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DEPARTMENT OF ENGLISH LANGUAGE EDUCATION

INSTITUTE OF EDUCATIONAL SCIENCES

AN INVESTIGATION OF THE STRUCTURE OF DISCUSSION SECTIONS IN RESEARCH ARTICLES WRITTEN BY NATIVE ENGLISH AND TURKISH RESEARCHERS IN THE FIELD OF APPLIED LINGUISTICS

M.A. THESIS

Özge ÇALIŞKAN

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ANADİLİ İNGİLİZCE OLAN ARAŞTIRMACILAR VE TÜRK ARAŞTIRMACILAR TARAFINDAN YAZILAN UYGULAMALI DİLBİLİM ALANINDAKİ ARAŞTIRMA MAKALELERİN "TARTIŞMA" BÖLÜMLERİNİN YAPISI ÜZERİNE BİR İNCELEME

YÜKSEK LİSANS TEZİ

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Abstract

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AN INVESTIGATION OF THE STRUCTURE OF DISCUSSION SECTIONS IN RESEARCH ARTICLES WRITTEN BY NATIVE ENGLISH AND TURKISH RESEARCHERS IN THE FIELD OF APPLIED LINGUISTICS

The present study aims to investigate the similarities and differences of rhetorical organization of research article discussions written by international writers and Turkish authors writing in English and Turkish in the field of Applied Linguistics. The study examined the rhetorical organization of research article discussions and the frequencies of moves and steps which were utilized in these sections. The corpus used in the present study included 45 research article discussions in total. Fifteen articles written by international group, 15 articles written by Turkish authors writing in English and 15 articles written by Turkish authors writing in Turkish were selected for a balanced corpus. RA discussions were analysed using the models by Yang

& Allison (2003) and Baştürkmen (2012). After the pilot study, the model needed some modifications and addition for the present study. Discussions in 45 research articles were coded by using MaxQDA 11. The findings revealed that there were some similarities and differences between international writers and Turkish authors writing in English and Turkish. Also, there were some similarities and differences between Turkish authors writing in English and Turkish. Turkish authors writing in English. Identifying the most frequent moves and steps, the commonly used move patterns and obligatory and optional moves and steps may help novice authors and researchers in the academic writing process.

Keywords: Applied linguistics, discussions, genre analysis, rhetorical organization, international writers, Turkish writers

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MAKALELERİN "TARTIŞMA" BÖLÜMLERİNİN YAPISI ÜZERİNE BİR İNCELEME

Bu çalışma, uluslararası araştırmacılar ve Türk araştırmacılar tarafından yazılan uygulamalı dilbilim alanındaki araştırma makalelerin tartışma bölümündeki yapısal organizasyonundaki benzerlikler ve farklılıkları araştırmayı amaçlar. Çalışma araştırma makalelerin tartışma bölümlerinin yapısal organizasyonunu ve bu bölümlerde kullanılan makro kalıpların sıklığını incelemiştir. Bu çalışmada kullanılan bütünce (corpus) toplamda 45 araştırma makalesini içermektedir. Dengeli bir bütünce oluşturmak için uluslararası araştırmacılar tarafından yazılan 15 araştırma makalesi, İngilizce yazan Türk araştırmacılar tarafından yazılan 15 araştırma makalesi ve Türkçe yazan Türk yazarlar tarafından yazılan 15 araştırma makalesi ve Türkçe yazan Türk yazarlar tarafından yazılan 15 araştırma makalesi seçilmiştir. Araştırma makalelerinin tartışma bölümleri Yang ve Allison (2003) ve Baştürkmen'in (2012) araştırmalarına dayanan modellerle incelenmiştir. Pilot çalışma sonrasında, modelin bazı değişikliklere ve eklemelere ihtiyacı olduğu ortaya çıkmıştır.

