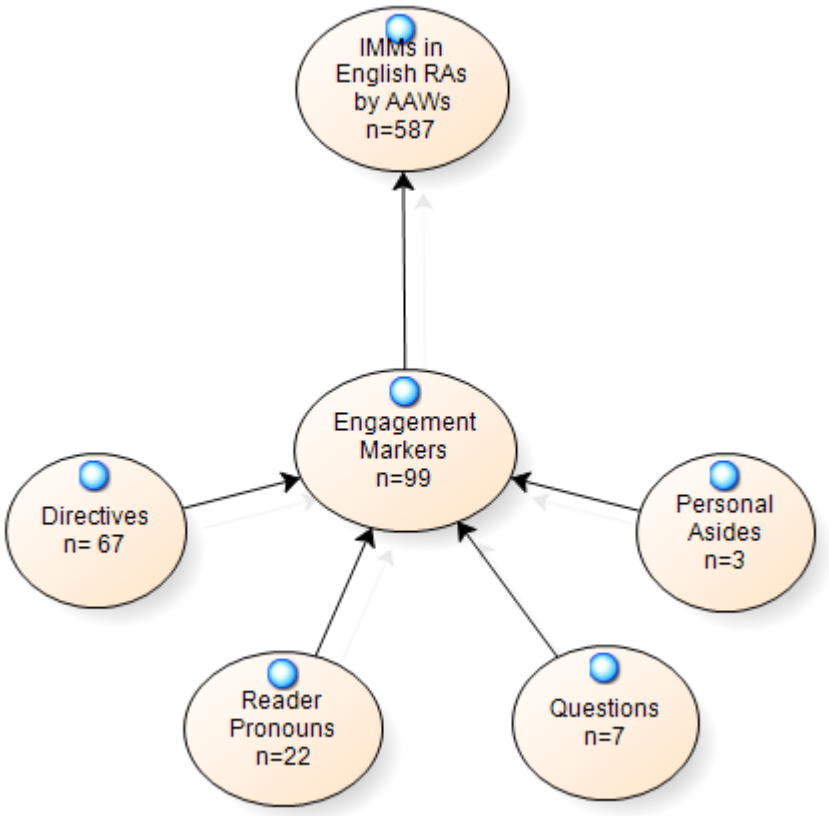

Figure 26: Engagement Markers in ERAs by AAWs

Readers can be engaged with a written text using directives, reader pronouns, direct questions and personal asides. The collected data of the AAWs reveals that AAWs use directives the most. These had 67 occurrences for every 100,000 words, and the second marker they use the most is reader pronouns. Furthermore, direct questions to readers had seven occurrences and personal asides only three. This shows that the AAWs used all the markers to engage their readers although the frequency varies. The findings relating to each group will be discussed separately below.

To begin with, it is obvious that the AAWs preferred to use directives the most in the process of engaging their readers to the text. Directives are used to lead and direct

readers both within and outside the text. They can be expressed by imperative forms of verbs, modal verbs, and be+ adjective as Hyland and Tse (2004) put forward. However, while analyzing the data, it was found that passive forms of the verbs can function as directives too, but in a more face saving manner; in other words, more implied and polite, so the passive form of verbs was included in this study. Figure 27 shows the findings related to the use of directives bythe AAWs.

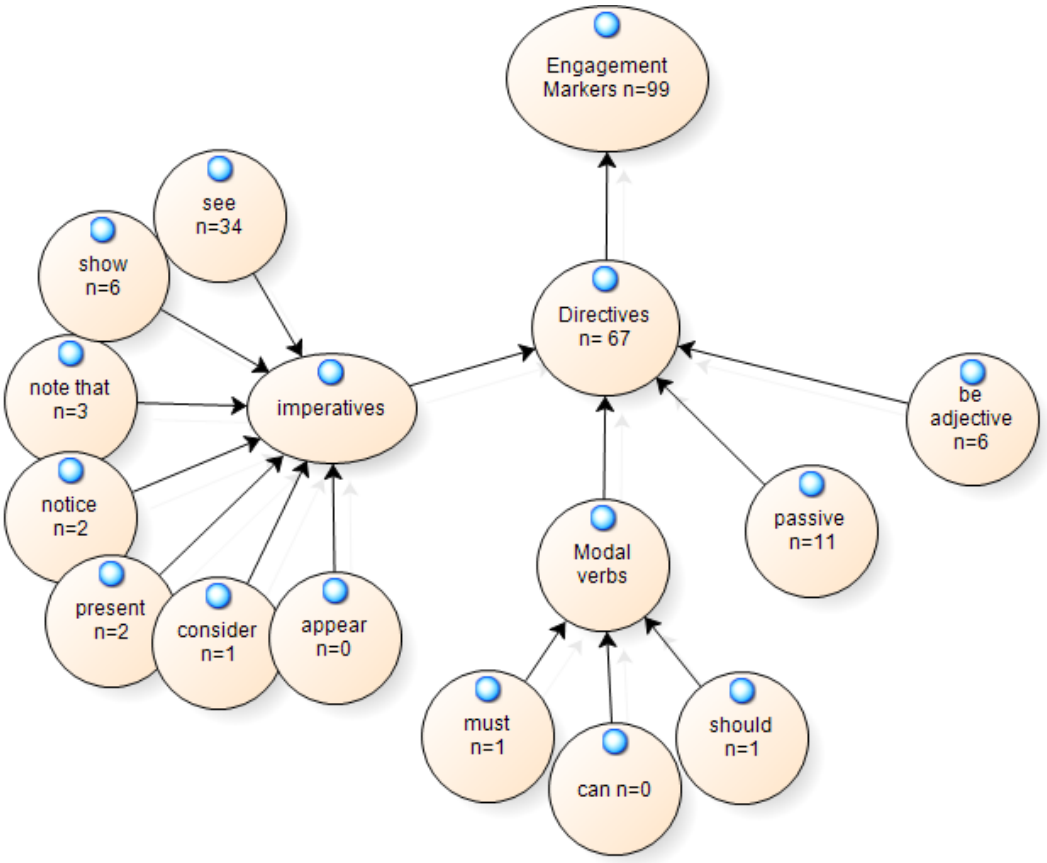

Figure 27: Directives in ERAs by AAWs

The imperative form of verbs was the most frequently used of the directives in the data. Next, the passive form of verbs was used eleven times for every 100,000 words, followed by be+adjective with six occurrences, with the least being the use of modal verbs.

The reason why the imperative form was used the most is the use of the verb *see*. This verb is usually used to direct readers within and outside the text. For example, to direct readers to related sources, tables, appendices, the verb *see* was used. This use is

the most common and the most effective way to direct readers in the text. An example is provided below:

(61) …Fig. 1 shows a responding and initiating context. (*See* Appendix for relevant test items.)

(Bardovi-Harlig and Vellenga, 2012: 80)

In some cases, the writers needed to attract the attention of their readers to the proposition being stated and, when this was the case, they preferred to use the verbs: *note*, *notice*, and *consider*. Examples are presented below:

(62) ...*Note that* in this study, by comments we refer to all sorts of teacher commentary on students' papers, not distinguishing teacher evaluative statements or questions from the kinds of error correction that L2 teachers often provide (Ferris, 1995; Truscott, 1996).

(Lee and Schalert, 2008: 166)

(63) The two explanations written by the participant are as follows: 1) "Guys used guns to scare the clerks," 2) "Some guys used guns to force people (to) go out." *Notice how* 'out' has been explicitly referenced in the second response…

(White, 2012: 429)

The second most frequent use was of the passive form of verbs. The reason for this can be the face saving feature of the passive compared to the use of the imperative, which acts as a command for the reader. This is because the writer does not explicitly direct the reader, but directs in an implied way, as in the example below:

(64) The descriptive statistics for the mixed model ANOVA *are displayed* in Table 3, the ANOVA summary table *is presented* in Table 4, and plots with juxtaposed ratios from the IEP study and the current study are included in Fig. 1…

(Evans, Hartshorn and Strong-Krause, 2011:235)

The *be+adjective* form had six occurrences in the collected data for every 100,000 words. This pattern can again be used to attract the readers' attention to what is to be stated and what the writer wants the readers to do. In addition, using this pattern, the writers also expresses an attitude toward their propositions as in Example 65.

(65) …In short, while empirical findings can help to illuminate the question of English for general or specific academic purposes, *it is important to remember* that the dispute cannot be solved on empirical grounds alone.

(Durrant and Mathews-Aydınlı, 2011: 71)

Finally, the use of modal verbs to directreaders occurredleast in the data. However, the writers mostly preferred to use modal verbs with the passive verbs rather than soley using the passive voice of the verbs. In this way, they may seem to havedirected their readers in a more polite way, as in the example below (66):

(66) Though this study provides evidence that WCF can improve writing accuracy, the reader should note its limitations and the ways in which future research might be enhanced…

(Evans, Hartshorn and Strong-Krause, 2011: 237)

The second most frequent use of engagement markers was reader pronouns in the data. These occurred 22 times for every 100,000 words. The findings relating to the use of reader pronouns in the ERAs by the AAWs are presented in Figure 28. As the figures show, the AAWs did not use the pronoun *you* to address their readers, but rather tended to include *we* to state their statement.

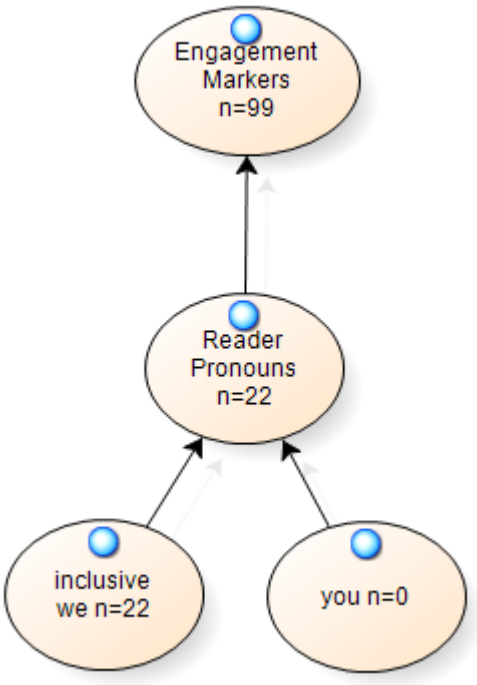

Figure 28: Reader Pronouns in ERAs by AAWs

The figure shows that the *inclusive we* is the only marker used as a reader pronoun. This indicates that the writers accepted their readers on their part, showing that they were equal in sharing the same background or belief.

(67) …Through such an enquiry we can better understand how affective experiences shape the ways in which students construct and engage with the learning context. A second implication is that while our work has drawn on social cognitive theory and the notion of the intelligent processing of emotion, these frameworks only provide insight into some pieces of the broader theoretical puzzle that is a major challenge to *our* field namely, how *we* can explore and understand more completely the relationship between emotion, motivation and cognition in particular learning contexts. It is our position that for this *we* need theories that do not present the individual and the context as discrete entities: rather, *we* see the individual and the context as one system and emotions as integral to the interpersonal processes that create the learning context moment by moment.

(Bown and White, 2010: 441)

As example 67 reveals, the writers use the pronoun *we* as both self-mention and as a reader pronoun. The underlined pronouns are the possessive pronouns for *we* and show the presence of the writers for what they did for the study and what they are thinking as they put forward their position in the second use of *we*. Nonetheless, those in italic form are examples of the *inclusive we*. The writers address their readers assuming that they and the readers are interested in the same field mentioned in the research article and that they have a common share.

Next, asking direct questions to readers is another way in which to engage them with the text. By doing so, the writer pulls the attention of the readers to what is to be mentioned. They may also act as a hook for readers, so that they continue to read the research article. In this study, direct questions occurred seven times for every 100,000 words in the ERAs by the AAWs. An example is shown on the next page:

(68) Collectively, what do these results tell us, and what implications for instruction arise from them? It appears to us that teachers must be cautious about assuming too much with respect to students' knowledge of English punctuation acquired in their secondary school instruction...

(Hirvela, Nussbaum and Pierson 2012:20)

Example 68 shows that the writer asks a question to the reader, surely without expecting an answer, but intending to include them in the text. Also, the question asked here functions as a smooth transition to the discussion and implications of the results.

The last engagement marker to be mentioned is personal asides which are used by writers to interrupt a statement and to show their views or comments on the proposition. These occurred three times in the ERAs written by the AAWs and were the least frequently used engagement marker in this study. In examples 69 and 70, it can be observed that the writers interrupt what they are saying and state their views on the statements.

(69) …Learners' failure to interact with native speakers while studying abroad is often discouraging to the learners, and contradicts their expectations (Collentine and Freed, 2004), which *we believe* in turn affects their beliefs about language learning, either positively or negatively, depending on the learner him or herself…

(Amuzie and Winke, 2009: 375)

(70) In this study, therefore, we attended to core and peripheral beliefs, examined the influence of language teachers' contexts on their work and elicited beliefs through the analysis of observed teaching; in doing so, *we believe*, we were able to investigate more deeply and in more realistic ways the relationship between language teachers' beliefs and practices. From now on, we use the term teachers to refer to language teachers.

(Phipps and Borg, 2009: 387)

In summary, the findings related to the use of interactional metadiscourse markers in English research articles written by American academic writers reveal that the AAWs made use of all interactional metadiscourse markers in their articles, although the frequency of these markers varied. The most frequently-used interactional metadiscourse marker by the AAWs in the data was first person pronouns, used to show

the presence of the writer. Moreover, hedges were the second most frequently-used and engagement markers followed the hedges in terms of frequency. The least occurring were boosters, which are used to show a certain commitment to the proposition on the side of the writer. The reason for the infrequent use of boosters can be the nature of the genre. Since the writers describe how they conduct a study and report the findings followed by a discussion, they may not feel confident stating their propositions with such certainty. This may also explain why self-mention was so frequent in reporting what was done, how it was done and its interpretation.

This part of the study presented the findingsin answer to the first research question. The following part will attempt to answer research question two.

The use of Interactional Metadiscourse Markers of TAWs and AAWs

Firstly, an overall view of the findings related to the use of interactional metadiscourse markers will be presented in terms of Turkish academic writers and American academic writers. Figure 29 presents the overall findings for research question two, which compares the use of metadiscourse markers of the TAWs and AAWs.

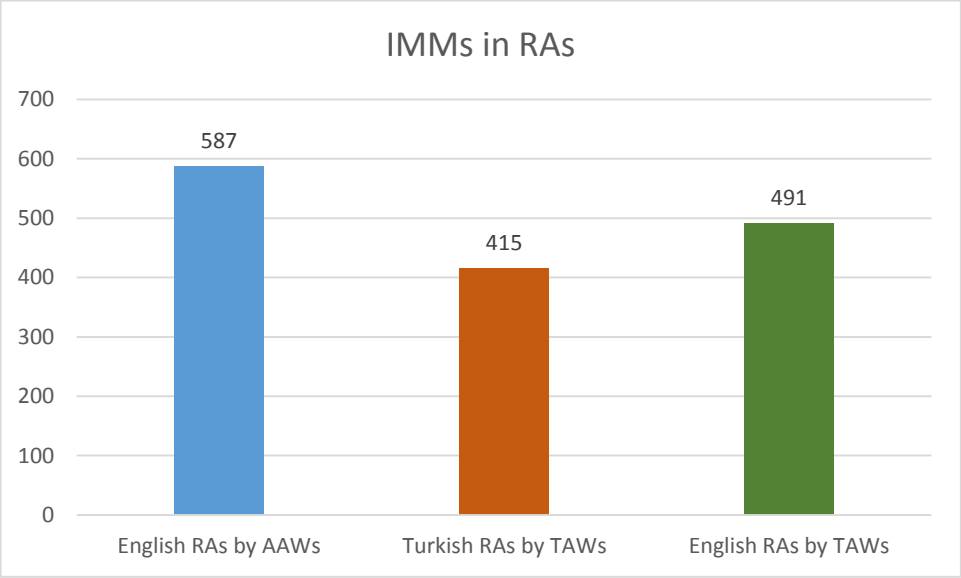

Figure 29: Interactional Metadiscourse Markers

As presented in Figure 29, the AAWs made more use of interactional metadiscourse markers compared to the TAWs. The occurrence per 100,000 words is 587 for the AAWs, 491 for the TAWs when writing in English and 415 for Turkish research articles written by the TAWs. This shows that all of the writers aimed to interact

with their readers while writing research articles on the teaching of English, although the frequency of the occurrences varies. It can be realized that the TAWs tended to give importance to interaction with their readers more when they wrote in English compared to articles written in Turkish. Detailed findings relating to the use of interactional metadiscourse markers in English, and Turkish research articles considering AAWs and TAWs, will be presented below.

Is there any significant difference in the use of interactional metadiscourse markers in English research articles written by AAWs and Turkish research articles on the teaching of a foreign language?

The use of interactional metadiscourse markers (IMM) in Turkish and English research articles (RAs) by AAWs shows certain differences. As Figure 30 shows, the AAWs used more interactional markers compared to the TAWs writing Turkish research articles.

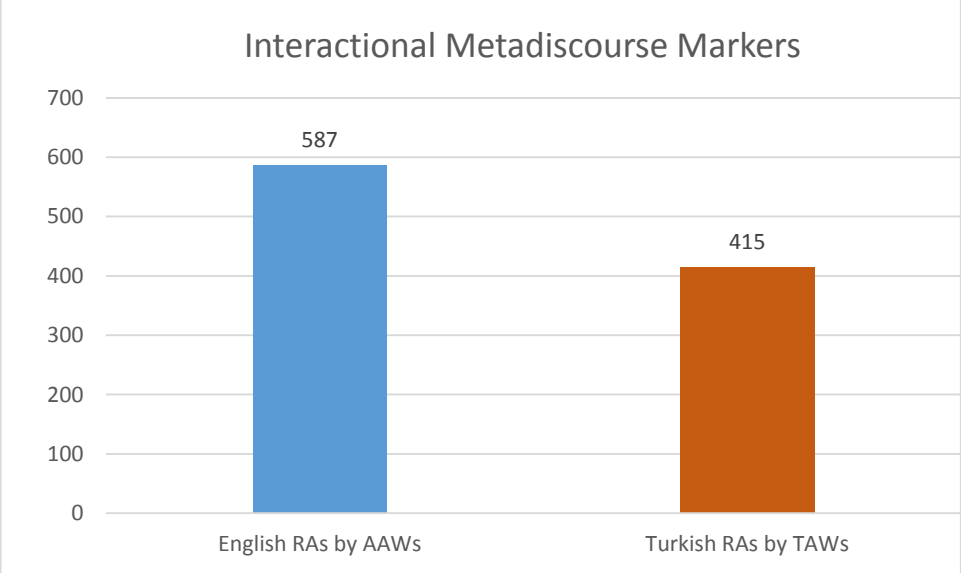

Figure 30: Use of Interactional Metadiscourse Markers by TAWs and AAWs

While the AAWs had 587 occurrences of interactional metadiscourse markers in their English research articles, the TAWs had 415 occurrences per 100,000 words. This may show that the AAWs gave more importance to engaging their readers in their articles and tried to facilitate discussion with them. A binomial test was run to find whether this difference between these two groups shows anysignificant difference.These statistics enable us to compare sample ratios of two variables in a 0.05

significant level (z). The result of the binomial test for these two groups is shown in Table 9. The two-way critical test value for a 0.05 significant level is 1.96.

Table 9: Binomial test result for TRAs by TAWs and ERAs by AAWs

	Frequency	qi	z
Turkish RA By TAWs	415	0.00415	-5.44775
English RA by AAWs	587	0.00587	

The result of the binomial test shows that there is a significant difference between the ratios of the Turkish RAs by TAWs and the English RAs by AAWs in the use of interactional metadiscourse markers. ($z=-5.44$, $p<0.05$). The study of Zarei (2011) shows that Persian speakers used less metadiscourse markers compared to native speakers of English, and the interpretation of this findingwas the writer's choice to place more importance on the comprehensibility of the text rather than on building a relationship with the readers. However, it can be observed from Figure 30 that the TAWs tended to build strong interaction with their readers although not frequently as the AAWs. These findings show that the use of metadiscourse markers may differ from culture to culture in terms of academic writing conventions. An analysis was conducted to discover whether there were differences in the categories of IMM used between the AAWs and the TAWs. The findings are presented below.

Hedges

The English and Turkish data was analyzed in terms of hedging. Figure 31 shows the number of occurrences of hedging in the Turkish research articles and the English research articles by AAWs.

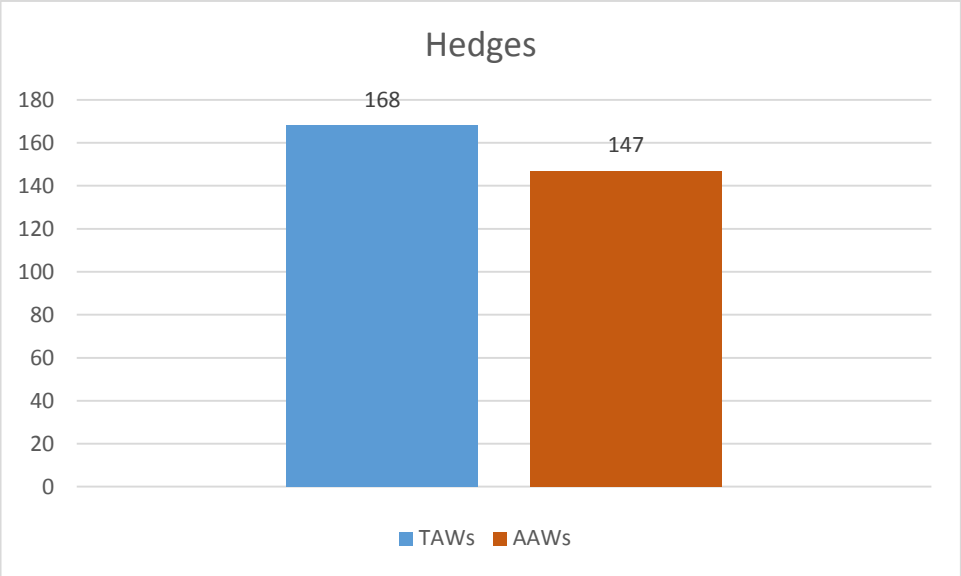

Figure 31: Number of Occurrences of Hedging

As Figure 31 presents, although the AAWs used more IMMs in their articles, the TAWs used hedging more often. The AAWs used hedging 147 times, whereas the TAWs used hedging 174 times per 100,000 words. Hedging is used to express to the reader that the writer does not show any great certainty concerning the proposition trying instead to facilitate discussion. However, for the TAWs, it can also be used for a more modest approach in reporting their study based on cultural characteristics.

Since there is a slight difference between the occurrences of hedges in the two data sets, a statistical binomial test was run to discover whether or not this difference was significant. The result of the binomial test for these two groups is shown in Table 9.

Table 10: Binomial test result for TRAs by TAWs and ERAs by AAWs for Hedges

	Frequency	qi	z
Turkish RA by TAWs	168	0.00168	-1.18415
English RA by AAWs	147	0.00147	

Table 9 displays the results of the test as z= -1.18415. The null hypothesis is accepted and there is no significant difference in the use of hegdes in the TRAs by TAWs and the ERAs by AAWs ($z=-1.18415$, $p<0.05$).

When the devices used for hedging are analyzed for both writer groups, it can be seen that the most frequent marker used by both sets of writers is *may* and *can* for the AAWs and the suffix *–AbIl-Ir*, which can be translated into English as *can* and *may* (Figure 32). This may show that both sets of writers preferred to mark hedging by using modality in their texts instead of epistemic verbs and adverbs.

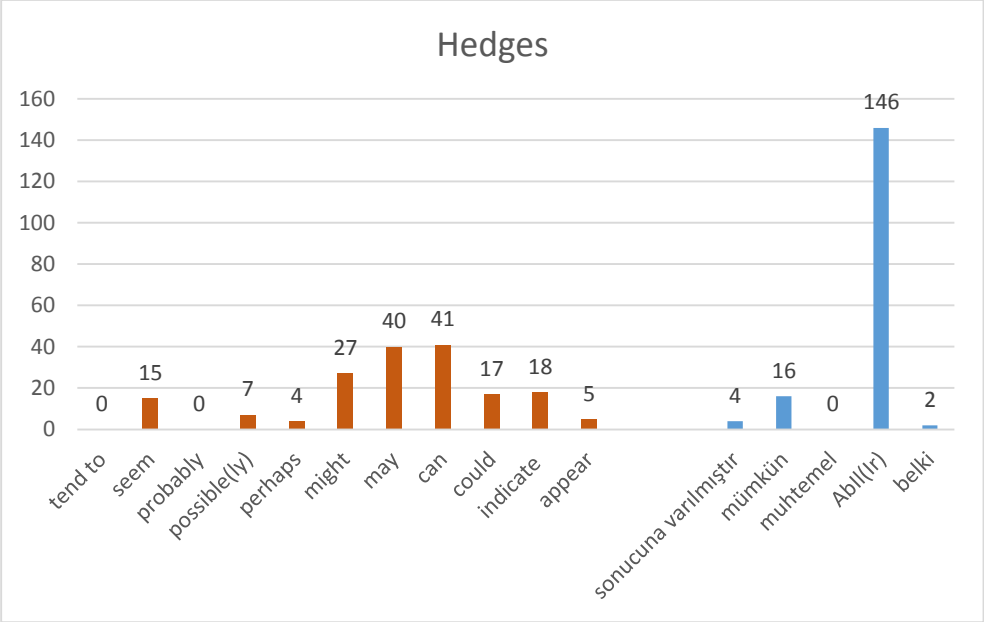

Figure 32: Markers used for Hedging by AAWs and TAWs

Another finding is the use of *possible(ly)* and *mümkün* (which means possible in Turkish). Although both sets of writers used this adverb in their texts, it had only five occurrences in English and sixteen in the Turkish research articles per 100,000 words. This may show that the AAWs preferred to use epistemic verbs rather than adverbs in their research artiles, whereas the TAWs tended to mark hedging by the use of adverbs.

As Figure 32 shows, while the AAWs used more variety in marking hedging, it is less so for the TAWs when writing in Turkish. The reason for this can be the language itself, since it is an agglutinating language. While English has the epistemic modal verbs *may, can, might,* and *could*, in Turkish *–AbIl-Ir* can be used to express hedging by replacing all of these modal verbs.

Boosters

Devices that express boosting were analyzed in the English research articles by the AAWs and the Turkish research articles by the TAWs. The findings show that the AAWs used twice as many boosters compared to the TAWs in their Turkish articles.

Figure 33 shows that the AAWs used boosting 36 times in their articles, whereas the TAWs used 15 for every 100,000 words.

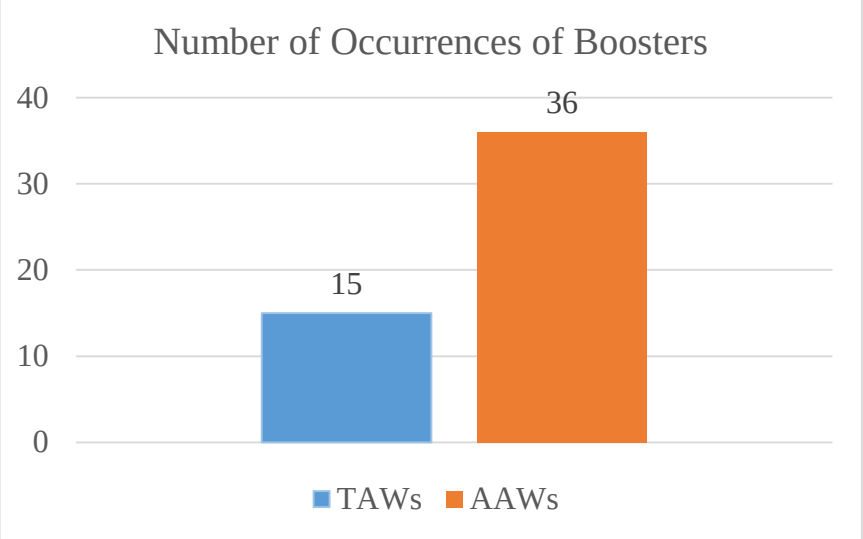

Figure 33: Boosters in English RAs by AAWs and Turkish RAs

Boosters are used to close alternative voices on the proposition and to express their certainity (Hyland, 2005). Writers use boosters to show that they are aware of the alternative voices, but they have chosen their position (Hyland, 2005). Considering this function of boosters, it can be observed that AAWs use more boosters compared to TAWs. The binomial test for boosters was run since the use of boosters showed differences between the two writer groups. Results of the binomial test for these two groups are shown in Table 11.

Table 11: Binomial test results for TRAs by TAWs and ERAs by AAWs for Boosters

	Frequency	qi	z
TRAs by TAWs	15	0.00015	2.941027*
ERAs by AAWs	36	0.00036	

Table 11 shows that there is a significant difference in the use of boosters in TRAs by TAWs and ERAs by AAWs ($z=2.941027$, $p<0.05$).This difference may show that the TAWs tended not to express such high certainity on the proposition and, taking the use of hedges into account, it can be concluded that the TAWs tried to soften their views and present them in such a way that they are aware of the probablity of other

alternatives. Interestingly, in the study of Zarei (2011), Persian writers used more boosters in their texts compared to English speaking writers. This may support the idea that culture has an effect on the choice of devices used as boosters. Figure 34 shows what types of boosters each writer group used in their articles.

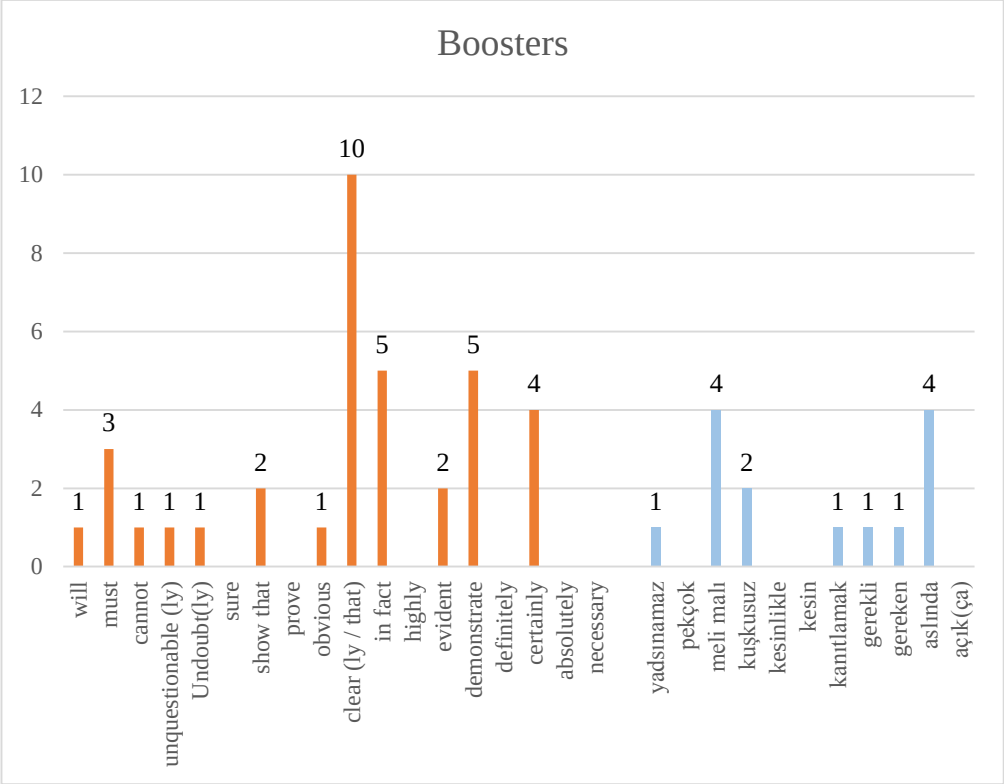

Figure 34: Boosters used by AAWs and TAWs

The figure shows that while the AAWs preferred to use modal verbs less,*-mElI (-mAlI)* has the highest frequency in the Turkish data. This can show that the TAWs preferred to express boosting by the use of suffixes rather than verbs and adverbs. The reason for this may be the effectiveness with which boosting can be marked within the verb using a suffix rather than searching for a variety of verbs and adverbs to mark it.

However, it is also observed that the TAWs preferred to use the adverb *aslında (in fact)* as frequently as *-mElI (-mAlI,)* but not the others, whereas the AAWs used *in fact* less than *clearly* (which has the highest frequency). This can be explained by the fact that there are other patterns possible when using *clear(ly,)* such as *it is clear that, clearly. In fact* does not offer much variety for the writers. Another difference is in the use of *undoubtly-kuşkusuz*. While the TAWs used *kuşkusuz* as the third most frequent

adverb to mark boosting, the AAWs preferred to use it less, with only one occurrence for every 100,000 words.

Attitude Markers

Writers may need to express their attitude toward what they share with their readers. This can be possible with the use of attitude markers. The findings show that both the AAWs and the TAWs used attitude markers in their articles (Figure 35).

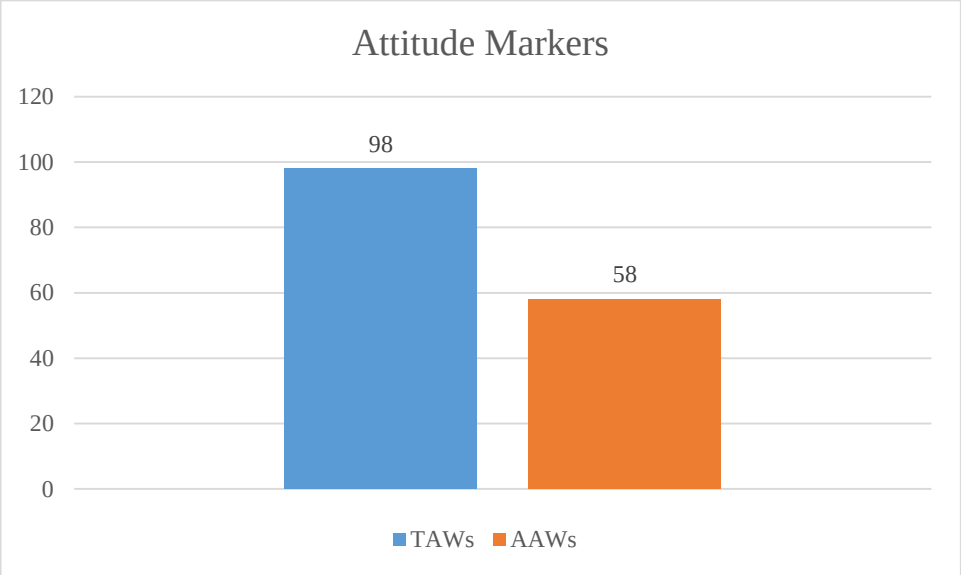

Figure 35: Occurrences of Attitude Markers in ERAs by AAWs and TAWs

As presented in Figure 35, the TAWs used more attitude markers compared to the AAWs. The TAWs used attitude markers 98 times in Turkish articles. However, the AAWs used only 58. To find out whether this difference in frequency is significant, a statistical test was run. The result is shown in Table 12. The results of the binomial test for these two groups are shown in Table 12.

Table 12: Binomial test results for TRAs by TAWs and ERAs by AAWs for Attitude Markers

	Frequency	qi	z
TRAs by TAWs	98	0.00098	-3.2039*
ERAs by AAWs	58	0.00058	

When the frequency of attitude marker occurences is compared, it is found that there is a difference. This is also supported by the binomial test result. Table 11 shows that there is a significant difference in the use of attitude markers in the TRAs by the TAWs and the ERAs by the AAWs ($z=-3.2039$, $p<0.05$).The TAWs used more attitude markers in the TRAs compared to the ERAs by the AAWs. Attitude markers enable writers to express surprise, agreement, importance, obligation, frustration and so forth (Hyland, 2005). Thus, to analyze this in more detail, the variety of markers used by both writergroups was compared. This would also assist in finding out where the difference lies. The findings are summarized in Figure 36.

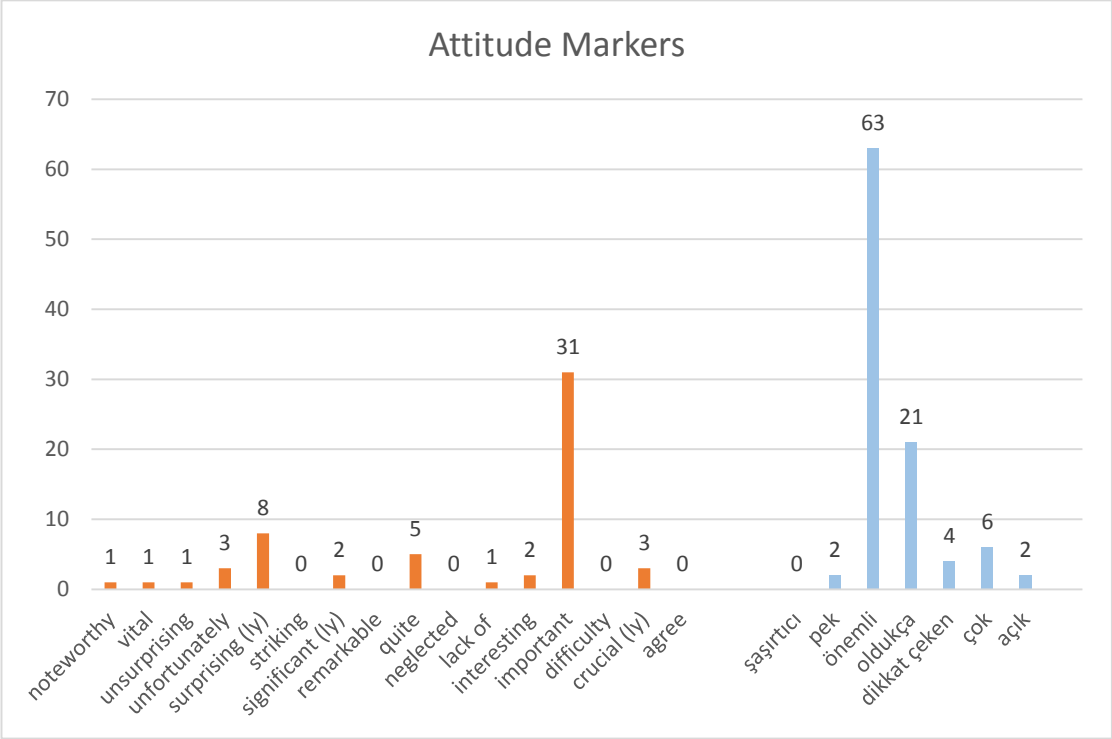

Figure 36: Attitude Markers of AAWs and TAWs

The figure shows that one item showing similarity between the TAWs and the AAWs is the use of the adjective *important (önemli)*. Both writer groups used this adjective to express the importance of their propositions, and used it as the most frequently used attitude marker. There is also a difference between the AAWs and the TAWs. While the Turkish writers did not express any surprise regarding their propositions in their articles, the American writers did. In fact, *suprising(ly)* is the second most frequent attitude marker used by the AAWs. This may show that the TAWs tended to emphasize and mark the importance of their propositions; perhaps to be more reliable in their studies. However, the AAWs also expressed surprise for unexpected findings or comments from other sources.

Self-mention

Some writers prefer to explicitly express their presence in their texts by using first person pronouns. By doing so, they may think that they are showing authorial identity (Hyland, 2005). The findings relating to self-mention are presented in the figure below.

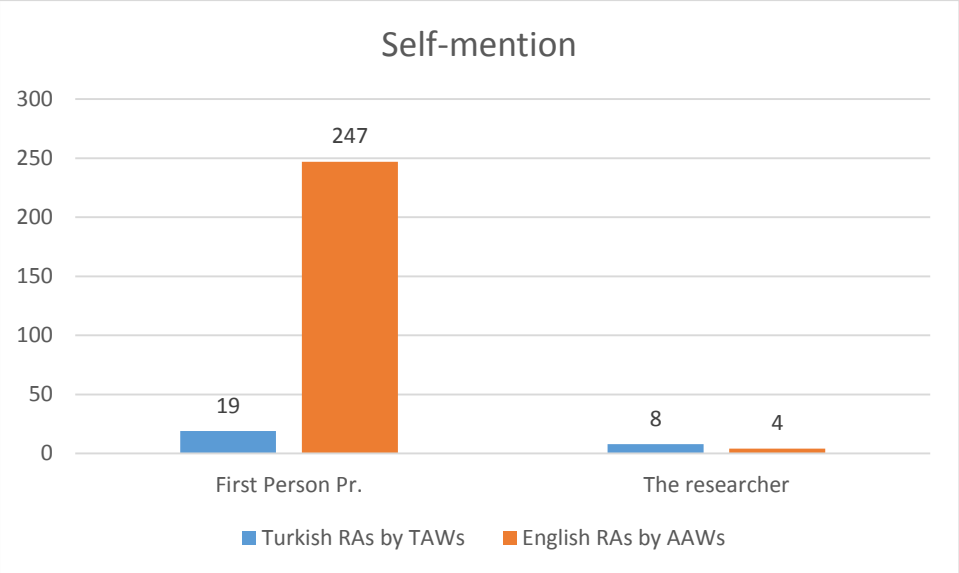

Figure 37: Self-Mention use in ERAs by AAWs and TRAs by TAWs

As can be seen, the AAWs used more self-mention markers compared to the TAWs in their articles. There were 247 occurrences of first person pronouns for every 100,000 words in the English research articles, but in the Turkish research articles, there were only 19. The binomial test results for the use of self-mention markers show that there is a significant difference between the TRAs by the TAWs and the ERAs by the AAWs, as shown inTable 13 ($z=13.99573$, $p<0.05$).