45 araştırma makalesinin tartışma bölümleri MaxQDA 11 programı kullanıralak kodlanmıştır. Bulgular uluslararası araştırmacılar ve İngilizce ve Türkçe yazan Türk araştırmacılar arasında bazı benzerlik ve farklılıkların olduğunu ortaya çıkarmıştır. Ayrıca İngilizce ve Türkçe yazan Türk araştırmacılar arasında da bazı benzerlik ve farklılıkların da olduğu ortaya çıkmıştır. Bu çalışmada sık kullanılan, zorunlu olan veya olmayan makro yapıların tespitinin yeni araştırmacılara akademik yazı alanında yardımcı olabileceği ortaya çıkmıştır.

Anahtar Kelimeler: Tartışma, tür çözümlemesi, Türk araştırmacılar, uluslararası araştırmacılar, uygulamalı dilbilim, yapısal organizasyon

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List of Abbreviations
RA: Research article
TAWE: Turkish authors writing in English

TAWT: Turkish authors writing in Turkish

EAP: English for academic purposes

ESP: English for specific purposes.

Chapter I

Introduction

1.1. Background of the Study

Academic writing has gained a great amount of attention by researchers in English for Academic Purposes (EAP) and English for Specific Purposes (ESP) for more than a decade. A large number of studies on written and spoken genres including research articles and grant proposals have been conducted. The research article (RA) is believed to be the most significant genre among the academic community members (Fazilatfar & Naseri, 2014). Research articles are one genre that has been examined using the move-based approach (Amnuai & Wannaruk, 2013). Different conventional sections have been investigated by using move analysis to identify the structure of research articles. Whereas some studies have focused on the organizational structures of RA sections including the introduction section (Swales, 1990,2004; Öztürk, 2007; Keshavarz, Atai & Barzegar, 2007, Samraj, 2002,2005), method section (Peacock, 2011; Lim, 2006), result and discussion sections (Amnuai & Wannaruk, 2013; Yang & Allison, 2003, Toprak, 2011), other studies have been concerned with the overall organization of RAs (Posteguillo, 1999; Nwogu, 1997; Kanoksilapatham, 2005,2007). While most attention has been given to the introduction section, the discussion section has received little attention despite the fact that it may be the most significant part of the research article (Holmes, 1997). Holmes (1997) points out that whereas there have been many studies within the field of humanities and social sciences, the bulk of recent research has tackled with the natural sciences such as Chemical Engineering, Medicine and Biochemistry when the discussion section is concerned. It is unfortunate and regrettable because a great amount of non-native speaker students are studying social science subjects via the medium of English. That is why, extending the genre analysis of research articles to the social sciences is really necessary to enable researchers to determine how far the structures observed in the natural sciences can be generalized to all written academic discourse.

1.2. Statement of the Problem

Moyetta (2016) claims that research articles written in English have been a rhetorical tool to access international discourse communities. That is why, there have been many calls for native and non-native speakers comparison in discussion sections (Peacock, 2002).

Peacock asserts that research writing is difficult for non-native speakers since they require help in joining the discourse community of international academic writing. Also, they may have some problems with the elements and conventions of the discourse. He suggests that it is essential to research native-non-native speaker differences to teach academic writing and shed some light on non-native speakers. Non-native writers need to be aware of the rhetorical conventions which are used in their research areas (Moyetta, 2016).

1.3. Purpose of the Study

The present study aims to investigate the genre-specific features of the discussion sections of published research articles within the field of Applied Linguistics. It focuses on the rhetorical structures of the discussion sections written by native speakers, Turkish authors writing in English (TAWE) and Turkish authors writing in Turkish (TAWT). Also, the present study aims to find out the similarities and differences between discussion sections written by these three groups in terms of the "commenting on results" move.

This study is hoped to contribute to the field of cross-cultural research in English for Academic Purposes (EAP) and second language writing since no comparative study has been conducted on the rhetorical structure of RA discussion sections comparing native and Turkish authors.

1.4. Research Questions

Within the framework of the aim aforementioned above, this study aimed to answer the following research questions:

- 1. What are the similarities and differences between the number of words and moves in RA discussions written by international authors, Turkish authors writing in English and Turkish authors writing in Turkish?
- 2. What are the generic similarities and differences between RA discussions written by international authors, Turkish authors writing in English and Turkish authors writing in Turkish in terms of move structure?
- 3. What are the generic similarities and differences between RA discussions written by international authors, Turkish authors writing in English and Turkish authors writing in Turkish in terms of the frequency of moves and steps?

1.5. Significance of the Study

The study explores the rhetorical organization of discussions in RAs within the field of Applied Linguistics. The analysis is based on the model by Yang & Allison (2003) and Baştürkmen (2009, 2012) with some modifications and additions. Taking each sentence as the coding unit, the study succeeds to identify the most and least frequent moves and steps in discussions included the corpus of the study. Another contribution of this study is that this study achieves to identify the generic similarities and differences between discussions in RAs written by international writers, Turkish authors writing in English and Turkish authors writing in Turkish in terms of move structure and frequencies of moves and steps. It is the first study to find out the similarities and differences between RAs written by international scholar, Turkish authors writing in English and Turkish authors writing in Turkish.

1.6. Limitations of the Study

The aim of this sub-section is to acknowledge the limitations of the present study. One important limitation of the study is the accessibility of Turkish research articles written in Turkish within the field of Applied Linguistics. Although the present study focuses on the recently published articles, in order to compile a corpus for the study it was required to expand the year range. Another limitation is the selection of journals. In order to analyse Turkish research articles written in Turkish, it is required to search among the national journals, mostly university journals, because Turkish authors can publish their work in their native language.

It was difficult to find out the nationalities of native speakers and contact them. That is why, "native researchers" phrase was replaced with "international researchers".

In spite of these limitations, the present study is expected to make a significant contribution to other comparative research studies concerning the rhetorical organization of research articles written by native and non-native authors.

Chapter II

Literature Review

This chapter begins by laying out the theoretical dimensions of the research and looks at how the rhetorical organizations of RAs in different fields have been employed. This chapter is divided into 3 parts. In 2.1. the concept of genre is defined. In 2.2. studies on the structure of research articles in L1 are examined. In 2.3. comparative studies on the structure of RAs are reviewed.

2.1. Genre Analysis

Genre analysis was introduced by Swales (1990, 2004) in order to investigate the rhetorical organization of academic texts (Dujsik, 2013). Han and Hiver (2018) consider genres as written and oral discourse such as linguistics characteristics of use and rhetorical structures of texts. Hyland (2007) also defines genre as ways of using language, which is abstract and socially recognised. He also claims that genre depends on the idea that community members generally do not have difficulty in figuring out similarities in the texts, which they often utilize and benefit from their experiences with the texts in order to read, write and understand them with ease. Swales (1990, p.58) defines genre as follows:

A genre comprises a class of communicative events, the members of which share some set of communicative purposes. These purposes are recognized by the expert members of the parent discourse community, and thereby constitute the rationale for the genre. This rationale shapes the schematic structure of the discourse and influences and constraints choice of content and style. Communicative purpose is both a privileged criterion and one that operates to keep the scope of the genre as here conceived focused on comparable rhetorical action. In addition to purpose, exemplars of genre exhibit various patterns of similarity in terms of structure, style, content and intended audience.

According to Swales (2004), a genre includes community discourse and goals which are known by the members of the discourse communities. He describes the discourse

communities as people who have a group of common public goals and a way of communication among their members. Discourse communities also need to provide feedback and information to each other, and they utilize different kinds of genres to achieve their communicative aims and achieve specific lexis. Also, discourse communities are a group of expert people who have a relevant content and discourse.