Table 13: Binomial test results for TRAs by TAWs and ERAs by AAWs for Self-Mention Markers

	pi	qi	z
TRAs by TAWs	19	0.00019	13.99573*
ERAs by AAWs	247	0.00247	

Although the use of first person pronouns is a matter of choice on a writer's part, showing a particular stance or authority, it can be noticed that almost none of the TAWs chose to use them. In this case, the explanation may not be through choice but because of cultural differences, or the differences in the accepted language of both cultures when writing academically. Another type of self-mention may be the use of *the researcher*; a more implied approach. The use of this structure may not necessarily mean the writers wereintending to express their stance, since the pattern *the researcher* was used to explain what was done during the studies, partıcularly in the methodology parts. It may be used more to emphasize that *the researcher*alone carried out the procedure, and no-one else.

Engagement Markers

There are many ways for writers to engage their readers with the text they are writing, such as the use of directives, reader pronouns, direct questions and personal asides. Figure 38 shows a comparison of the Turkish data and the English data by the AAWs in terms of the use of engagement markers. In total, in the TRAs there were 113 occurrences of engagement markers and in the ERAs by AAWs, there were 99.

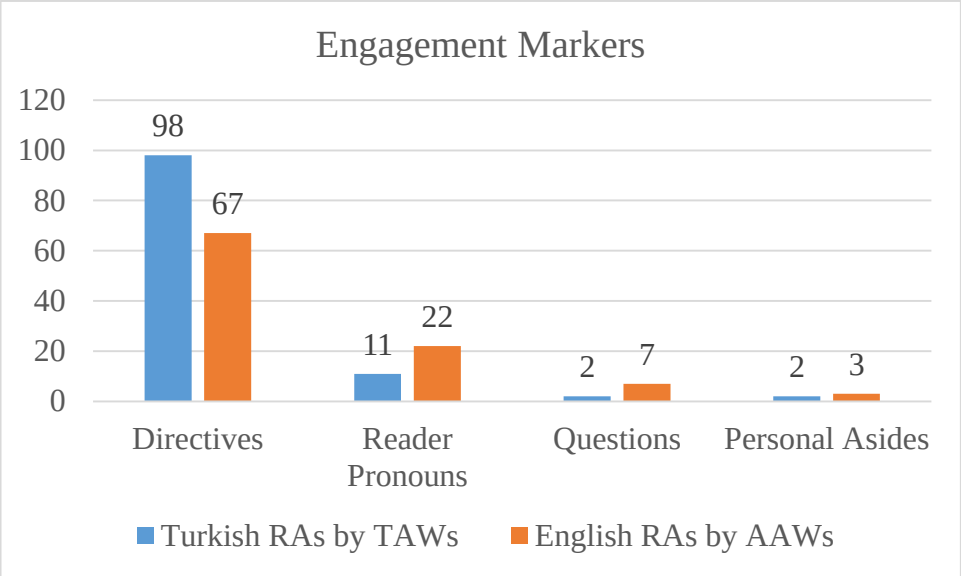

Figure 38: Engagement Markers of the AAWs and the TAWs

As presented (Figure 38), the TAWs used more engagement markers in their Turkish texts compared to the AAWs. To find out whether this difference is statistically significant, a binomial test was run.

Table 14: Binomial Test Results for TRAs by TAWs and ERAs by AAWs for Engagement Markers

	Frequency	qi	z
TRAs by TAWs	113	0.00113	-0.96204
ERAs by AAWs	99	0.00099	

When the frequency of attitude marker occurences is compared, it can be seen that there is a difference. However, for the use of engagement markers, the null hypothesis was acceptable and the binomial test shows that there is no significant difference in the use of engagement markers between the TRAs by the TAWs and the ERAs by the AAWs ($z=-0.96204$, $p<0.05$).

However, it is worth notingthat the difference in frequencyappears because of the passive form of the verbs used to lead readers within the category of directives. There were 98 occurrences per 100,000 words in the TRAs. To gain a clearer picture, the detailed devices used as directives are compared in Figure (39). It can be seen that the high use of directives for the TAWs arose from the use of the passive voice of verbs.

Although the passive voice may not have been considered as directives by Hyland and Tse (2004), in this study it was taken into account because the writers directed their readers to related tables or figures using the passive voice, which can be accepted as indirect leading. Moreover, another important difference between the writers is the use of imperatives. The only imperative form used by the TAWs was *Bkz. (see,)* to refer readers to tables, figures or the sources the writershad cited. However, in the English data, a variety of verb usage was found. Not only did the AAWs direct their readers to figures or tables, they also used the imperative to draw the readers' attention, such as *note that* or*notice that*.

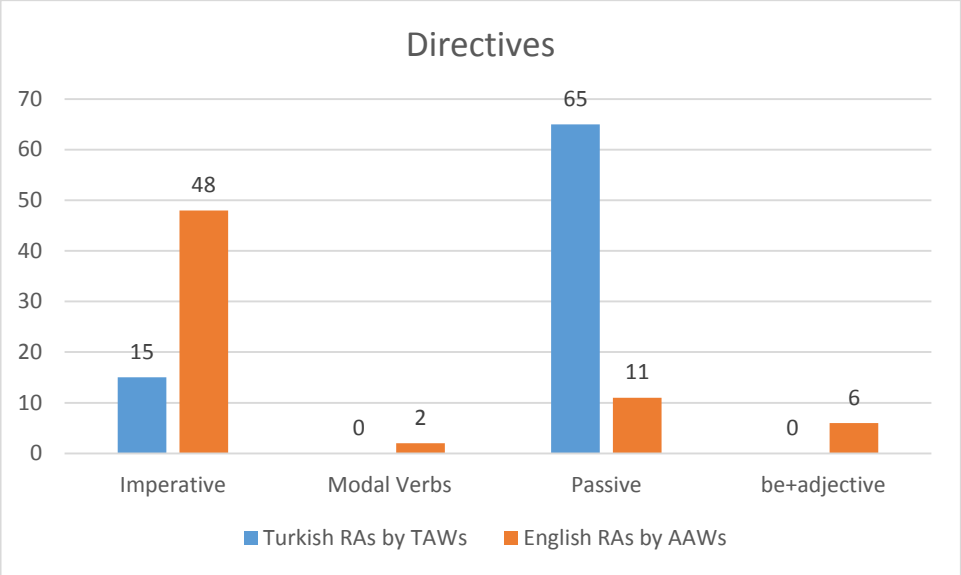

Figure 39: Directives

Furthermore, referring back to Figure 38, it can be said that the AAWs used more direct questions and personal asides to engage their readers compared to the TAWs. It can also be stated that the AAWs used engagement markers in a more direct and accurate way compared to the TAWs. This conclusion can be based on the fact that the writers made use of the passive voice.

Although no significant difference was found in use of engagement markers between the two data sets, a binomial test was run for the subcategories to find out whether there was a significant difference. The results are shown in Table 15.

Table 15: Binomial Test Results for the Use of Engagement Marker Subcategories

	TRAs by TAWs		ERAs by AAWs		
	Frequency	qi	Frequency	qi	z
Directives	98	0.00098	67	0.00067	-2.41438*
Reader Pronouns	11	0.00011	22	0.00022	1.91503
Questions	2	0.00002	7	0.00007	1.666716
Personal Aside	2	0.00002	3	0.00003	0.447219

As shown in Table 15, a significant difference occurred only in the use of directives. The TAWs used more directives in their Turkish research articles compared to the English research articles by the AAWs. In Figure 39, it can clearly be observed that this difference lies in the use of the passive voice to lead readers in the article. The TAWs used the passive voicemore frequently compared to the AAWs. This can be explained by cultural differences. In Turkish, using the imperative form or modal verbs to lead readers can be considered rude. Therefore, writers may prefer to use the passive voice, which is considered a more indirect and face-saving strategy for Turkish writers.

Considering the findings on the comparison of the use of IMMs, with regard tothe AAWs and the TAWs, it can be said that the AAWs used more IMMs in their texts, which is the result of their preference for self-mentions. It was also found that the AAWs were more explicit in stating their propositions and showing their stances, whereas the TAWs preferred hedging and avoiding first person pronouns to express their presence in their texts. These findings can be interpreted as cultural differencesreflecting on academic writing.

Is there a difference in the use of interactional metadiscourse markers in Turkish research articles and English research articles on the teaching of a foreign language written by TAWs?

The English research articles by the AAWs and the Turkish research articles by the TAWs show differences as well as similarities. It is important to identify whether the TAWs transferred their Turkish academic text writing habitsto the English academic texts. Therefore, the use of IMMs in Turkish and English research articles by the TAWs was compared. The overall findings are presented in Figure 40.

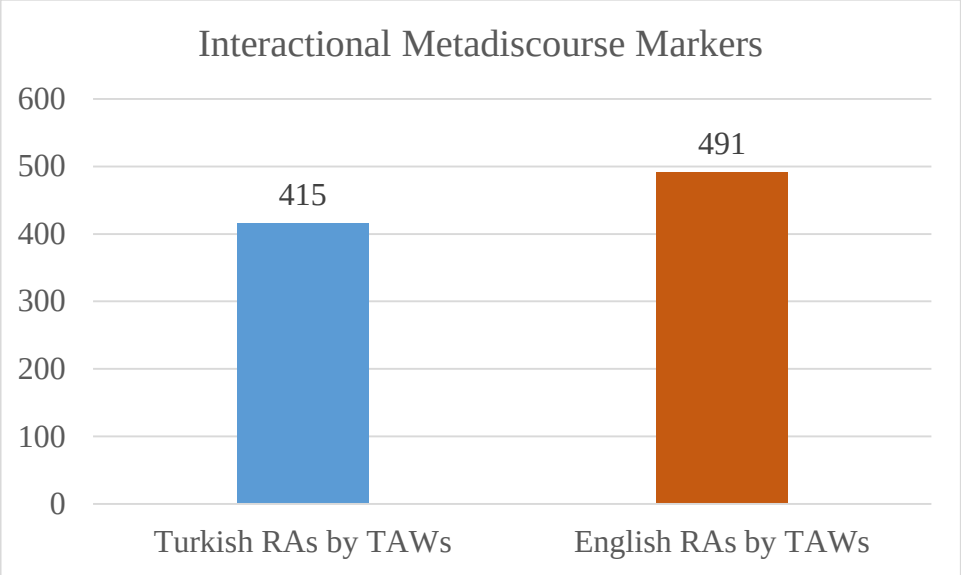

Figure 40: IMMs used by TAWs in Turkish and English RAs

It can be seen that the TAWs used more IMMs whilst writing in English compared to their writing in Turkish. The total occurrences of IMMs in the English RAs were 491 and in the Turkish RAs there were 415. In order to understand whether this difference is significant or not, a binomial statistical test was run. This test was conducted to compare the sample ratios of frequency and to find out whether any significant difference exists in the use of IMMs in the TRAs and the ERAs by the TAWs. This allows for a comparison of the sample ratios of two variables in a 0.05 significant level (z). The two-way critical test value for a 0.05 significant level is 1.96. The results are presented:

Table 16: Binomial Test Results for the Use of IMMs in TRAs and ERAs by TAWs

	Frequency	qi	z
Turkish RA by TAWs	415	0.00415	2.53071
English RAs by TAWs	491	0.00491	

As Table 16 shows, a significant difference between the ratios of IMMs in the Turkish RAs by TAWs and the English RAs by TAWs was found. ($z=2.53$, $p<0.05$). This means that theTAWs used more interactional metadiscourse markers while writing in English. In other words, they may have paid more attention to writer-reader interaction in research articles in the field of teaching English while writing in English. To find where the difference specifically lies, a comparison was made for each category of IMM, considering the English and Turkish articles by the TAWs. The findings are presented below:

Hedges

The use of the hedging devices was compared for the Turkish and English data from the TAWs. The findings are presented in Figure 41.

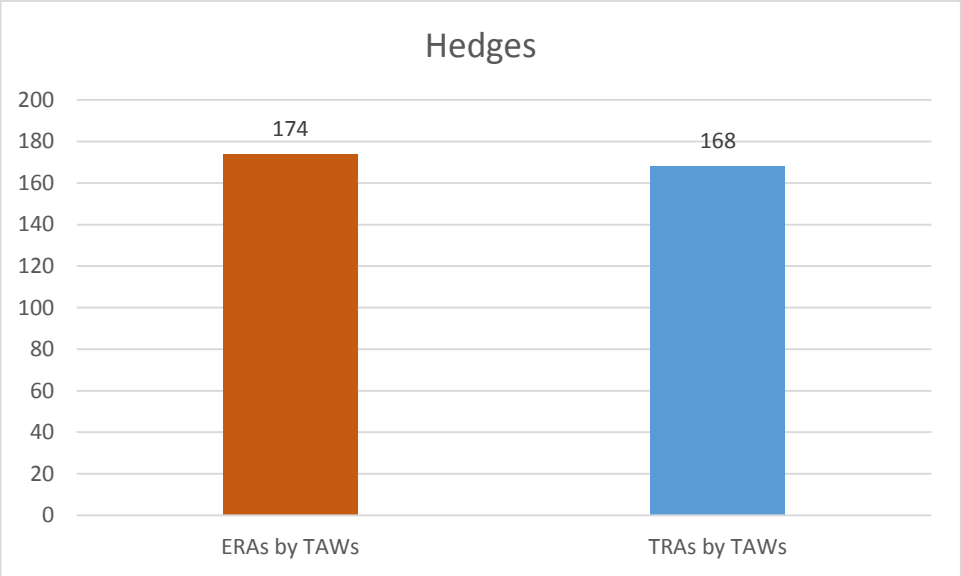

Figure 41: Hedges used in ERAs and TRAs by TAWs

In the articles analyzed, the TAWs used hedges in both the Turkish and English articles. However, it can be seen that the TAWs used rather more hedging devices whilst writing in English. A binomial test was conducted to investigate whether this difference was significant.

Table 17: Binomial Test Results for the Use of Hedges in TRAs and ERAs by TAWs

	Frequency	qi	z
Turkish RA by TAWs	168	0.00168	-0.32472
English RAs by TAWs	174	0.00174	

As Table 17 shows, no **s**ignificant difference between the ratios of hedges in the Turkish RAs by the TAWs and the English RAs by the TAWs was found. ($z=-0.32472$, $p<0.05$). This may imply that the difference in the use of IMMs in each data set does not depend on the use of hedges. The TAWs used hedging in the same way while writing in both Turkish and English.

It can be stated that the TAWs tended to give a little more importance in interacting with their readers while writing in English, and they tended to show less commitment to the propositions they were making, displaying to readers that the propositions were open to discussion. In other words, the TAWs may have preferred to have beena little less assertive, softening their claims, while writing the TRAs, although this difference is not statistically significant.

From Figure 42, it can be observed that the TAWs preferred to use epistemic modals more than other devices while writing in both languages. However, compared to the Turkish data, the TAWs used epistemic modals less than the suffix *–AbIl-Ir*. This can be because of the nature of the languages since epistemic modals can be translated into Turkish using the suffix *–AbIl-Ir*.

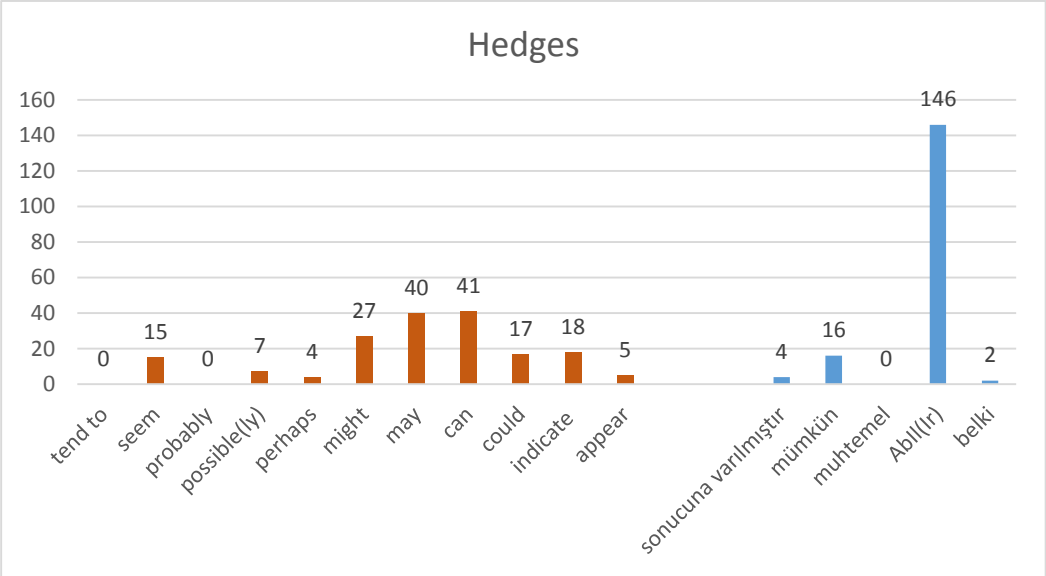

Figure 42: Hedging Devices used by TAWs in ERAs and TRAs

Moreover, Figure 42 shows one difference that the TAWs had while writing in English and Turkish. In Turkish *mümkün* (possible) is used a little more frequently. It was used sixteen times in the Turkish data while it only occurred seven times in the English data. Another difference is the use of epistemic verbs in both languages. While writing in English, the TAWs used epistemic verbs, but in Turkish no epistemic verb occurrences were detected. The reason for this can be the language itself, because marking hedging is difficult using verbs in Turkish because hedging can be marked by the use of the suffix *–AbIl*-Ir.

Boosters

The English RAs and the Turkish RAs by the TAWs were analyzed for the use of boosters. The findings are presented in Figure 42. The TAWs used boosters twice as often in their English RAs as in their Turkish RAs. The TAWs used 28 boosters in their ERAs while in the TRAs there were 14 occurrences of boosters.

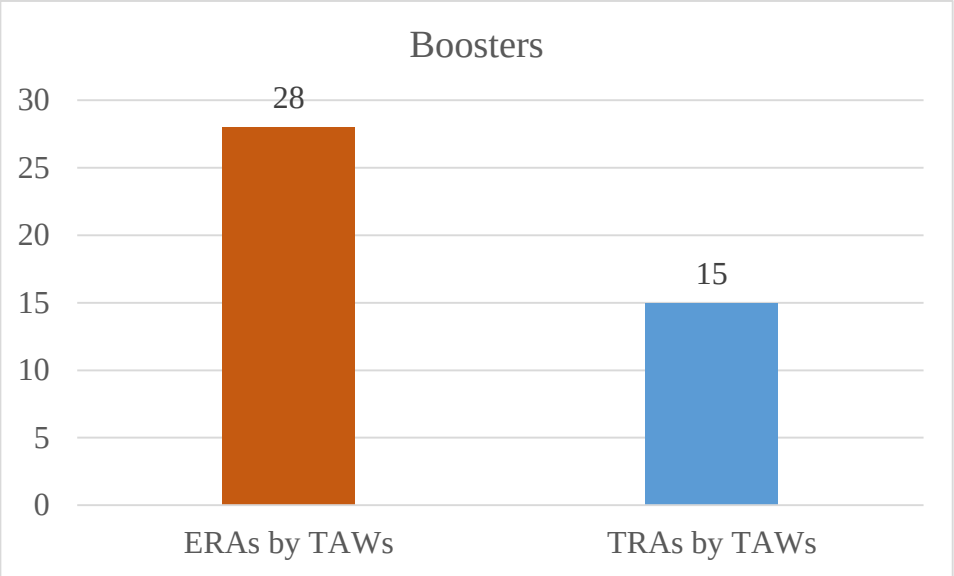

Figure 43: Boosters in ERAs and TRAs by TAWs

Figure 43 shows that the TAWs used more devices for boosting while writing in English when the frequency of occurences is compared. Thus, to find out whether this difference is statistically significant, a binomial test was run.