Hyland (2013) claims that genre analysis is a form of discourse analysis, but genre analysis is more specific when compared to discourse analysis. Genre analysis investigates cyclical language use such as grammar and lexis. He also asserts that genre analysis considers texts as a model of rhetorical practices. Therefore, genre analysis provides descriptions and clarification of texts and communities. In essence, genre is a type of rhetorical templates, which writers use to give some responses to repeated conditions and situations. He also argues that genre analysis depends on the idea and presumption that characteristics of the same group of texts are based on the social context of their usage.

Hyland (2013) claims that a significant part of research in language for specific fields is interested in genre-as-text in order to identify discursive and lexico-grammatical structures of the genres. This type of analysis gives significant information about the construction of the texts and their rhetorical patterns. He also suggests that this kind of analysis was based on the work of move analysis initiated by Swales (1990) with the aim of describing the patterns of particular genres and limitation on the sequences of the moves and steps.

Geçikli (2013) points out that the growing interest in the genre concept results in the rising of the number of genre analysis studies. Textural patterns of genres have a significant role in the structural and rhetorical organization of the genre types in academic written context. She also claims that scholars have investigated written and spoken genres in many studies. In these

studies, much attention has been given to the overall structure of these genres. Some scholars have investigated the differences of the genres across linguistic and cultural communities.

2.2. Studies on the structure of research articles written in English

A great number of studies have been conducted on the structural organization of RA sections. Most remarkable work has been done on RA introduction section (Swales,1990,2004; Samraj, 2002, 2005; Öztürk, 2007; Keshavarz, Atai & Barzegar, 2007), but there are other sections which have been the focus of attention including, abstracts (Anderson & Madea, 1997; Huckin, 2001; Pho, 2008; Samraj, 2002), the methods sections (Lim, 2006; Peacock, 2011; Martinez, 2003), result and discussion sections (Yang & Allison, 2003, Brett, 1994). The overall organization of RAs has also been studied (Nwogu, 1997; Posteguillo, 1999; Kanoksilopatham, 2005, 2007).

Yang and Allison (2004) argue that most of the empirical studies follow Introduction-Methods-Results and Discussion (IMRD) cycle. Maswana, Kanamaru and Tajino (2015) examined the overall organization of RAs across five engineering fields. The findings of this study show that moves and steps may change by subdiscipline whereas some subdisciplines may share the same moves and steps. For instance, Structural Engineering and Chemical Engineering have the same moves and steps cycle for the introduction section while Environmental Engineering and Chemical Engineering have common moves and steps for the body section. These differences are the reflections of culture and community of the certain field of engineering. In addition, Graves, Moghaddasi and Hashim (2013) explored the organizational structure of research articles in the field of Mathematics. They reported that RAs in Mathematics do not follow the expected pattern of the IMRD. Surprisingly, the method and discussion sections cannot be seen in this discipline due to the fact that Mathematics lacks an empirical basis. Posteguillo (1999) analysed the overall structure in

Computer Science RAs and no structural pattern was identified. However, three parts of the IMRD model which are introduction, results and discussions/conclusion sections appeared in the predicted order (i.e., I-R-D).

Safnil (2013) claims that introduction is the most important section of RAs due to the fact that it is the first part which is read by readers. If this section attracts the readers' attention, they will be motivated to read the whole article. That is why, this part of RAs must be convincing and interesting as possible. Samraj (2002, 2005) examined the introduction and abstract sections of RAs in the fields of Wildlife Behavior and Conservation Biology. The introductions and abstracts were investigated by using the models proposed by Swales (1990, 2004) and Bhatia (1993) respectively. She found that abstracts from these two disciplines share numerous moves, which are statement of purpose, results of the study and conclusion. On the other hand, she also found that abstracts in Conservation Biology are structurally similar to introductions rather than abstracts in Wildlife Behaviour. Her study shows that there are some differences in abstract and introduction pattern across the two fields. Another researcher Pho (2008) aimed to investigate the rhetorical structure of abstracts, which were selected from The Modern Language Journal, TESOL Quarterly and Computers & Education, in the fields of Applied Linguistics and Educational Technology. The findings of this study displayed that some moves are obligatory in these three journals. These were presenting the research, describing the methodology and summarizing the findings. Although the discussing the research move can be seen in the field of Applied Linguistics, this move was not common in the field of Educational Technology. The describing the methodology move was the most frequent in these three journals. Another study carried out by Can, Karabacak and Qin (2016) displayed that the purpose and methodology sections were more detailed than implications and background information in the abstracts of RAs in the field of Applied Linguistics. In fact, background information was the only optional category. Overall, the *methodology* was

the most frequent move and occupied a larger space in abstracts of RAs. The findings of this study were in line with most of the studies conducted before. Öztürk (2007) asserts that not only different disciplines but also related disciplines show some variation with regard to the structural organization of introductions of RAs. He investigated the structure of introductions in second language writing research and second language acquisition research. He found that there were some differences between these two subdisciplines of Applied Linguistics. Saz Rubio (2011) investigated articles published in the field of Agricultural Sciences and he found that the majority of the introductions of RAs in this discipline follow the expected pattern (i.e., predicted by the CARS model), which is the M1-M2-M3 cycle. In addition, a study carried out by Samraj (2002) shows that introduction sections of RAs in Wildlife Behaviour seem to include the moves in the CARS model.

It can be argued that discussion sections in RAs have a prominent role, and native and non-native speakers of English have difficulty in writing them. Discussion sections especially the *commenting on result parts* are significant due to the fact that researchers make new claims here (Le and Harrington, 2015). Le and Harrington (2015) suggest that compared to other disciplines, only a small number of studies have been carried out in Applied Linguistics with regard to the rhetorical organization of discussion sections. Swales (1990) claims that discussion sections in RAs have some main moves which are: *background information, statement of results, (un)expected outcome, reference to previous research, explanation, exemplification, deduction and hypothesis* and *recommendation* (pp.170-172). Another model has been proposed by Dudley-Evans (1994), and it includes nine moves: *information move, statement of result, findings, (un)expected outcome, reference to previous research, explanation, claim, limitation* and *recommendation*. According to Baştürkmen (2012) the discussion section is the most significant part of a research article because it provides information concerning the findings, compares results with other studies and presents further suggestions. In her study, she aimed to

investigate the rhetorical organization of the discussion section in the field of Dentistry with regard to one particular move, the commenting on results. In conclusion, the organizational structure of discussion section in the field of Dentistry displayed a similar pattern and similar rhetorical aims as Applied Linguistics. Liu and Buckingham (2018) studied the rhetorical organization of discussion sections in the field of Applied Linguistics. They found that Move 1 (background information) was the opening move in the discussion sections in RAs they analyzed, which is in line with the study by Bastürkmen (2012), but contrasts with the results of Holmes (1997), who found that the opening move was Move 2 (statement of the results). In addition, Move 7 (deductions from the research) was seen most frequently as a closing move. The study carried out by Dobakhti (2016) focused on the rhetorical structure of discussion sections in RAs in Applied Linguistics. The analysis displayed that there were 11 moves in the corpus. Move 1-Step 1 (stating findings) was present in all the research articles. The most frequent moves were Move 3 (commenting on results), Move 2 (referring to data to provide evidence for findings) and Move 5 (comparing findings with literature) respectively. There were some differences compared to other empirical studies. The most striking difference was the constant reference of researchers to their data. From this analysis, a new move (Move 2) appeared after writers mentioned their results (Move 1-Step 1). With this move (Move 2), writers aimed to provide some evidence and support for the findings of their study. Consequently, another new move was proposed, (Move 4), where the writers provided some evidence for their comments on results via their data and literature. Moreover, Dujsik (2013) aimed to identify the rhetorical pattern of research article discussions in major applied linguistics journal articles with reference to Peacock's (2002) model given below:

Move 1 (information move)

Move 2 (finding)

Move 3 (expected or unexpected outcome)

Move 4 (reference to previous research)

Move 5 (explanation)

Move 6 (claim)

Move 7 (limitation)

Move 8 (recommendation)

The study displayed that Move 2 and Move 4 were the most frequent and obligatory moves, which is in line with the study by Yang and Allison (2003).