Table 18: Binomial Test Results for the Use of Boosters in TRAs and ERAs by TAWs

	Frequency	qi	z
TRAs by TAWs	15	0.00015	-1.98271*
ERAs by TAWs	28	0.00028	

As Table 18 shows, there is a **s**ignificant difference between the ratios of boosters in the Turkish RAs by TAWs and the English RAs by TAWs. ($z=-1.98271$, $p<0.05$).This may mean that the TAWs felt more confident in expressing the certainty of their propositions in English compared to Turkish. Perhaps, regarding culture, they thought that English speakers are more open to boosting and cannot be misunderstood, so they may have used devices for boosting more frequently while writing in English. More detailed findings related to the use of boosters are presented in Figure 44.

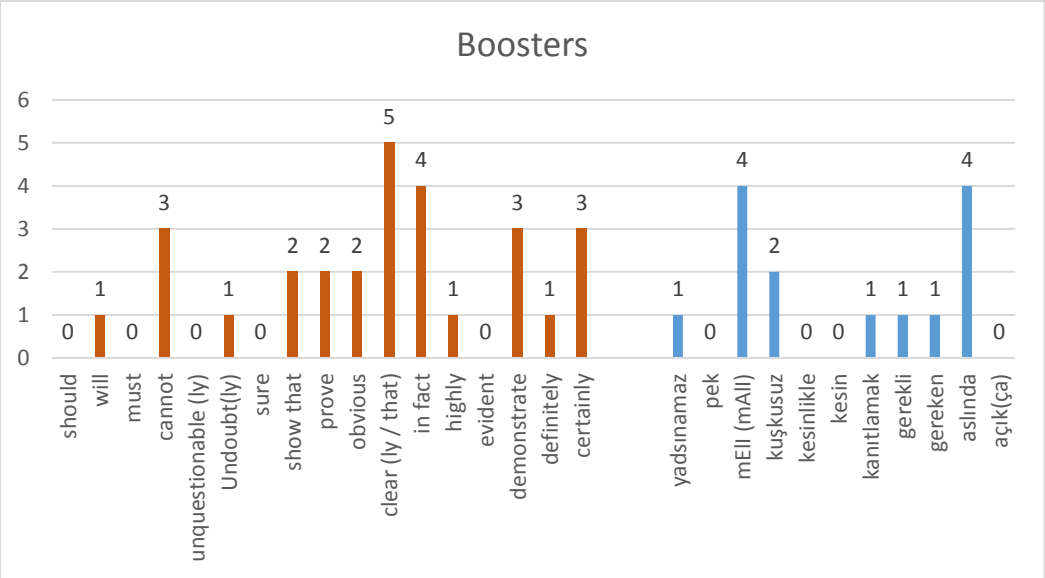

Figure 44: Booster Devices Used in ERAs and TRAs by TAWs

Figure 44 shows that, while writing in Turkish, the TAWs preferred to express boosting by *-mElI (-mAlI),* whereas while writing in English they made use of adjectives and adverbs more often. It can be said that they especially preferred to use *clear(ly)* most often. On the other hand, they did not use *açık (ça) (clear-ly)* in the Turkish research articles. Another difference is with the use of verbs. The TAWs used more verbs to express certainty in English, but in Turkish they used fewer. A remarkable difference is also noticed in the use of *kesinlike (certainly)*. The TAWs used*certainly* more frequently than they used the equivalent meaning *kesinlikle* in the articles in Turkish. Moreover, they used*aslında (in fact)* with the same frequency in both languages to mark commitment to their propositions. It can be seen that the TAWs used devices to mark boosting differently when writing in English and Turkish.

Attitude Markers

The TAWs used attitude markers while writing in both languages, although the frequency of the items shows differences. The findings resulting from a comparison of the English and Turkish articles are displayed in Figure 45.

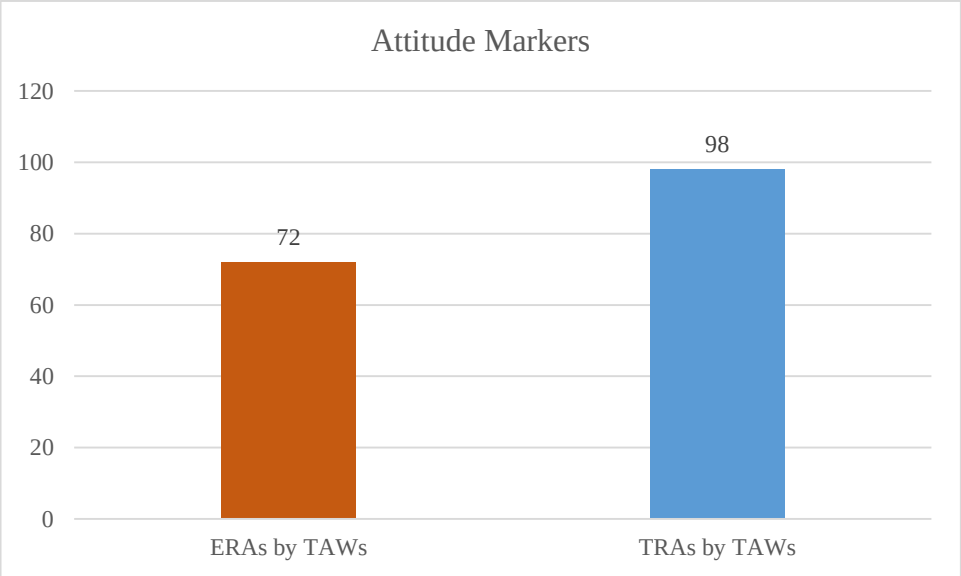

Figure 45: Attitude Markers in ERAs and TRAs by TAWs

Although the occurrence of attitude markers seems similar, the TAWs used more attitude markers while writing in Turkish. 72 occurrences were found in the English research articles and 98 in the Turkish research articles for every 100,000 words. The TAWs tended to use less attitude markers while writing in English. When this finding was statistically analyzed, it was found that there is a significant difference between the ratios of attitude markers used in the Turkish RAs by the TAWs and the English RAs by the TAWs. ($z=-1.994977$, $p<0.05$) (see Table 19).

Table 19: Binomial Test Results for the Use of Attitude Markers in TRAs and ERAs by TAWs

	Frequency	qi	z
TRAs by TAWs	98	0.00098	1.994977*
ERAs by TAWs	72	0.00072	

The TAWs used more attitude markers while writing in Turkish. This may imply that they felt more confident in presenting their attitudes towards propositions in research articles while writing in their native language. To investigate what different attitude markers TAWs used while writing in English and Turkish, the markers used are compared in Figure 46.

Figure 46 shows the devices used to express writers' attitudes in their academic texts.

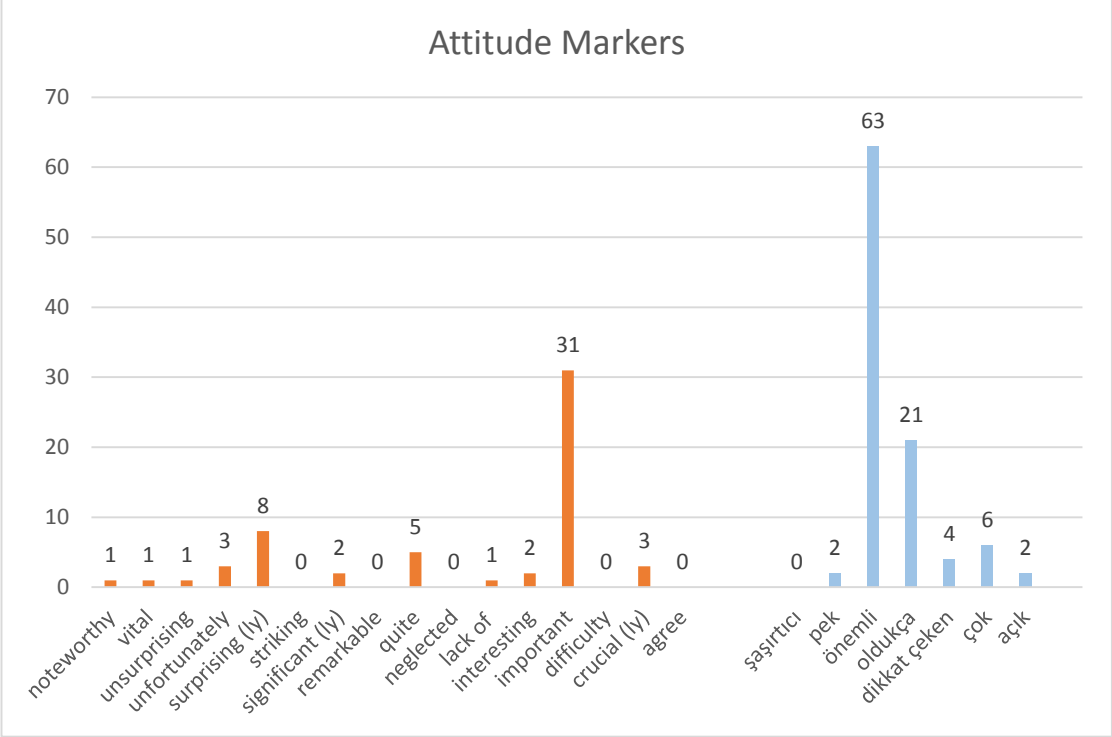

Figure 46: Attitude Markers in ERAs and TRAs by TAWs

As presented in Figure 46, although the frequency of the attitude markers changes, the types that are used are quite similar while writing in both languages. It can be seen that the TAWs especially preferred the adjective *important* (*önemli)* to show the importance of their propositions on the writers' side while writing in both languages. While the TAWs alsoused synonyms of the word *important* in their articles, this variety is not observed in the Turkish articles. Another difference is in the use of *quite (oldukça)* in both languages. The TAWs used it more frequently in the Turkish articles compared to the English articles. These findings may show that while expressing attitudes toward their propositions, the TAWs did not transfer their writing style in Turkish to their style in English. In addition, while the frequency of the markers in English is less, it can be seen that they are used in a variety of ways, such as in expressing surprise, interest, importance, negative attitude, or lack. While writing in Turkish, it was found that only two types of adjectives were frequently used, *önemli* and *dikkat çeken (salient)*. It can be said that the TAWs avoided using a variety of attitude markers, perhaps because they thought that commenting on propositions may not be acceptable in research. Therefore, the markers they used most frequently were only to emphasize importance.

Self-mention

Self-mention can be marked by using the first person pronoun and, in a more implied way, by using the pattern *the researcher*. Both markers were compared in terms of their frequency in the English and Turkish research articles by the TAWs. The findings are presented in Figure 47.

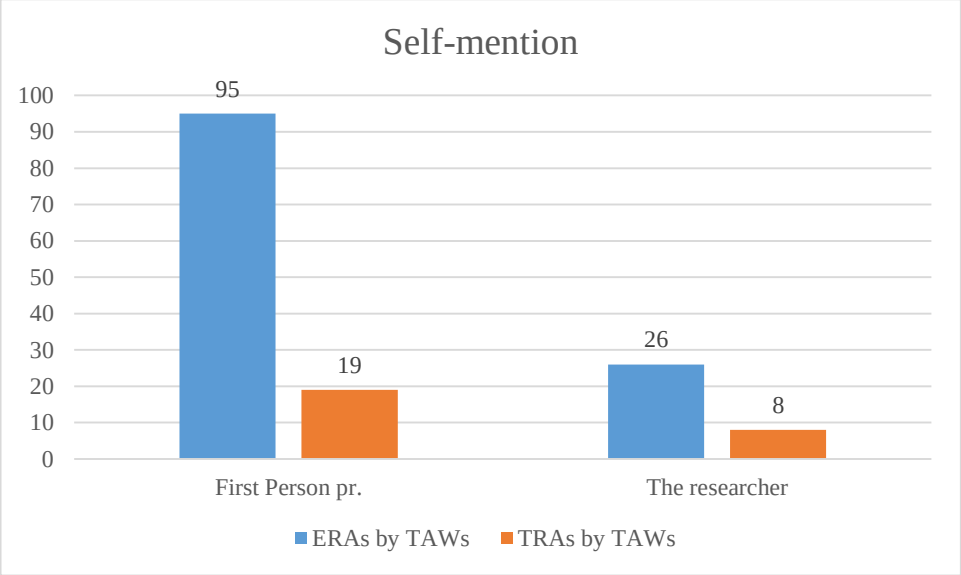

Figure 47: Self-mention in ERAs and TRAs by TAWs

It can be observed that the TAWs used the first person pronoun more frequently while writing in the English research articles compared to the Turkish research articles. The binomial test results for this category are presented below in Table 20.

Table 20: Binomial Test Results for the Use of Self-mention Markers in TRAs and ERAs by TAWs

	Frequency	qi	z
TRAs by TAWs	19	0.00019	-7.12098*
ERAs by TAWs	95	0.00095	

From Table 20, it can be noticed that there is significant difference between the ratios of self-mention markers used in the Turkish RAs by the TAWs and the English RAs by the TAWs. ($z=-7.12098$, $p<0.05$). The TAWs used more self-mention markers while writing in Turkish compared to writing in English. This may show that the TAWs tended to adapt the writing conventions of academic English while writing in English

and tried to retain their own cultural norms while writing in Turkish, in terms of self-mention. In other words, in Turkish, individuality is not culturally preferred and also, in academic writing courses, the use of self-mention is discouraged. This may also affect the writing conventions of both languages for the TAWs.

Figure 46 also shows that the TAWs tended to use *the researcher* in both languages, but more frequently while writing in English. This finding may show that the TAWs tried to make their presence more explicit while writing in English, and less explicit in Turkish, but still could not refer to themselves using first person pronouns, instead tending to use *the researcher*. The reason for the use of this expression can be to express objectivity to the proposition on the part of the writer.

Engagement Markers

The TAWs tended to engage their readers in what they wrote while writing in both languages. The findings are presented in Figure 48.

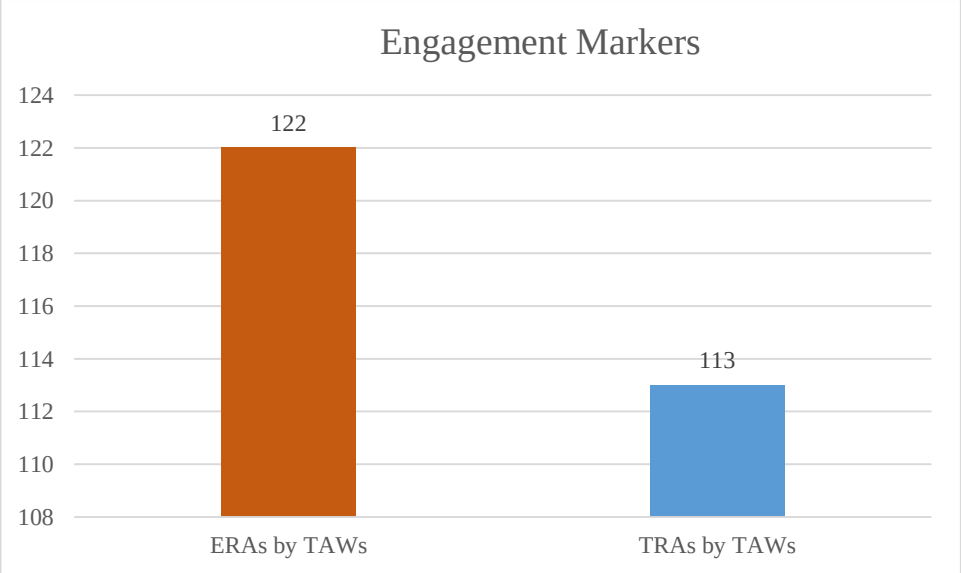

Figure 48: Engagement Markers in ERAs and TRAs by TAWs

The figure shows that the TAWs used engagement markers a little more frequently in English. There were 122 occurrences in the English RAs and 113 in the Turkish RAs for every 100,000 words. It can be said that the TAWs used engagement markers in writing academic texts with similar frequency in both languages. However, although it seems there is no difference in terms of the use engagement markers when the two data sets are compared, a binomial test was still run. The results are presented in Table 21.

Table 21: Binomial Test Results for the Use of Engagement Markers in TRAs and ERAs by TAWs

	Frequency	qi	z
TRAs by TAWs	113	0.00113	-0.58744
ERAs by TAWs	122	0.00122	

Table 21 shows that no significant difference between the groups was found. This may suggest that the TAWs paid attention to attracting the readers and leading them within the text in similar ways. Details regarding the subcategories of engagement markers can be found in Figure 48.

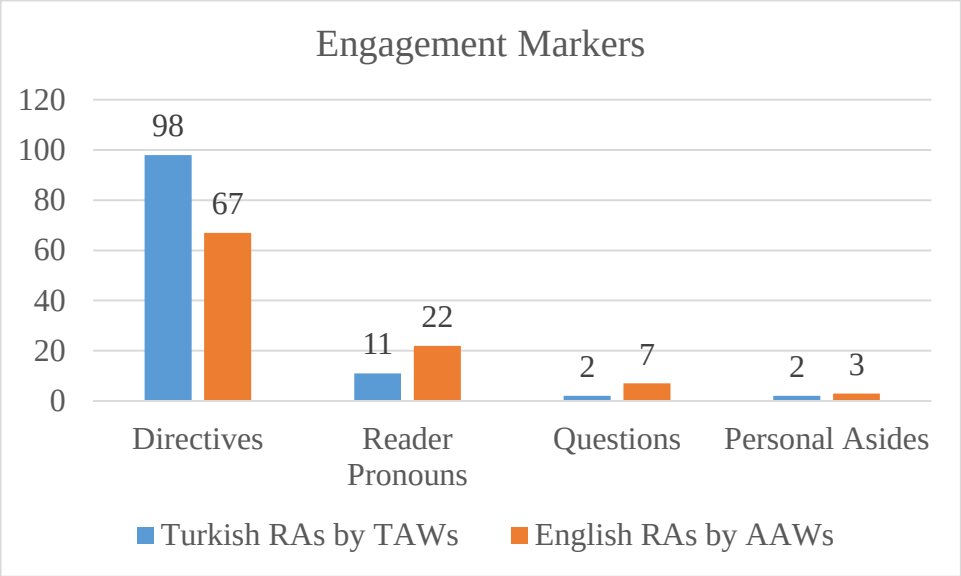

Figure 49: Devices Used for Reader Engagement

As presented in Figure 49, the TAWs used directives more frequently than the others, and within the use of the directives, it can be observed that the TAWs used more directives while writing in Turkish. A binomial statistical test was run to find out whether this difference was statistically significant.

Table 22: Binomial Test Results for the Use of Directives in TRAs and ERAs by TAWs

	Frequency	qi	z
TRAs by TAWs	98	0.00098	0.96143
ERAs by TAWs	85	0.00085	

From Table 22, it can be seen that there is nosignificant difference between the ratios of attitude markers used in the Turkish RAs by the TAWs and the English RAs by the TAWs. ($z=0.96143$, $p<0.05$).

As earlier mentioned, the TAWs mostly used the passive form of verbs to direct readers instead of the use of *-mElI (-mAlI)* and imperative forms of verbs. The reason for this may be that later mentioned patterns are more direct and the TAWs may have thought that it was not polite toward readers. For a detailed view related to this finding, see Figure 50.

It can be observed from Figure 49 that the TAWs preferred to use the passive form of verbs while writing in both languages to lead their readers, and they used them even more frequently while writing in Turkish. This may show that they felt more confident while transferring a writing habit from their mother tongue to their second language. Furthermore, they used more imperatives while writing in English. In fact, as for directives, the TAWs used a greater variety of markers while writing in English compared to Turkish. This may mean that the TAWs preferred to use structures that make them feel close to the culture of the language they were writing in.