Yang and Allison (2003) investigated the rhetorical organization of research articles in Applied Linguistics proceed from results and to conclusions. Yang and Allison's (2003) model was given below:

Move 1- Background information

Move 2- Reporting results

Move 3- Summarizing results

Move 4- Commenting on results

Move 5- *Summarizing the study*

Move 6- *Evaluating the study*

Move 7- *Deductions from the research*

They found that "commenting on results", "reporting results", "summarizing the study", "evaluating the study" and "deductions from the research" were very common in discussion sections. The eight moves in Holmes (1988) follow this pattern largely and remain similar. Toprak (2011) also followed the model by Yang & Allison (2003) and found that "commenting on findings" and "restating" were the most frequent moves respectively in Applied Linguistics. Hopkins and Dudley-Evans (1988) aimed to carry out a genre-based

analysis of the discussion sections in dissertations in Biology and articles concerning irrigation and drainage. They adopted a different model which is provided below.

Move 1- Background information

Move 2- *Statement of result*

Move 3- (*Un*)*expected outcome*

Move 4- Reference to previous research (Comparison)

Move 5- Explanation of unsatisfactory result

Move 6- *Exemplification*

Move 7- Deduction

Move 8- *Hypothesis*

Move 9- Reference to previous research (Support)

Move 10- *Recommendation*

Move 11- Justification

They found that *statement of result* was the only obligatory move. Therefore, they classified this move as the 'head' move in the pattern. However, in the dissertations, it appeared that the choice of moves was based on the writers' satisfaction or dissatisfaction with the result being reported. Writers of dissertations state their results using Move 3 (*unexpected outcome*), Move 4 (*comparison*) and Move 5 (*explanation of unsatisfactory results*). If the results were satisfactory, the writers tended to use Move 7 and 8 (*deduction and hypothesis*) and support these results using Move 9 and 10 (*support and recommendation*). Moreover, the move pattern goes from the lower to the higher number such as Move 3 comes before Move 4. There are also some exceptions such as: Move 1 can appear at any point of the pattern and Move 9 can follow Move 7 and may come before Move 8. Puebla (2008), on the other hand, investigated the rhetorical organization of RAs within the field of Psychology. Eight research articles were examined and then compared to the study carried out by Dudley-Evans (1994).

The result showed that only three articles included the introduction part of the discussion section. Other articles started the discussion section with the evaluation part, which included statement of findings, claim and reference to previous work. In addition, the conclusion part of the discussion section appeared in all the RAs and all of them displayed a restatement of the main findings, claims and recommendations about future work.

When compared to the number of the studies carried out in the literature, studies on methods section are very limited. Kanoksilapatham (2005), Lim (2006), and Martinez (2003) examined the methodology sections of RAs. Martinez (2003) suggests that articles in the field of Biology displayed what the method section is about.

Although there are many studies on the results sections of RAs, the most prominent ones were carried out by Brett (1994) and Bruce (2009) in the field of Sociology and Organic Chemistry. Khansari (2017) also examined the result sections of RAs within the field of Applied Linguistics and Chemistry. He found that all moves in the results sections of RAs were seen in both fields. However, "presenting examples" was the only move that was found in the articles from Applied Linguistics.

Conclusion sections of RAs focus on overall results of the whole study. This section includes evaluation of the study and suggestions for further research (Adel & Moghadam, 2015). Toprak (2011) states that conclusion section is considered as a complement section of discussion section, studies on examining conclusion sections are limited. She examined the textual organization of conclusion sections of articles in Applied Linguistics. Also, she found that "deductions from the research" was the most frequent move.

2.3. Comparative Studies on the Structure of RAs

Rhetorical structures of research articles written in different languages have also been the focus of many researchers. While many studies have been carried out so far, little

investigation has been done about interdisciplinary differences and native writers and nonnative writers variation (Peacock, 2002). Safnil (2013) aimed to investigate the rhetorical structure of English introductions which were written by Indonesian writers in the field of Engineering, Natural and Medical Sciences. The results of this study revealed that the rhetorical structure of English introductions written by Indonesian scholars did not share the same style with the expected pattern written by native speakers of English. Safnil & Arono (2016) suggest that writers from different disciplines may write introductions of RAs in a different way although they write and use the same language due to having different practices of research and academic writing style. Kafes (2015) also claims that expectations of various discourse communities play a significant role in cross-cultural variations in writing styles. Also, these expectations of communities have an effect on the fact that second language writers transfer the rhetorical strategies of their native language to the target language. He also claims that there are not any comparative studies on the rhetorical pattern of research articles written by American and Turkish scholars. As far as abstracts are concerned, he found that Turkish academic writers are in line with the abstracts by American academic writers. It can be concluded that there is a similarity between the rhetorical structures of abstracts written by Turkish and American authors. The striking result of Kafes's study revealed that although the background move in abstracts can be seen in most of American research articles, very few Turkish research articles include this move in their abstracts. Similarly, Kafes (2012) investigated the rhetorical pattern of abstracts written by American, Turkish and Taiwanese authors in English. He found that the results move was the obligatory move in the three abstract groups. However, conclusions and introductions are rare in abstracts written by Turkish and Taiwanese authors compared to those of American. This study revealed that abstracts written by American authors are more complete in the sense that they include the four fundamental units compared to the two non-native groups. He also suggests that cultural

patterns, academic background, different discourse community and various expectations have a big influence on academic writing style. Martin (2003), on the other hand, examined abstracts in terms of the rhetorical choices of Spanish and English writers. The most striking result is that most of the abstracts in Spanish articles show a greater tendency to eliminate the results section when compared to English articles. Alharbi and Swales (2011) investigated the differences and similarities between Arabic and English abstracts in language science journals. They found that some of the abstracts written in Arabic were more expressive and open than English abstracts. English abstracts included a brief summary of the article while Arabic abstracts consisted of more complex sentences and additions. In addition, Wannaruk and Amnuai (2016) point out that non-native writers have some difficulties in writing articles because they are not able to explain the background information, purposes and significance of the studies. They investigated the rhetorical organization of RAs from Thai and international journals. The findings show that the frequency of moves is almost similar, but most of the articles from Thai journals do not contain Move 2 (establishing a niche) because non-native speakers may not identify gaps and comment on other studies. Keshavarz, Atai and Barzegar (2007) examined introductions of RAs written by Iranian and non-Iranian English scholars. The only difference between those groups was that most introductions written by Iranian writers lacked Move 3 (occupying the niche). Gecikli (2013) aimed to investigate the differences and similarities between Turkish and English introductions in PhD theses. She found that English introductions followed the CARS model more than those in the Turkish corpus, and they are more complex and comprehensive than Turkish introductions. Similarly, the study carried out by Hirano (2009) shows that there are some significant differences between the introductions in Brazilian Portuguese articles and English articles with regard to the rhetorical organization. English articles fit the expected pattern, the CARS model, while

Brazilian Portuguese articles show some variation. Most of the Brazilian Portuguese articles did not contain Move 2 in the introduction sections.