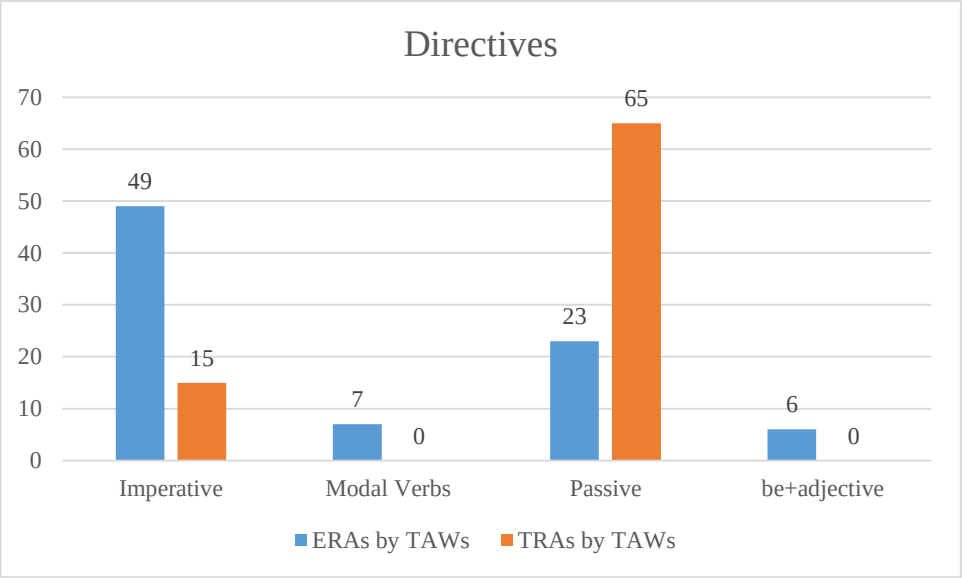

Figure 50: Directives by TAWs

In Figure 48, it can be seen that the TAWs used reader pronouns, questions and personal asides more frequently while writing in English. A binomial test was run for the rest of the categories of engagement markers to identify any significant difference. The results are displayed in Table 23.

Table 23: Binomial Test Results for the Use of Engagement Markers in TRAs and ERAs by TAWs

	TRAs by TAWs		ERAs by TAWs		
	Frequency	qi	Frequency	qi	z
Reader Pronouns	11	0.00011	30	0.0003	-2.96767*
Questions	2	0.00002	1	0.00001	0.577355
Personal Aside	2	0.00002	6	0.00006	-1.41425

As displayed in Table 23, the TAWs used reader pronouns more frequently while writing in English. A significant difference is found in this subcategory. This may show that each language has its own style of academic writing and the TAWs tried to engage their readers with their texts more while writing in English, whereas in Turkish they could write as if reporting the findings of the studies they conducted rather than writing interactive texts.

In summary, from the findings it can be concluded that the TAWs used interactional discourse markers while writing research articles both in English and Turkish. The frequency of the markers does not display any great difference in fact. However, it may show that the TAWs tried not to transfer their Turkish writing styles while writing in English and possibly adapted their styles according to the language in which they were writing. To find out whether this could be the case, the following section attempts to answer the next research question.

Is there a difference in the use of interactional metadiscourse markers in English research articles on the teaching of a foreign language written by TAWs and AAWs?

To find out **w**hether there is any difference in the use of interactional metadiscourse markers between the TAWs and the AAWs while writing in English, the frequency of IMMs was compared. Figure 51 displays the findings.

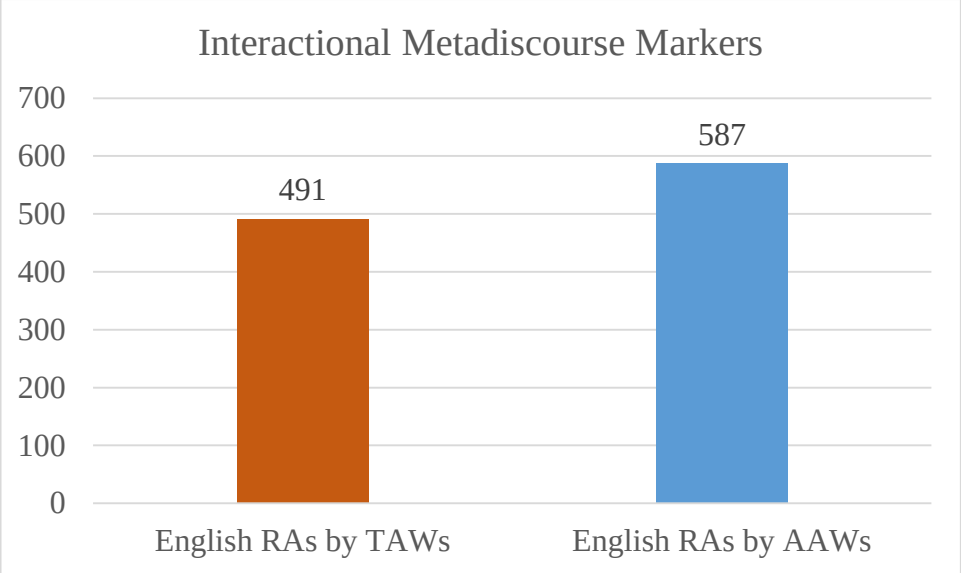

Figure 51: IMM in ERAs by AAWs and TAWs

As presented in Figure 51, the TAWs used interactional metadiscourse markers less frequently compared to the AAWs while writing in English. The total occurrence for IMMs for the TAWs is 491 and 587 for the AAWs for every 100,000 words. This may show that the TAWs tended to interact with their readers while writing English research articles with a similar frequency to the AAWs. To discover whether this difference in frequency is statistically significant or not, a binomial test was run. The results are presented in Table 24.

Table 24: Binomial Test Results for the Use of IMMs in ERAs by TAWs and AAWs

	Frequency	qi	z
ERA by AAWs	587	0.00587	2.93187*
ERAs by TAWs	491	0.00491	

As Table 24 shows, a **s**ignificant difference between the ratios of IMMs in the English RAs by the TAWs and the AAWs was found. ($z=2.93187$, $p<0.05$). The AAWs used interactional metdiscourse markers more frequently compared to the TAWs when writing in English. Similarly, Zarei (2011) found that Persian writers use less metadiscourse markers compared to native speakers of English in academic texts. On the other hand, Blagojevic's study (2004) shows that Norwegian writers use interactional metadicourse markers more frequently while writing English academic texts. These findings could show that the use of interactional metadiscourse markers may depend on cultural differences (Abdi, 2002).

It was found that Norwegian writers, writing in English, use a high number of metadiscoursal elements compared to those found English native speaker texts. The use of interpersonal metadiscourse is the same in both languages and textual metadiscourse is higher in English academic articles (Blagojevic, 2004).

In order to find out whether TAWs and AAWs use hedges, boosters, attitude markers, self-mentions and engagement markers in the same way, a detailed description is presented below.

Hedges

Devices to express hedging were used by both the Turkish and the American academic writers. Figure 52 shows the overall frequency for hedge markers.

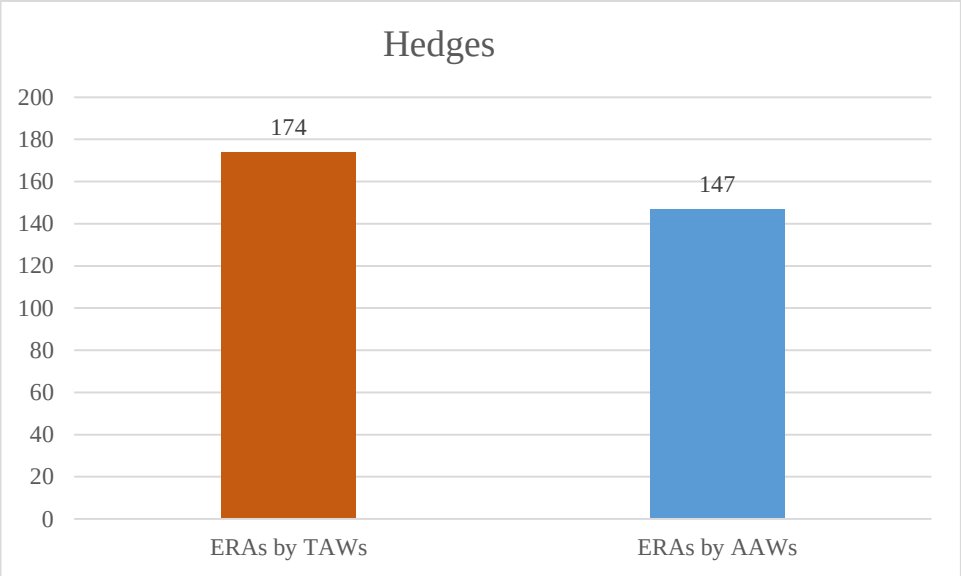

Figure 52: Hedges Used by AAWs and TAWs in ERAs

It can be seen from Figure 52 that the frequency of hedges use by the TAWs outweighs that of the AAWs. 174 occurrences were found in the ERAs written by the TAWs and 147 occurrences were found in the AAWs' research articles. A binomial test was run to find out whether this difference in frequency is statistically significant.

Table 25: Binomial Test Results for the Use of Hedges in ERAs by TAWs and AAWs

	Frequency	qi	z
English RA by AAWs	147	0.00147	-1.18415
English RAs by TAWs	174	0.00174	

As Table 25 shows, no significant difference between the ratios of hedges in English research articles by the TAWs and the AAWswas found. ($z=-1.18415$, $p<0.05$).

Considering the frequency of occurrence of hedges in articles, it can be said that the difference in frequency may indicate that the TAWs preferred to leave their discussions open to their readers' comments and avoided expressing certainty a little more frequently compared to the AAWs. This finding is different from that of Hinkel's study (2005). Hinkel (2005) investigated the types and frequency of hedges in academic

essays and found that non-native speakers only made use of a limited range of hedging devices. Most of the devices found in Hinkel's study (2005) related to conversational discourse and casual spoken interaction. However, in the present study, it can be concluded that the TAWs used hedging devices more frequently than the native speakers of English.

To find out what devices each writer group used while writing, their use of the devices is compared in Figure 53.

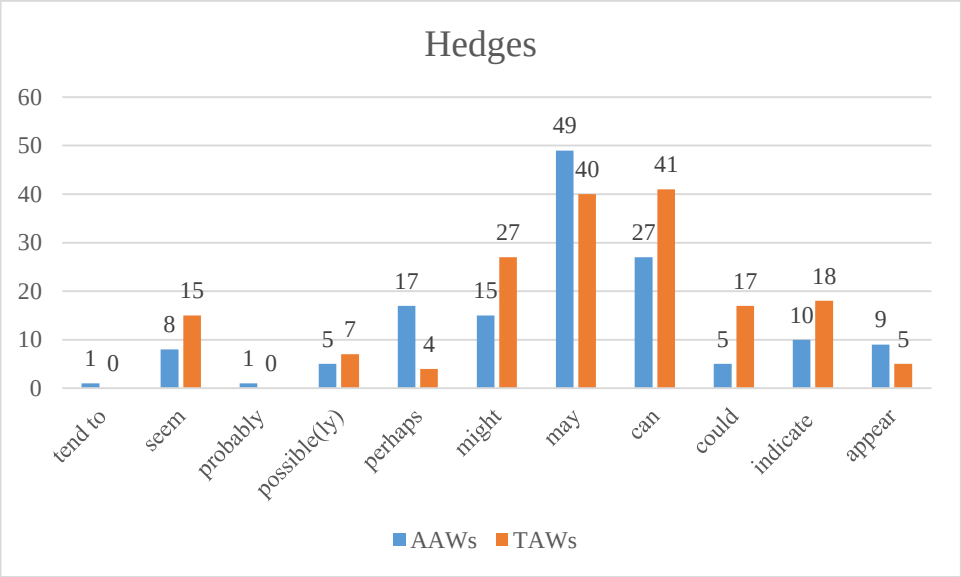

Figure 53: Hedge Markers

It can be seen that both writer groups preferred to mark hedging by using modal verbs. Figure 53 shows that both writer groups preferred to use *may*, *can*, and *might* more frequently compared to *could* and other devices such as epistemic verbs and adjective/adverbs. However, although *may*and *can* were preferred the most, it can be observed that the TAWs used them with the same frequency and that the AAWs used *may* as the most frequent hedge marker. This difference may be due to the formality of these adverbs or that by using *may* the researcher shows a weaker possibility about the proposition compared to the use of *can* (Seibel, 1980). It may be thatthe AAWs tended to express more commitment to their propositions compared to the TAWs.

The frequent use of *may* and *can* by both sets of writers was a finding of Kafes (2009). He compared the use of modal verbs among AAWs, TAWs and Spanish academic writers to build stance in their texts. He found that both AAWs and TAWs

used the modal verb *may* the most, as does the finding in this study. In Vold's study (2006) *may* was found to have been used as the most frequent modal verb in medical research articles and Biber et al (1999) reveal that *may* is the most frequent modal verb used to mark logical possibility in academic texts. Additionally, supporting the finding related to the use of *may* and *can*, Rezzano (2004) states that *may* and *can* are considered as the most productive devices to mark a low degree of certainty in academic texts. On the other hand, it can be seen that the TAWs used *may*and *can* with the same frequency. This may show that the TAWs preferred to use these modals interchangeably.

Another point to be made is the use of *perhaps*. It can be noticed that the AAWs used this adverb more frequently than the TAWs. The reason may be that the TAWs did not even use the Turkish equivalent of *perhaps (belki)* in their Turkish research articles; possibly for the reason that it seems less formal in Turkish, and so they may transferred this habit to their writing in English. Therefore, they used it less frequently and preferred to mark hedging more by the use of modal verbs, especially by the use of *may*and *can.* Markkanen (1989) explains the different use of modal verbs by native and non-native academic writers, based on the different conventions of the writers' cultural backgrounds, and Kasper (1979) states that educational background can also be a variable.

Boosters

The English research articles written by the AAWs and the TAWs were also compared for the use of boosters. Figure 54 presents the findings.

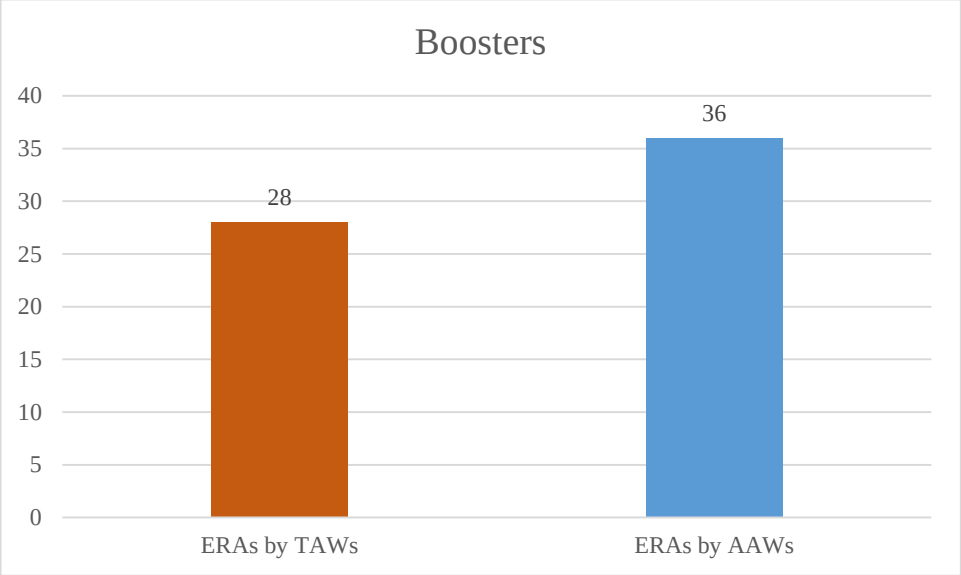

Figure 54: Boosters in ERAs by AAWs and TAWs

As the Figure 54 shows, both writer groups used boosters with similar frequency. The ERAs by TAWs had 28 andthe AAWs 36 occurrences of boosters. Although the TAWs used 15 occurrences of boosters while writing in Turkish, this number increased while writing in English. To decide whether this difference is statistically significant, a binomial test was conducted.

Table 26: Binomial Test Results for the Use of Boosters in ERAs by TAWs and AAWs

	Frequency	qi	z
ERAs by TAWs	28	0.00028	-1.00016
ERAs by AAWs	36	0.00036	

As shown in Table 26, there is no significant difference between the ratios of boosters inthe English RAs by TAWs and those by AAWs ($z=-1.00016$, $p<0.05$). This result may mean that the TAWs tended to write more closely according to the academic writing conventions of the target language they were writing in. They seem to have tried

to apply the conventons of academic writing in English while writing English research articles.

In order to discover where the difference lies in terms of frequency, the items used for boosting were compared for the two writer groups (Figure 55).

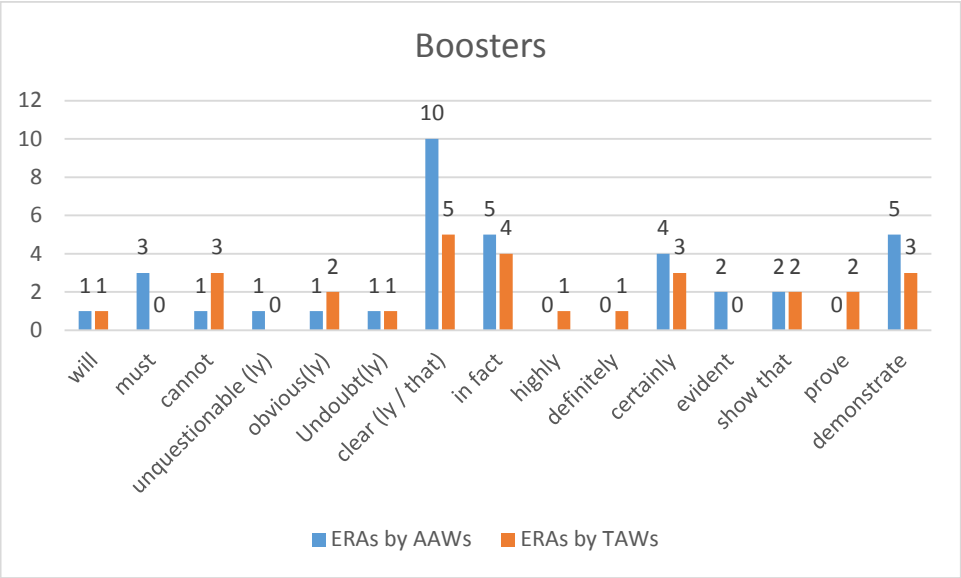

Figure 55: Boosters Used in ERAs by TAWs and AAWs

The figure shows that both writer groups used *clearly* and related patterns most frequently in their research articles. However, the AAWs used them twice as frequently. There were ten occurrences of *clearly* and related patterns found in the ERAs by AAWs, whereas there were only five in the ERAs by TAWs. Moreover, it can be seen that they used *in fact, certainly, demonstrate* and the modal verb *will* with similar frequency. On the other hand, one item that should be mentioned is the use of the modal *must.* As the figure shows, although the AAWs used it, none of the TAWs used it. The reason for this may be the strong meaning of *must* in expressing very high certainty about the proposition. By using *must,* the writer may show readers that the statement is the writer's view and he does not accept any alternative voice on the issue.

Figure 55 shows that both writer groups used almost the same variety of verbs and adjectives/adverbs. This may support the idea put forward, for the previous Figure 55, that the TAWs and AAWs used almost the same items as boosters and with almost the same frequency. Furthermore, considering the use in Turkish research articles, it can be concluded that the TAWs applied the writing conventions of the language they were using in their research articles.

Attitude Markers

The English research articles of both the TAWs and the AAWs on the teaching of English were compared in terms of the use of attitude markers. It was found that the TAWs used attitude markers more frequently than the AAWs. Figure 55 shows that there were 72 occurrences in the ERAs by TAWs and 58 occurrences in the AAWs' articles. Since the TAWs had 98 occurrences of attitude markers in the Turkish research articles, it can be said that the TAWs tended to express their opinions on their propositions, and they also did the same do it whilst writing in English. This may explain why the TAWs used more attitude markers than the AAWs.

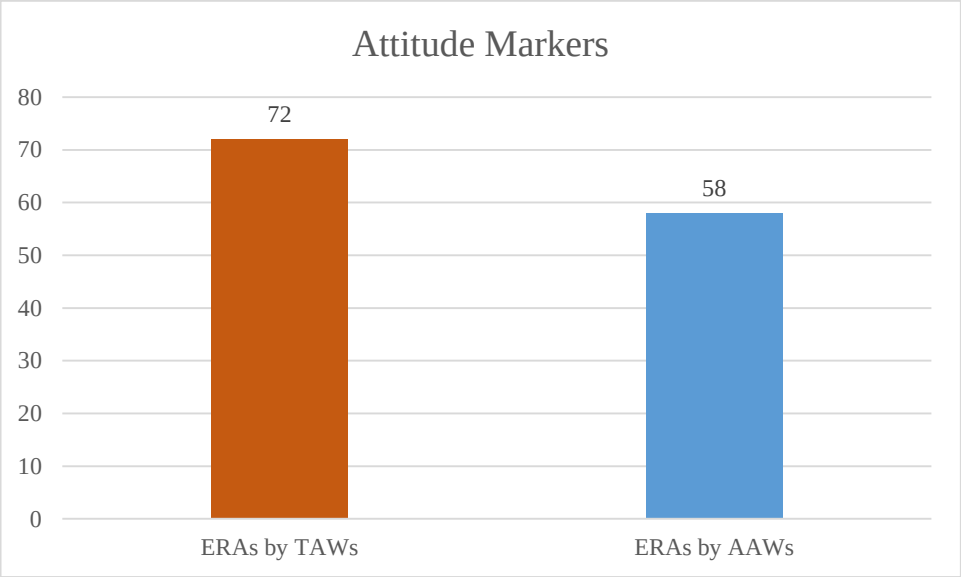

Figure 56: Occurrences of Attitude Markers in ERAs by TAWs and AAWs

A binomial test was run to find out whether this difference is statistically significant.

Table 27: Binomial Test Results for the Use of Attitude Markers in ERAs by TAWs and AAWs

	Frequency	qi	z
ERAs by TAWs	72	0.00072	1.228285
ERAs by AAWs	58	0.00058	

It can be seen from Table 27 that the TAWs used attitude markers with a similar frequency to the AAWs while writing in English. Since a significant difference was not found between the Turkish research articles and the English research articles by AAWs,

it can be said that the TAWs tended to write in a similar way to the AAWs while writing English research articles considering the use of attitude markers. While writing in Turkish, however, they used attitude markers more frequently, but when writing in English they reduced the use of these markers, so that no significant difference was found compared to the use by AAWs.

To find out whether the writers used different or similar attitude markers, the findings were compared and are presented in Figure 56 in terms of frequency of use. The figure shows that both writer groups used *important* as the most frequent adjective to express their attitude towards the proposition, and the frequency of the occurrence of this adjective is almost the same for both English research article groups. The TAWs used this adjective 63 times in the Turkish articles, so it can be said that expressing the importance of a proposition and pulling the attention of the readers to it was used by both writer groups and the language they were writing in may not be seen as a factor affecting writer choice.

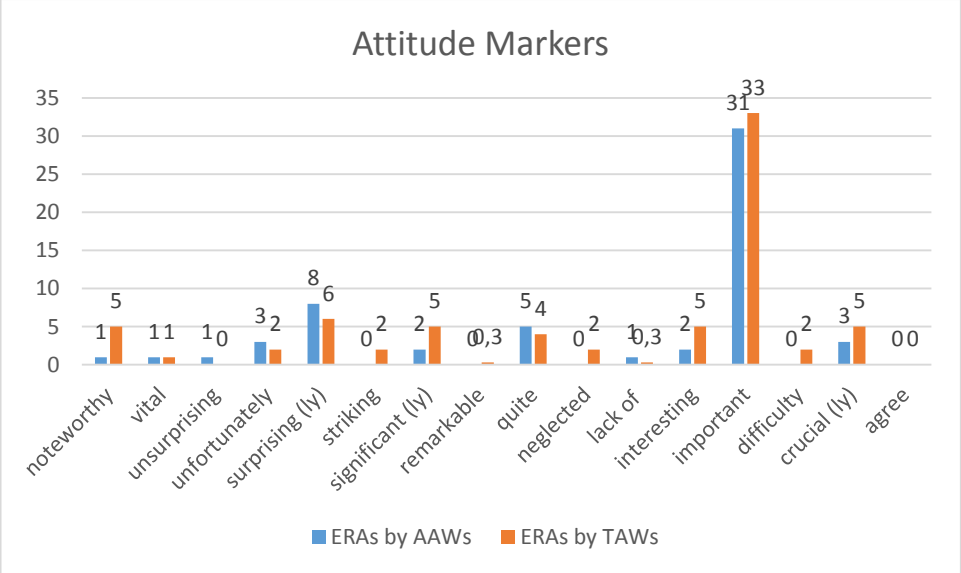

Figure 57: Attitude Markers in ERAs

Figure 57 shows that both sets of writers also used synonyms of *important* in their articles to show the importance of their propositions. On the other hand, the figure also displays that both writer groups tended to express surprise in their articles, but it was found that the TAWs did not express any surprise in their Turkish articles. It can therefore be concluded that whilst writing in English, the TAWs tended to express more variety of attitude in their articles.

When the data was compared in terms of the use of attitude markers, it was found that both sets of writers used these markers quite often and with variety. This finding is supported by the finding of Hyland (2005), who compared the use of metadiscourse markers in research articles in two fields, natural science and social science papers. Hyland found that writers of social science papers used attitude markers frequently and with variety. He explains the reason for this by stating that these writers needed to establish a "convincing discourse and personal credibility, critical insight and disciplinary competence" (Hyland, 2005: 151), which is possible by the use of attitude markers.

Self-mention

The findings of the study show that both the AAWs and the TAWs used self-mention in their research articles. There are two ways that this was used; the use of first person pronouns and the pattern *the researcher*. Figure 58 shows the related findings.

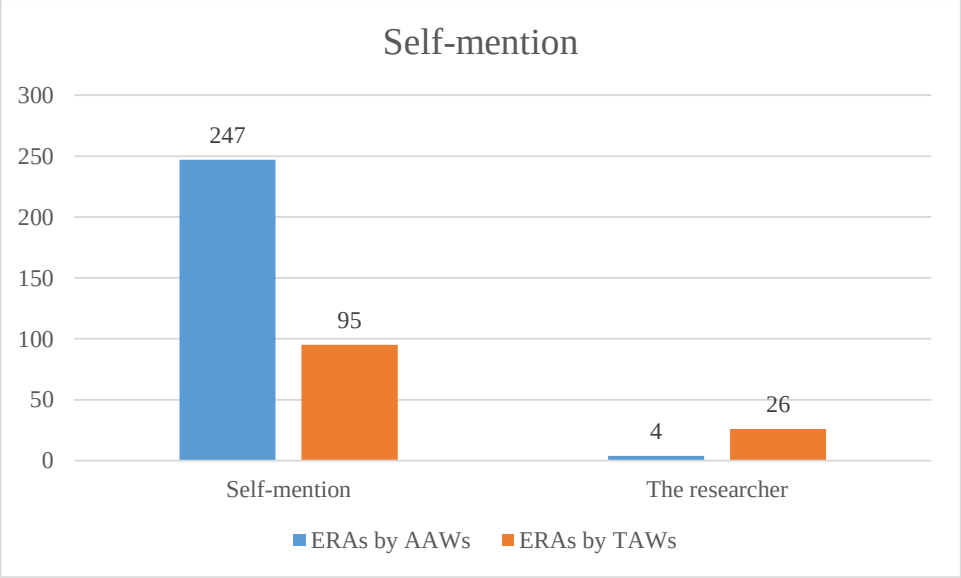

Figure 58: Self-mention in ERAs by TAW and AAWs

A binomial test was run for significant difference analysis between the groups. The result can be seen in Table 28.

Table 28: Binomial Test Results for the Use of Self-mention Markers in ERAs by TAWs and AAWs

	Frequency	qi	z
ERAs by TAWs	95	0.00095	-8.22765*
ERAs by AAWs	247	0.00247	

From Table 28, it can be observed that there is **s**ignificant difference between the ratios of self-mention markers used in English research articles by the TAWs and AAWs. ($z=-8.22765$, $p<0.05$).The AAWs used more self-mention markers compared to the TAWs. However, it should be remembered that the TAWs used more self-mention markers whilst writing in English compared to Turkish and that this frequency increased while writing in English. This finding may suggest that the TAWs were trying to adapt the writing conventions of the target language rather than their native language while writing English research articles.

As presented in Figure 58, the AAWs used first-person pronouns to express their presence in the texts much more frequently than the TAWs. Hyland (2000) expresses that writers' personal presence and authority is considered as a vital rhetorical resource for writers to gain approval for their work. In line with this, Hyland (2002a) found in his study that while native and academic writers use first person pronouns, they had little impact on students' writing. He explains the reason for this as the possibility of acquiring implicit understanding of disciplinary conventions through reading and that the variations were rarely spelt out for students. This may also be the case for the findings of this study. Perhaps, whilst learning academic writing in English, the TAWs were not explicitly exposed to the use of self-mention. Another explanation for the finding can be the uncertainty in the literature on the use of self-mention in academic texts. While impersonality is considered to be a feature of expository writing, because it is thought that academic research is empirical and objective (Geertz, 1988), and many textbooks teach learners to avoid self-mention, some textbooks direct learners to make their voice clear by use of the first person (Hyland, 2002a).

Figure 58 also shows that instead of the first person pronoun, the TAWs tended to use the pattern *the researcher* in their texts. However, this pattern does not necessarily mean expressing presence in the text, because the writers used it to express who the doer

in the study is, in other words, their role in explaining the study. It was found that the TAWs preferred not to use first person pronouns in their TRAs either. There were 19 occurrences for every 100,000 words. This finding may indicate that expressing self in Turkish research articles may not be acceptable as an academic style and therefore, the TAWs avoidedusing it. Nonetheless, since it is acceptable in English academic writing, the TAWs may have felt more confident about this issue, and therefore used self-mention markers more frequently in their English research articles.

Engagement Markers

Engagement markers for both writer groups were compared in terms of frequency. The AAWs had 99 occurrences and the TAWs had 122 occurrences of engagement markers in their English research articles. It can therefore be said that there is little difference between the writers with regard to engaging readers with their texts in terms of frequency.

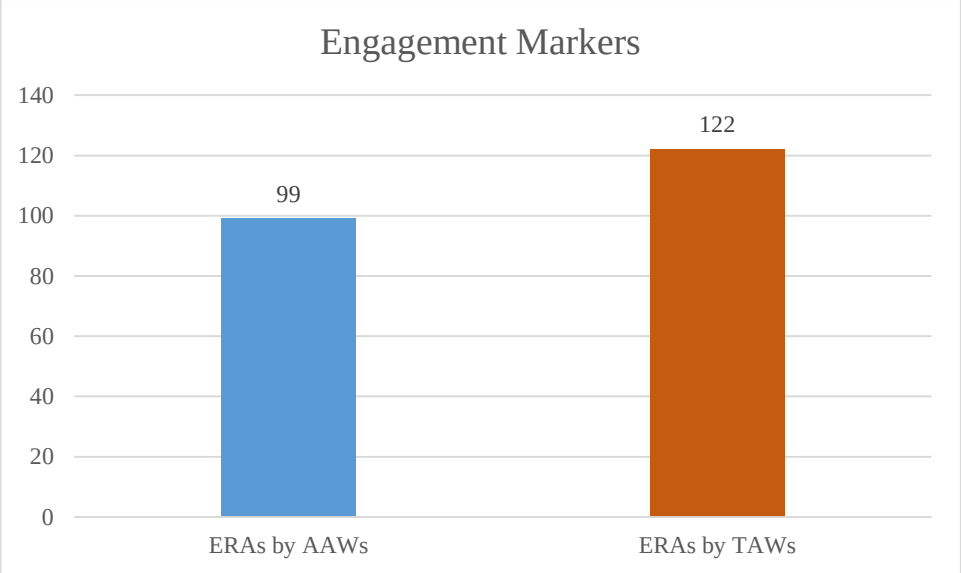

Figure 59: Engagement Markers in ERAs by AAWs and TAWs

Although there is a difference in the use of engagement markers in the ERAs by the TAWs and the AAWs in terms of frequency, no significant statistical difference was found between the groups after the binomial test was run.

Table 29: Binomial Test Results for the Use of Engagement Markers in ERAs by TAWs and AAWs

	Frequency	qi	z
ERAs by TAWs	122	0.00122	1.548012
ERAs by AAWs	99	0.00099	

As shown in Table 29, there is no significant difference between the ratios of the engagement markers used in the English RAs by the TAWs and the AAWs. ($z=1.548012$, $p<0.05$).However, the categories of engagement markers should also be compared to find out whether the writer groups used similar or different engagement markers in their texts. For the comparison see Figure 60. This displays that both the TAWs and the AAWs used directives as the most frequent engagement marker in their texts. This is followed by the use of reader pronouns. In terms of the use of direct questions and personal asides, slight differences can be observed from the figure.

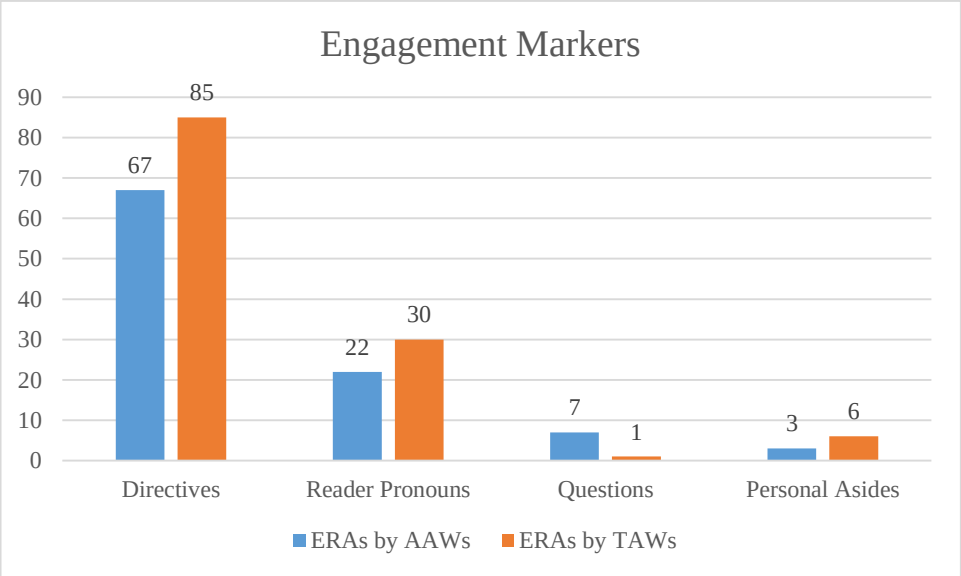

Figure 60: Engagement Marker use by TAWs and AAWs

To find out whether there was any significant difference between the subcategories of engagement markers, a binomial test was run. The results for each category are presented in Table 30.

Table 30: Binomial Test Results for Subcategories of Engagement Markers Used in ERAs by TAWs and AAWs

	ERAs by TAWs		ERAs by AAWs		
	Frequency	qi	Frequency	qi	z
Directives	85	0.00085	67	0.00067	1.460556
Reader Pronouns	30	0.0003	22	0.00022	1.109548
Questions	1	0.00001	7	0.00007	-2.12139*
Personal Aside	6	0.00006	3	0.00003	1.000025

As can be observed from Table 30, a significant difference between the groups was found only for the use of questions. The AAWs preferred to ask questions to pull readers' attention to the article more frequently compared to the TAWs. Asking questions in research articles may seem too informal for the TAWs, because questions are usually used in newspaper columns or stories to attract readers' attention. However, in research articles, this style may not be considered suitable for formal writing.

Considering the frequency of occurrence for each subcategory, certain findings can be put forward. To start with, in terms of the use of directives, the structure types preferred by the AAWs and the TAWs were compared. Figure 61 shows the type of directives used by both writer groups. It can be seen that both groups used the imperative form of verbs the most frequently in their articles. The imperative form was used mostly for the verb *see* to refer to tables, figures, sources and so forth. Nevertheless, the AAWs also used the imperative form of verbs to attract readers' attention to the proposition they were making, using *note that, consider that* and so on, whereas the TAWs only used the imperative to lead readers to information related tables, figures and sources. Next, it can be said that the use of the passive is more frequent in the text of the TAWs, which can be interpreted as the TAWs preferring not to lead or direct their readers with the imperative form of the verb, perhaps thinking it to be impolite. Hyland (2001a: 565) supports this explanation stating, "directives carry strong connotations of unequal power, claiming greater authority for the writer by requiring readers to act or see things in a way determined by the writer." As a result, most directives were used for citational purposes in this study, matching the findings of Hyland's study (2001a)

Another area to noteis the use of modal verbs. It can be seen that the TAWs used more modal verbs to lead their readers in their texts. However, it was also found that the use of the modal verbs was in the passive voice and obviously directed toward the readers, such as *it should be noted that*…

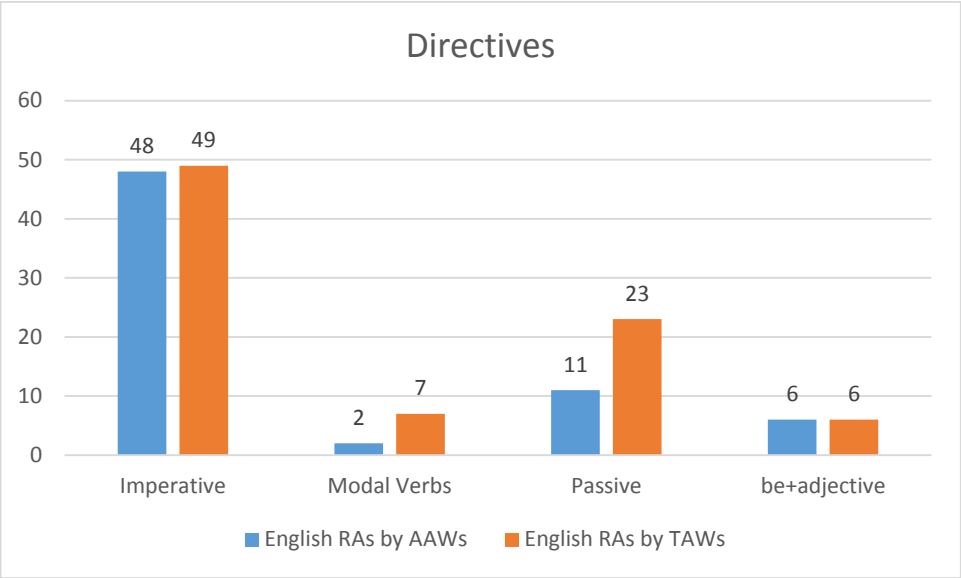

Figure 61: Use of Directives

Considering Figure 61, reader pronouns were also frequently used by the writers, but the TAWs used more reader pronouns compared to the AAWs in the English research articles. However, asking direct questions was more frequently used by the AAWs. In terms of personal asides, the TAWs' texts included more occurrences.

These findings relating to the use of engagement markers may show that both the AAWs and the TAWs tended to include engagement markers in their texts to build interaction with their readers. Although the frequencies are very close, it can be observed that the AAWs tended to be more direct with their readers while the TAWs tried to direct their readers in a more implied and polite manner.

To sum up the findings presented for the last research question, it can be said that both the AAWs and the TAWs used interactional metadiscourse markers in their English academic texts on the teaching of a foreign language. Both sets of writers tended to attempt to draw their readers' attention to their texts. It was also found that the TAWs and the AAWs used similar frequencies of the markers in their texts, although the verbs or subcategories may show a few differences.

On the whole, considering all the findings for the second research question, it may be worth revisiting previously conducted studies on the use of interactional

metadiscourse markers (see Appendix E). Apendix E shows the studies conducted and the blank cells indicate that the researcher did not focus on these aspects during the research. To recognize the explicit focus of the studies, please see Appendix D. As can be seen from the table, there are four studies conducted as contrastive studies regarding the use of metadiscourse markers. However, from Appendix E, it should be noted that two studies investigated the use of metadiscourse elements in Turkish texts and only one study (Can, 2006) carried out a comparative study on metadiscourse categories. The other studies focused more specifically on the use of hedges and boosters. Appendix E summarizes the studies on metadiscourse use in texts and the studies mentioned above, while presenting and discussing the findings of the present study. It is believed that presenting the main and striking findings of the studies in Appendix E may help to better understand the findings of the present study as well as the findings of other studies.

To begin with, the table in Appendix E displays the findings of various studies on the use of metadiscourse markers in texts written by English/American and other languages, including Turkish. It can be observed that there are mainly four studies focusing on the use of metadiscourse usage and conducted on a contrastive study design. Blagojevic (2004) investigated the use of metadicourse markers in English research articles written by English and Norwegian academic writers. The articles were analyzed in terms of the use of *hedging devices, emphatic devices, attitude markers* and *commentaries*. The study shows that both writer groups used metadiscourse markers in their articles in almost the same way. However, there are slight differences among the subcategories. It was found that although English writers used more metadiscourse markers in their research articles, Norwegian writers used interactional markers more in their articles. This is in line with the findings of Dahl (2004), where English and Norwegian writers used metadiscourse markers in similar ways while French writers used them less. Dahl (2004) infers from these findings that English/American writers take the responsibility of the text by showing willingness to lead readers to comprehend the text more easily. This idea is supported by the findings of the study of Mur-Duenas (2011) and of Zarei (2011). In the current study, it was found that Turkish academic writers used interactional metadiscourse markers while writing in English with only slight differences with the American academic writers, although the findings may show differences in the subcategories of the taxonomy of Hyland and Tse (2004). This may

suggest that non-native speakers of English tend to use interactional metadiscourse markers while writing research articles and they tend to write using similar conventions to the target language. This seems to be supported by the findings of the present study which shows that Turkish academic writers use less metadiscourse markers while writing Turkish articles. However, Akbaş (2014) conducted a similar contrastive study with students and found that Turkish MA students used interactional metadiscourse markers while writing in English and in Turkish with similar frequencies. This finding may support the idea that Turkish MA students have begun to focus on drawing their readers' attention. This may mean that, in the future, we might see more articles which construct interaction with readers using interactional metadiscourse markers.

As it can be seen from Table 29, the Turkish writers tended to use interactional metadiscourse markers in both their Turkish and English texts (Ünsal, 2008; Fidan, 2008; Akbaş, 2014). Thefindings of these studies are in line with the findings of the present study. This study reveals that the TAWs used interactional metadiscourse markers while writing both in Turkish and in English. However, the findings also show that the TAWs used more interactional metadiscourse markers while writing in English, although the frequency of use was less than for the AAWs. This is also supported by the findings of the studies shown in (see Appendix E). This may show that while the TAWs tended to construct interaction with their readers, in their articles, they tried to use more markers to achieve this aim in their English articles. This indicates that writers try to achieve written texts according to the writing conventions of the target language, although they also reflect their own cultural writing conventions in their texts. Furthermore, the present study findings show that the TAWs used more attitude markers while writing in Turkish and expressed their beliefs on the proposition more frequently while writing in English compared to the AAWs. This is similar to the findings of Akbaş (2014), but different to Can (2006) who found that American students use more attitude markers compared to Turkish students. One explanation for this difference may be the genre used because in both this study and in Akbaş's study (2014), research articles and academic writers were chosen as data sets, while in Can's study (2006) only students essays were analyzed. It can be observed from the table in Appendix E that the other studies were not contrastive in terms of the use of metadiscourse markers, only focusing

on certain subcategories, such as hedges and boosters. The subcategories will be discussed in detail below.

There is one important finding relating to the use of hedges in the present study. While the TAWs used hedging devices the most frequently, the AAWs used self-mention devices the most followed by hedging devices. In terms of hedging, although the frequencies showed differences, no significant difference among the groups was found. Both the AAWs and the TAWs used modal verbs *(may, can)* in the ERAs while the TAWs used *–AbIl-Ir* in the TRAs most often. This shows that the TAWs preferred to show less certainty on their propositions and were less assertive. However, the AAWs used more variety in marking hedging using epistemic verbs, adjectives and adverbs. One explanation for this can be that in Turkish the use of *–AbIl-Ir* is commonly used to express possibility rather than the verb itself.

The TAWs used modal verbs more frequently than the other categories to express hedging andused less variety of adjective and adverbs. The TAWs used hedging more frequently, although no significant difference was found, and this finding is in line with Can (2006) and Bayyurt (2010). However, Can (2006) conducted a study of student essays of bilingual Turkish and American students. He found that Turkish students used more hedging devices while writing in Turkish compared to American students' essays. Compared to other categories in the taxonomy, the TAWs used hedging devices the most frequently, which is a similar finding from the study of Fidan (2002), who analyzed scientific articles from various disciplines in Turkish academic journals and books.

Almost all the studies focused on the use of hedging devices in Turkish and English texts (see Appendix E). In the study of Blagojevic (2004), hedging devices were used more frequently by Norwegian writers and in Zarei (2011), by Persian writers. Considering Turkish and contrastive studies, it can be concluded that hedging devices were used with similar frequency by native speakers of English, although the sources they used show differences. The present study reveals that no significant differences were found among the groups in the use of hedging devices. This may show that the use of hedging devices show similarities among cultures, as in the studies of Blagojevic (2011), Zarei (2011), Kafes (2009), as well as the present study. The findings of these studies show similarities in the use of 'may' and 'can'. In other words, in research articles, native speakers of English used 'may' for hedging and non-native speakers

preferred ‘can’ more often, although ‘can’ is accepted as being more informal; see Vold (2006- medical research article; Biber, et al.1999). Also Leech (1971) does not accept ‘can’ as an epistemic modality marker. This may imply that in academic writing courses, more focus on formal and informal language, or on academic writing conventions should be made. This is important because academic writers conduct studies and write related articles to share their experience with colleagues in the field and the writing conventions and the language used in these articles may affect the interpretation of the study and of the writer him/herself. Furthermore, the use of hedging devices in research articles may show that all writer groups prefer to show openness to the propositions they make on the part of the reader and display that the propositions are open to discussion. This finding may show that academic writers tend to show less presence in their research articles, prefering to tone down their claims to avoid possible attack (Doyuran, 2009).

The table in Appendix E shows findings relating to the use of boosting devices in various studies. The studies in the table reveal that all writers, native and non-native speakers of English alike use boosting devices in their research articles. Boosters were found to have been used more frequently by native speakers of English in the studies of Blagojevic (2004), Zarei (2011), Dahl (2004) and Algı (2002). The present study reveals similar findings relating to boosters. The AAWs used boosters more frequently compared to the TAWs, and the TAWs made use of boosters more frequently in their English articles compared to the Turkish articles. These differences were found to be significant in the present study. This can be interpreted as academic writers preferring to show certainty of the propositions they make, wanting their readers to feel their presence in the text. It can be said that the TAWs may have felt more confident in expressing their certainty whilst writing in English. Moreover, writers use boosters to express the certainty of propositions and need to persuade their readers as to the true value of the propositions (Vazquez and Giner, 2009). However, considering the findings of the present study and the studies in Appendix E, two reasons for this can be identified. The first is applying the academic conventions of the target language and the second reason can be more confidence being felt while writing in English due to the fact that the culture itself may accept such an attitude.

In terms of variety in the use of boosters in the present study, the AAWs used more variety in expressing certainty compared to the TAWs and the TAWs used more variety when they wrote in English. The variety of use of boosters by the TAWs can be supported by the findings of the studies of Algı (2012) and Akbaş (2014). The most preferred boosting device was the modal verb 'must' in the present study, and this is a finding similar to that of Kafes (2009). Why this modal verb was preferred by the writers may be its effectiveness in showing readers that the writer is certain about what s/he is stating and shows it explicitly to the readers. However, the AAWs used more variety in expressing this function, such as in the use of adjectives and adverbs. This can be explained by the language structures of English and Turkish. The TAWs may have found it easier to mark certainty using suffixes rather than by searching for a variety of verbs and adverbs to mark it while writing in Turkish, and they may have transferred this attitude while writing in English. In the Turkish research articles, it was found that the writers used the suffix *–mElI (-mAlI)*. This finding is in line with the finding of Doyuran (2009) in Turkish research articles. This may explain the lack of variety of booster devices in both types of research articles by the TAWs.

Moreover, attitude markers were investigated in the present study. The findings show that the TAWs used attitude markers more frequently in their Turkish research articles. Zarei (2011) similarly found that Persian writers used more attitude markers in Persian research articles. When the ERAs by the TAWs and the AAWs are compared, it can be seen that the TAWs used more attitude markers but fewer than in their Turkish articles. Similar to the findings on the use of hedging and boosting devices, this finding may be interpreted as application of the target language writing conventions whilst writing. In addition, Table 31 shows that most of the studies reveal that native speakers of English use more attitude markers compared to non-native speakers of English. However, the present study, and the study of Zarei (2011), displays the opposite of this finding. This difference may be due to the type of writer. For example, in contrastive studies comparing Turkish and English, the participants were students. In this study, however, as well as Zarei's study (2011), the participants were academic writers. Moreover, the studies of Blagojevic (2004) and Mur-Duenas (2011) show that native speakers of English use more attitude markers. The frequent use of attitude markers in the Turkish and Persian languages can be explained culturally. Perhaps, these cultures

value affective attitudes and their writers reflect this in their writing while establishing a relationship with readers (Akbaş, 2014).

The findings relating to the use of self-mention devices in the studies in Table 31 show differences. Blagojevic (2004) and Mur-Duenas (2011) found that native speakers of English used more self-mentionin their texts. This shows that native speakers of English tend to state their presence in their texts and want to explicitly interact with readers. This finding is also supported by the finding of the present study. In this study, the AAWs used far more self-mention devices in their texts compared to the TAWs. Can (2006) found a similar result. However, he conducted his study with students. Also, Akbaş (2014) found that TAWs used none of the self-mention devices. These findings may suggest that Turkish writers prefer not to mention themselves in their texts. This may be a cultural feature. Turkish students and academicians may be taught to avoid the self in their texts. Expressing oneself explicitly appears authoritative and lacking humility in Turkish culture and this may have an effect on their writing. Another reason may be that students and academicians may be taught to avoid self-mentions because academic research is considered empirical and objective and by using self-mention this objectivity may be lacking (Geertz, 1988; Ramanathan and Atkinson, 1999). This may also explain the use of *the researcher* or the use of the passive voice in the research articles of the TAWs. By using these markers, the TAWs tried to keep their texts objective for their readers.

Finally, the current study reveals that all of the writer groups used markers to engage their readers with the texts they wrote. They paid attention to lead the reader (use of imperatives to direct to tables), emphasize important points (use of directives), show shared knowledge (inclusive *we* or other use of reader pronouns), or just draw the attention of readers to the text by asking questions. Therefore, the use of engagement markers among the groups of writers did not show any significant differences. This may indicate that the AAWs and the TAWs paid attention to their readers and tried to engage them within the texts. However, certain of the subcategories show significant differences among the groups.

To begin with, the TAWs used fewer directives, especially the imperative forms of verbs in their texts compared to the AAWs. Perhaps the avoidance of the imperative form is a politeness strategy used by the TAWs. Hyland (2001a: 565) supports this

explanation stating that, "directives carry strong connotations of unequal power, claiming greater authority for the writer by requiring readers to act or see things in a way determined by the writer.'' Hyland also found in his study (2001a) that most directives were used for citational purposes rather than for emphasis on the proposition. Zarei (2011) investigated the use of metadiscourse markers in Persian and English and the study reveals that writers in Persian used less engagement markers compared to writers in English and that English writers paid more attention toengaging their readers. This supports the findings of this study considering the higher frequency in the use of engagement markers, especially reader pronouns, direct questions and personal asides,of which there were very few in both sets of research articles written by the TAWs.

In terms of reader pronouns, the TAWs used them more frequently in the ERAs compared to the TRAs. Using the *inclusive we*, for instance, instead of *you*, which is the case in this study (also see Bloor, 1996), shows that the writer and the reader are closely linked as members of the same scientific community (Hyland, 2001). Moreover, Hyland (2001) explains this avoidance of *you* by stating that writers generally tend to avoid the strong bond with their readers that *you*establishes, and therefore they try to minimize any implication that the writer and reader are not closely related considering the same disciplinary community. The finding also may suggest that the TAWs felt more confident engaging their readers by the use of the inclusive *we* while writing in English. This may be explained by cultural differences in academic writing. The low frequency of the use of direct questions and personal asides in the articles can be explained by the construction of a very explicit relationship with readers. The reason for considering them as an explicit strategy is that personal asides are especially used "through interruptions to the ongoing discussion, briefly breaking off the argument to offer a metacomment on an aspect of what has been said." (Hyland, 2001; 15) Direct questions were rare in the data and this may be because their appearance "in the pedagogic literature as strategies is to be avoided and replaced with indirect questions." (Hyland, 2001; 23; see Swales and Feak, 1994; 74)

To sum up, the TAWs and AAWs in this study show significant differences in the use of interactional metadicourse elements in their research articles. However, while

writing in English, the TAWs wrote using similar conventions with the AAWs in terms of the use of interactional metadiscourse elements. Thus, it can be said that they produced texts somewhere between their native culture and target culture. This is also expressed by Dahl (2004) who states that researchers may be affected by their native writing culture. However, they may be also influenced by the disciplinary culture in which they socialize via academic studies. This may indicate that non-native speakers of English may be provided with the necessary information on academic writing regarding the use of metadiscourse elements while writing for international academic journals to share their research and are taught how to interact with their colleague readers in their research articles.

CHAPTER FIVE
SUMMARY AND CONCLUSION

This section presents a discussion of the findings of the current study. The findings are discussed in terms of each category of the taxonomy suggested by Hyland and Tse (2004) considering the ERAs by TAWs and AAWs and the TRAs by TAWs. The discussion is made with regard to the research questions of the study.

Discussion and Conclusion

The main purpose of the study is to investigate the use of interactional metadiscourse markers in English research articles (ERAs) on the teaching of a foreign language written by Turkish academic writers (TAWs) and American academic writers as well as Turkish research articles (TRAs) written by Turkish academic writers and to compare the findings and present possible interpretations. However, it is important to make generalizations related to the use of interactional metadiscourse markers very carefully because of the different nature of the languages; English (inflected language) and Turkish (agglutinative language). Since the initial study, comparing Turkish and English academic writers in terms of their use of interactional metadiscourse markers in research articles on teaching a foreign language, it is thought that the findings of this study can elaborate on certain important issues.

First of all, this study shows that both the TAWs and AAWs under consideration used interactional metadiscourse markers in their research articles on the teaching of a foreign language, in both Turkish and in English. This means that both writer groups paid attention to constructing dialogue with their readers and engaging their readers with their texts in both languages. The findings display that the TAWs and the AAWs, in both Turkish and in English research articles on teaching, were aware that interaction with their readers was important. They opened discussions on their propositions and toned down their voice, showing certainty and belief in what they were putting forward. In addition, they showed their presence, directed their readers in their texts and engaged them by using directives, reader pronouns, direct questions and personal asides, although the last two markers were used the least as markers in data analyzed. Thus, it

can be said that both sets of writers, the AAWs and the TAWs, involved their readers in their research articles, exactly as academic writing presupposes as Hyland (2001) states:

> Academic writing presupposes the active role of readers and that the engagement of audience is an important constitutive element not only of a writer's argument, but also of a disciplinary context. Writing is a social act, and every successful text must display its writer's ability to engage appropriately with his or her audience. (Hyland, 2001:p.25)

Overall, although both writer groups used interactional metadiscourse markers in their texts, the type and frequency showed differences when comparing the English research articles by the TAWs and AAWs, and the Turkish research articles. The most frequent use of IMMs was found in the English research articles by the AAWs, followed by the English research articles by the TAWs. The lowest frequency was found in the Turkish research articles. The TAWs employed IMMs in their Turkish texts, but not as frequently as the AAWs. These findings were also supported by statistical analysis using binomial testing. A signficant difference was found among all of the data sets. In other words, the AAWs used significantly more IMMs in their research articles compared to the TAWs, while the TAWs used significantly more IMMs in their English research articles compared to their Turkish research articles. In terms of non-native speaker use of IMMs, Mur-Duenas (2011) reveals in his study that Spanish speakers used less metadiscourse features compared to American-based Business Management scholars, and this is line with the findings of this study.

Considering the findings above, it can be said that the TAWs followed their own academic writing conventions in their own culture while writing in Turkish, but they tried to adapt the use of IMMs whilst writing in English. Halliday (1994) states that metadiscourse is considered as academic rhetoric which can be influenced by the culture of the writer. Blagojevic (2004) also claims that academic writing norms show differences from culture to culture, in traditional writing habits and in rhetorical preferences which exist in different writing cultures (Kaplan, 1966; Ivanic, 1998; Flottum, Dahl, Kinn, 2006). Therefore, academic writers may transfer their own cultural writing norms while writing in a different language.

Nevertheless, while the AAWs used *can* less than *may*, *the* TAWs used both of these modal verbs frequently. This finding is to some extent be supported by the study

of Crawford (2005). In this study, native English speakers were found that they prefer to use more formal modal verbs, such as *may* and *would*, whereas non-native speakers tended to use *can (*see Vold (2006- medical research article; Biber, et al.1999). This can be interpreted asthe TAWs tending to use modal verbs to express hedging in English, as did the AAWs, but using less variety thanthe AAWs. This may mean that they transferred their own cultural academic writing norm whilst writing in English. The finding relating to a lack of variety is in line with the finding of Karkkainnen (1990) who found that Finish learners equally used less variety compared to native speakers of English. Another explanation maybe the view that hedges help writers to take their stances and project their claims with a suitable amount of certainty and confidence; hence, it gives writers the opportunityto protect themselves against possible critical reactions (Hyland, 2005; Swales et al., 1998). This may be the reason why both writer groups used hedging in their research articles.

Boosters were found to be the least used by both the AAWs and the TAWs, withthe TAWs using boosters less than the AAWs. Boosters are used to to express the certainty of a proposition. Writers have the need to convince their readers of the true value of their propositions (Vazquez and Giner, 2009). Perhaps, academic writers use boosters less frequently compared to other IMM devices because these express high certainity of the proposition they are making and the writers may feel they prevent interaction between writer and reader because the writer closes the proposition to discussion.This may support the finding of agreater use of hedging in the texts. The most commonly-used suffix was *–mElI (-mAlI),* andmodal verbs were preferred more in the English research articles by the TAWs. The TAWs preferred not to show full commitment to their propositions and avoided displaying authority. Furthermore, the TAWs used less boosters compared to the AAWs. This finding is different from the findings of Zarei (2011) but is in line with Can (2006). In Zarei's study (2011), it was found that Persian writers used more boosters and were more direct compared to native speaker of English. In Can's study (2006), it was found that American students used more boosters in their essays compared to Turkish students. While the TAWs used very few boosters in their Turkish articles, they tended to use boosters more frequently while writing in English. This may show that they tried to adapt their writing norms to the academic writing norms of the language they were writing in.

In terms of attitude markers use, the findings reveal that the TAWs used significantly more attitude markers in the Turkish research articles compared to the English research articles by the AAWs. Moreover, they used attitude markers more frequently in Turkish compared to English. This may suggest that the TAWs tended to express their attitudes toward the proposition they were making in their Turkish research articles because of feeling more confident in their native language. However, it was found that the TAWs did not make use of variety in their use of attitude markers. The most frequently used was *important,* while the AAWs used a greater variety in expressing their attitudes, such as surprise, importance (more synonyms), agreement, frustration, expectancy and so forth.

An outstanding difference was in the use of self-mention by the writers. While the AAWs used first person pronouns extensively, the TAWs used fewer in both Turkish and English. This finding is supported by the study of Molino (2010). Molino (2010) compared the use of self-mention devices of native speakers of English and Italian. It was found that in Italian articles there was less use of the first person pronoun detected compared to English articles. This may display that the TAWs preferred not to show their presence in academic texts. Another explanation for the finding can be the uncertainty in literature on the use of self-mention in academic texts (Geertz, 1988; Hyland, 2002). As Hyland (2002) suggests, writers need to construct a stance toward their propositions, but if the writer is from a culture (such as Turkish) which relies more on circumstances where self is more collectively constructed, the writer tends to avoid mention of self in texts (Ramanathan and Atkinson, 1999). Another reason for the sparse use of self-mention markers by the TAWs may be academic writing conventions of their culture, since they may have been taught not to make themselves explicit while writing academic texts. This impersonal style is considered a characteristic of expository writing because it is based on the notion that academic research is purely empirical and objective (Hyland, 2002). Self-mention is considered as being representative of writers to readers and, by means of the use of first person pronouns, writers have the opportunity to display their roles in the discourse (Hyland, 2001b; Kuo, 1999; Tang and John, 1999). This may be the reason why in certain cultures avoidance of the self is taught in academic writing.

Finally, both the AAWs and the TAWs used engagement markers commonly in their texts, although the devices they used showed differences in frequency. It is possible

that engagement markers were used more often because by using engagement markers writers can attract their readers' attention to important points of their argument using questions, directives and so forth (Hyland, 2005). In this study, directives were generally preferred by the writers, in particular to attract their readers' attention to tables or outside references. While both sets of writers used directives frequently, the TAWs mostly preferred to direct their readers using the passive form of verbs. They usually used the passive form to direct readers to tables, figures or for citation purposes, whereas the AAWs used directives, especially the imperative form of verbs, to direct readers to tables and figures and to draw the attention of readers to important points being made.

In this study, although there were differences in the use of interactional metadiscourse markers used in the Turkish research articles and the English research articles, it ccn be seen that the TAWs used IMMs in their English research articles more frequently compared their use in Turkish research articles. It can be said that the TAWs were aware of the importance of following metadiscourse use in English academic discourse otherwise misunderstanding could have occurred between the writers and their readers (Blagojevic, 2004) when their works are published internationally. Blagojevic (2004) found in a study conducted with Norwegian academic writers that the Norwegian writers used more interactional metadiscourse markers while writing in English, which reflects the results of this study. The TAWs used more interactional metadiscourse markers whilst writing in English compared to their writing in Turkish. Additionally, Dahl (2004) found that Norwegian and English writers used similar patterns, whereas French writers did not. Moreover, all this may indicate that the TAWs of the current study felt freer while writing in English compared to writing in Turkish, because they used more IMMs and engaged their readers with their articles more frequently compared to their Turkish research articles.

All these findings from previous studies as well as this study show that TAWs pay attention to their readers and write their research articles focusing on building interaction with their readers. When other comparative studies are considered as well (Blagojevic, 2004; Dahl, 2004; Mur-Duenas, 2011), it can be observed that English research articles written by English or American writers include more interactional metadicourse markers compared to research articles in other languages in those studies. Since this is also the case in the present study, it can be concluded that American/English

academic writers give importance to constructing interaction with their readers. This shows that these writers may have received formal education on academic writing and its conventions while in other cultures, the use of metadiscourse may not be a focus of academic courses. In Turkey, only limited formal education in writing is provided both in foreign language courses and Turkish courses. In high schools especially, writing courses in Turkish may not include details related to producing well-written coherent texts. Writer and reader interaction may not be the focus of writing courses and this may explain why TAWs use less interactional metadiscourse markers in their texts compared to AAWs. This is supported by the definition made for writer and reader-responsible styles of Hinds (1987) and the findings of Mur-Duenas (2011). Mur-Duenas' study shows that Spanish writers tend to write using a reader-responsible style, meaning that readers should spend effort interpreting the content of the text, whereas American writers can be considered as writer-responsible writers.

The differences in the use of interactional metadiscourse markers may also be considered as being cultural. Perhaps, in Turkish culture, while writing articles, it is believed that the writer is responsible for presenting information or reporting a study rather than constructing interaction with readers. Moreover, perhaps this is because they were taught to avoid this, or because cultural factors deem it too authoritative for academic writing.This may explain the finding related to the use of hedges and boosters. The TAWs used these elements more frequently than engagement markers and self-mentions. Hedges and boosters are used when writers want to express their presence in their texts and engage the readers with the text. Thus, it can be said that by analyzing written texts, we can learn a lot about the cultures of the writers and their writing conventions. This idea is also supported by Mauranen (2001) who puts forward the idea that, "texts are…one of the main keys to understanding a culture. Texts as cultural products act out relevant social relationships within the culture, and in this way provide keys to understanding themselves as well as other aspects of the culture" (p.53).

It is well known that writers are influenced by the writing culture they grow up with and this is reflected in their written styles. This study shows that TAWs use interactional metadiscourse markers differently when writing in Turkish and English. The study reveals that TAWs try to write more closely to the target culture norms because English is a global language and one of the ways they can communicate and

share their knowledge in their field is by writing in English and publishing their articles in international journals. As Flottum, Dahl and Kinn (2006) suggest, writers are influenced by cultural and educational background, language proficiency and writer personality and style. This is supported by other researchers (Kaplan, 1966; Ivanic, 1998).

The current study focuses on analyzing research articles on the teaching of a foreign language using the suggested taxonomy by Hyland and Tse (2004). The taxonomy of Hayland and Tse (2004) was chosen for its explicitness and because it is a recent taxonomy for metadiscourse elements in texts. However, it should be emphasized that "no taxonomy or description will ever be able to do more than partially represent a fuzzy reality" (Hyland, 2005; 58). The reason for this is its explicitness. In other words, such taxonomies can only focus on explicit devices which can be detected clearly in texts. Considering the present study, it can be seen that explicit devices in the research articles were studied, but establishing interaction with readers can be achieved in various ways, such as using punctuation or underlying meanings of propositions they make. In this sense, the taxonomy of Hyland and Tse (2004) lacks such interactions and therefore, using this taxonomy limits the analytical process of the study since the present study focuses on explicit devices used by writers. On the other hand, including explicit devices in a text displays writer's 'conscious choice to indicate presence in the discourse' (Hyland, 2005; 58). By using explicit devices, writers show their readers that they are aware of them and are willing to establish interaction. Thus, the metadiscourse taxonomy suggested by Hyland and Tse (2004) was very useful during the data analysis process of the current study. The categories are clearly defined, making it is easy to understand what purpose a device serves in establishing interaction with readers using interactional metadiscourse markers.

Another point is the clear cut difference in analysis the taxonomy requires. However, there may be some overlap between devices used for interpersonal and those for interactional purposes. The devices in one category can sometimes be included in more than one category of the taxonomy. For instance, while Hyland and Tse (2004) include such expressions under *reminders* in interpersonal metadiscourse markers, in this study, these devices are considered to be directives. This is because the writer asks readers to return to a particular section of the text, reminding readers of the information

presented earlier from a new perspective. In other words, one device can be attributed to more than one category (Hyland, 2005). To illustrate, from the present study, the expression ‘as shown in Table 3’ (Eren and Tezel, 2010; p.1422; from current data) can be categorized both as a directive, since it directs the reader to that specific table, and also as a reminder. Thus, in certain situations, there may not be a clear cut role for these devices.

Furthermore, establishing interaction with readers is suggested by means of metadiscourse markers, and the use of metadiscourse markers helps writers to explicitly interact with readers. However, in some cultures this might not be acceptable, although it is acceptable in English. For example, while the writer is responsible for conveying the message to the reader and aiding them in its comprehension by using metadiscourse markers in Japanese, Korean and Chinese, this explicitness may be perceived as acceptable since the reader should be assisted in receiving the message (Eggington, 1987). Cylne (1987) states that German writers require readers to comprehend the meaning of their texts on their own, while in English culture it is the responsibility of the writer to convey meaning. In this case, the taxonomy of Hyland and Tse (2004) may be considered as limited and there may be the need to adapt this taxonomy to the culture of the language that the text is written in. In terms of the current study, in Turkey, the avoidance of self-mention in academic texts or boosters in academic writing is taught, because these markers may appear as too strong and assertive for readers and may not be acceptable to other scholars. The data of this study shows that Turkish academic writers prefer to avoid self-mention and the use of the passive voice or the term *the researcher*. Moreover, Turkish academic writers in the present study avoided the use of imperative forms of verbs when they needed to attract readers’ attention on a proposition. In other words, they avoided the use of *note that, notice that* and so forth. Instead of using these devices, they preferred to use attitude markers and adjectives. However, these devices are not included in the taxonomy of Hyland and Tse (2004). This may suggest that the taxonomy may be adapted to the culture of the language that is written for such contrastive analysis. Another inference from this finding might be that writers should not only be aware of the writing conventions of English academic writing, but also of the culture that they expect their audiences to be from (Hyland,

2005), or that writers should be taught that metadiscourse displays differences among cultures in terms of academic writing.

Since the TAWs wrote similarly in terms of interactional metadiscourse element use to both their own culture and the target culture, this finding supports both Kaplan (1966) and Widdowson (1979), who claim that academic writing conventions are quite global. Still, every culture has its own norms and no writers have to adapt their writing norms to a target language. However, if they want to publish in international journals, then knowing the academic writing conventions of the target language is important. Başaran and Sofu (2009) investigated why English research articles of TAWs were less accepted by the SSC journals compared to other countries. They found that in 2005, Turkey ranked 19th of 190 countries in terms of articles accepted in the SCI (Science Citation Index) and 25th of 159 countries for SSCI (Social Sciences Citation Index) journals. One point that the study shows, after interviews with both academic writers and referees, is the formal training received. They found that one emerging theme in their study was that academic writers did not receive formal academic training thereby causing difficulties for TAWs. The study of Başaran and Sofu (2009), and the present study, show that TAWs attempt to write following conventions of a target language and, if they receive more formal training, academic writers' research articles can be accepted for publication more often. The most important point that can be made here is that it is crucial for academic writers to interact with readers in their fields. Writers can reflect their cultures in their texts as well as constructing interaction with their readers. They do not have to abandon their own cultural academic writing norms while writing, but what they can do is to interact with their readers by being aware of their cultural writing norms and those of the readers they consider as their audiences and, in order not to be misunderstood by the readers, they should receive formal training in this area.

To summarize the findings, this study reveals that the TAWs and the AAWs involved in the research used interactional metadiscourse markers in research articles on the teaching of a foreign language. They showed certain similarities as well as differences in the use of the markers and, considering this finding and the findings of other scholars, this may show that every writer may bring different writing norms while writing in their native language and also in English. However, while writing in the target

language, non-native speakers tended to apply the academic writing conventions of English.

Implications of the Study

This study found that Turkish academic writers tended to use less interactional metadiscourse markers compared to English writers in their English research articles. Most commonly they tended to build a relationship with their readers in a more implied way, such using the passive form of verbs. Since Turkish academic writers should write in English if they want their work to be read, there is a need to write in a similar fashion to English academic writers. Therefore, it is suggested that academic writing courses be included in MA and PhD programs because people attending these programs aim at improving themselves academically and, to this aim, they ought to write and publish their work in English. These courses could help students to become aware of metadiscourse and how use it appropriately in their texts. Such courses could also be taught on undergraduate BA programs, because if English is the medium of instruction in their departments, students need to write their academic papers in English in order to pass their courses. As Başaran and Sofu (2009) suggest, in their study investigating the reasons for the low number of research articles by TAWs accepted by international journals, TAWs do not receive much information on academic writing in their courses at university, at BA, MA or Ph.D levels. As a result, including courses on academic writing in the curriculum may help to improve the English academic writing skills of Turkish academicians.

The courses could also focus on raising learner awareness in cultural differences in writing conventions of different languages. This may help academic writers to write globally acceptable and comprehensible texts. Not only in English, but also in Turkish, learners should be taught how to build relationships with the readers and follow consistent norms for academic writing.

It is also important for research assistants to publish papers in English to connect with scholars in their field. Therefore, even though they are proficient in English, it is believed that taking EAP (English for Academic Purposes) courses focusing on academic language in research articles can be of great benefit to them.

A final point could be the teaching of a variety of markers which build a relationship with readers. Since TAWs tend to use modal verbs more frequently, they could be taught to use alternative patterns to mark hedging, boosting, attitude or to engage their readers. Studies on sample research articles could be carried out to achieve all of these aims.

Limitations of the Study

The findings of this study cannot be generalized across writers and disciplines, since only one discipline and one topic were the basis of this study; the teaching of a foreign language. Thus, caution should be taken while making generalizations. Also, different writers bring different writing norms to their texts. This should be considered, too. Another limitation is that since this study was the second study comparing interactional metadiscourse markers in Turkish and English research articles, more markers could have been identified for analysis in the Turkish data. However, the only basis for the categories of Turkish IMMs was the pilot study conducted. Therefore, not all suffixes used as interactional metadiscourse markers in Turkish were analzed in the data. The most common suffixes from the pilot study were added to the list (see Appendices A and B).

Suggestions for Further Research

One future study could investigate a comparative study on Turkish research articles and English research articles across more disciplines, such as science and the social sciences. Perhaps, since the TAWs of this research were mostly instructors of English, they may have been aware of the use of interactional metadiscourse elements. Consequently, English research articles written by TAWs from different academic fields could be compared. Such a study could contribute to the field in terms of identifying whether being exposed to the English language for a lengthy period may affect the use of IMMs.

A further contribution could be made by a study comparing TAWs, native speakers of English and another non-native speaking culture, such as Chinese, Spanish or Italian. Such a study would provide an opportunity to investigate whether the use of

interactional metadiscourse markers displays differences across different non-native speakers of English.

Additionally, it could investigate whether writing courses at Turkish universities could assist future writers in use of IMMs. Thus, the written output of academic writers and that of student writers could be compared in both English and Turkish. This may help to identify which parts of the teaching of the use of IMMs should be strengthened.

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APPENDICES

APPENDIX A

Pilot Study Items

Turkish Articles
Hedges
-AbIl-Ir
belki
sonucuna varılmıştır
kabul edilebilir derecede
Boosters
-Meli(-Malı)
aslında
kesinlikle
açıkça
kuşkusuz
Attitude Markers
şaşırtıcı şekilde
oldukça
önemli şekilde
eksikliği
zorluk
açık bir şekilde
dikkat çekmektedir
önemlidir
Engagement Markers
Reader Pronouns (siz; biz, -mız, -ız)
Personal Asides
inanılmakta
Directives
Imperatives/ -meli(malı)/
passive

Questions
Self-Mentions
First person pronouns/ and Turkish suffixes

English Articles
Hedges
might
perhaps
possible
possibly
can
appear to
Boosters
In fact
definitely
it is clear that
certainly
Clearly (associated with)
Attitude Markers
unfortunately
agree
surprisingly
unsurprisingly
quite
significantly
important
neglected
limitations
lack of

difficulty
fail
Engagement Markers
Reader Pronouns (you, your)
Directives
Imperatives / Modal Verbs/ be+adjective +to
Passive
Personalasides
By the way
it is truethat
believe
Questions
Self-Mentions

APPENDIX B

Items Coded in the Present Data

IMMs in Turkish RAs by TAWs

1. **Hedges**
    a. sonucuna varılmıştır
    b. -AbIl-Ir
    c. mümkün
    d. belki
    e. muhtemelen
2. **Boosters**
    a. yadsınamaz
    b. pek
    c. –MelI(MalI)
    d. kuşkusuz
    e. kesinlikle
    f. kesin
    g. kanıtlamakta
    h. gerekli
    i. gereken
    j. aslında
    k. açıkça
3. **Attitude Markers**
    a. şaşırtıcı
    b. pek
    c. önemli
    d. oldukça
    e. dikkat
    f. çok
    g. açık
    h. açıkça
4. **Engagement Markers**
    a. Reader pronouns

i. -siz
ii. -nız
iii. Inclusive biz
iv. -mız
v. -ık
vi. -iz

b. Personal asides
i. inanılmaktadır
ii. düşünülmekte
iii. gerçekte

c. Directives
i. Passive
1. verilmiştir
2. belirtilmiştir
3. belirtildiği üzere
4. sergilenen
5. sunulmuştur
6. sunulan
7. özetlenmiştir
8. bulundurulduğunda
9. gösterilmektedir
10. görülmektedir
11. görüldüğü gibi
12. bakıldığında
ii. Modal Verbs
1. Gereken
a. –MelI(MalI)
i. Imperative
1. aktaran
2. Bkz
3. göstermektedir

b. Self-Mentions

a. ben
b. -im
c. bana
d. benim
e. biz
f. -iz
g. -ik
h. bizim
i. bize
j. the researcher

IMMs in English RAs by TAWs

1. Hedges

a. Verbs
  i. tend to
  ii. seem
  iii. indicate
  iv. appear to

b. Modal Verbs
  i. might
  ii. may
  iii. could
  iv. can

c. Adj. And Adv.
  i. probably
  ii. possible(ly)
  iii. perhaps

2. Engagement Markers

a. Reader Pronouns
  i. you (your)
  ii. inclusive *we*

b. questions

c. Personal Asides
   i. it is true that
   ii. believe
   iii. agree
d. Directives
   i. Passive
   ii. Modal Verbs
      1. should
      2. must
      3. can
   iii. Imperatives
      1. show
      2. see
      3. present
      4. notice
      5. note that
      6. consider
      7. appear
   iv. be+adjective+to

3. Boosters

a. verbs
   i. sure
   ii. show
   iii. prove
   iv. demonstrate
   b. Modal Verbs
      i. will
      ii. should
      iii. must
      iv. cannot
   c. Adj. And adv.
      i. unquestionably

ii. undoubtedly
iii. obvious
iv. necessary
v. in fact
vi. highly
vii. evident
viii. definitely
ix. clear(ly)
1. it is clear that
x. certainly
xi. absolutely

4. Attitude Markers

a. vital
b. unsurprisingly
c. unfortunately
d. unexpected
e. surprising
f. striking
g. significant(ly)
h. remarkable
i. quite
j. noteworthy
k. neglected
l. interesting(ly)
m. important
n. fail
o. expected
p. difficulty
q. crucial(ly)

5. Self-Mentions

a. I
b. me

c. my
d. we
e. us
f. our

APPENDIX C

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APPENDIX D

Studies on the Use of Metadiscourse Markers

		Interpersonal	Interactional					
				Hedges	Boosters	Attitude Markers	Self-mention	Engagement Markers
Blagojevic (2004)	ERAs by English-Norwegian Writers	X	X	X	X	X	X	
Dahl (2004)	ERAs by English-French-Norwegian Writers	X	X					
Mur-Duenas (2011)	English RAs by AAWs and Spanish RAs by Spanish Academic Writers	X	X					
Zarei (2011)	English RAs by native speakers - Persian RAs by Persian Academic Writers	X	X					
Akbaş (2014)	Turkish and English Student essays by Turkish MA writers		X					
Algı (2012)	Turkish and English Student essays by Turkish students			X	X			
Bayyurt (2010)	Turkish and English Student essays by Turkish students			X				
Can (2006)	English Essays by bilingual Turkish students and monolingual American students Turkish Essays by bilingual and monolingual Turkish students	X	X					
Doyuran (2009)	only Turkish RAs			X				
Erkoç (2010)	English MA thesis by Turkish students			X				
Kafes (2009)	ERAs by Spanish-Turkish-American Writers			X	X			
Özden (2002)	only Turkish RAs		X					
Fidan (2008)	only English RAs	X	X					

APPENDIX E (Results of the Studies on the Use of Metadiscourse Markers)

		Interactional Markers	**Hedges**	**Boosters**	**Attitude Markers**	**Self-mention**	**Engagement Markers**
Blagojevic (2004)	ERAs by English-Norwegian Writers	used more in ERAs by English writers	more in Norwegian	More in English	More in English	More in English	
Dahl (2004)	ERAs by English-French-Norwegian Writers	English and Norwegian: similar use--French less					
Mur-Duenas (2011)	English RAs by AAWs and Spanish RAs by Spanish Academic Writers	used more in ERAs by AAWs	more in ERAs by AAWs	More in ERAs by Spanish	More in ERAs by AAWs	more in ERAs	More in ERAs by Spanish AWs
Zarei (2011)	English RAs by native speakers and Persian RAs by Persian Academic Writers	More in ERAs with few differences	More in Persian RAs	More in English RAs	More in Persian RAs	No difference, almost never used	more in ERAs
Akbaş (2014)	Turkish and English Student essays by Turkish MA writers		varied in English	varied in Turkish	more in Turkish texts	Not used in Turkish texts but in English texts	
Algı (2012)	Turkish and English Student essays by Turkish students		Variety of hedges in L1 and L2, but slightly more in L2	Variety of boosters in L1 and L2, but slightly more in L2			
Bayyurt (2010)	Turkish and English Student essays		Used more in L2				
Can (2006)	English Essays by bilingual Turkish students and monolingual American students--Turkish Essays by bilingual and monolingual Turkish students	All of the students used, but frequency changes			• AWs used more • TWs used in Turkish essays more compared to English essays		
Doyuran (2009)	only Turkish RAs		used in TRAs				
Erkoç (2010)	English MA thesis by Turkish students		used in theses				
Kafes (2009)	ERAs by Spanish-Turkish-American Writers		AAW: may NNS: can	Must: used more by all groups			
Fidan (2002)	only Turkish RAs	used in RAs					
Ünsal (2008)	only English RAs	used in RAs					
Current Study	ERAs by TAWS, AAWs and TAWs by TAW	More in ERAs by AAWs More in ERAs by TAWs	No significant difference	More in ERAs by TAWs compared to TRAs More in ERAs by AAWs	More in TRAs	More in ERAs by AAWs	No significant difference among the groıps