Amnuai and Wannaruk (2013) point out that the discussion section is really challenging for both native and non-native speakers of English. That is why, previous studies display some prominent differences in the structural pattern in the corpus of discussion sections. Jin (2018) compared discussion sections of high and low impact articles within the field of chemical engineering. He found that these articles followed the expected move pattern. Move 2 was the most frequent move while Move 6 was the least used move. There were some differences between the two corpora. Move 3 (commenting on results) played a significant role in separating discussions of high-impact and low-impact articles. The scholars of high-impact research articles tended to comment on their results by comparing the results with previous studies and evaluate their results. Safnil (2013) attempted to find out how the discussion parts in RAs within the field of social sciences and humanities written by Indonesian writers are structured. He analysed the communicative moves in the discussions by following the eight-move structure suggested by Swales (1990). He found that the most frequent moves in the discussion section were Move 1 (background information), Move 2 (statement of results) and Move 5 (explanation), which contrasts with the findings of English ones. The most dominant moves in English RAs were Move 1, Move 2 and Move 4 (reference to previous studies). This difference can be explained by the fact that Indonesian writers' reference to previous knowledge is not sufficient. However, English writers want to display the contribution of the present study to the existing knowledge. Atai and Falah (2005) carried out a contrastive genre analysis of discussion sections in RAs written by native and non-native speakers of English. They observed that the 'statement of the results' and 'reference to previous research' moves were obligatory in RAs written by English and Persian writers. The 'unexpected outcome' move could not be seen in the articles by Persian writers. Moreover,

English writers utilized the explanation, generalizability and recommendation moves much more often than Persian authors did. This is the part which makes the discussion section more interactive. Another study was carried out by Khorramdel and Farnia (2017) in terms of genre analysis of discussion sections in English and Persian Dentistry articles. However, in this study, there was no significant difference between the English and Persian corpora. Both groups utilized Move 1, Move 2 and Move 4 in a frequent way. Movetta (2016) carried out a study on the discussion sections in English and Spanish RAs in the field of Psychology. She found some similarities and differences between two groups. Statement of the results and reference to previous research were obligatory moves in both corpora. However, providing background information, providing explanations, indicating research implications appeared more frequently in the English corpus than the Spanish corpus. Similarly, Amnuai and Wannaruk (2013) aimed to investigate the variations between English RA discussions and Thai RA discussions. Their study was based on the model by Yang & Allison (2003). The most salient result was about the frequency of Move 4 in both sets of data. Move 2 was also the second most frequently used move in the corpora. However, the difference was about the frequency of the third most used move. Move 1 was the most frequent move in English RA discussions whereas Move 7 was in the Thai RA corpus. Also, Move 7 was very significant in the Thai corpus, and its frequency was much greater than that of the English corpus. Another difference was about the opening of the discussion section. While English writers utilized Move 1 as an opening, Thai writers used Move 2 to open the discussion section. Similarly, Thai authors were eager to close the discussion sections by using Move 7 or Move 4 while English scholars closed the discussions using Move 4.

As far as the conclusion section of RAs is concerned, many recent comparative studies have been carried out on conclusion sections of RAs (Jahangard, Rajabi-Kondlaji & Khalaji, 2014; Adel & Moghadam, 2015; Vazifehdan & Amjadiparvar, 2016; Moritz, Meurer &

Dellagnelo, 2008; Aslam & Mehmood, 2014; Tabatabaei & Azimi, 2015). Overall, they found that there were some differences between native and non-native speakers or different disciplines in terms of the rhetorical organization of conclusions of RAs.

When it comes to RA discussions, no comparative study has been carried out on the rhetorical structure of discussion sections in the field of Applied Linguistics comparing English and Turkish RAs. The present research is intended to fill in this gap. This research will significantly pave the path for contribution to the field of cross-cultural research.

Chapter III

Methodology

This chapter contains two sections, which are detailed information related to the corpus used in the present study and the model of analysis adopted in the present study.

3.1. The Corpus

The corpus used in the present study consisted of 45 research article (RA) discussions in total. Fifteen articles written by international writers, 15 articles by Turkish authors writing in English and 15 articles written by Turkish authors writing in Turkish were selected to construct a balanced corpus. All the articles in the corpus were selected from journals publishing research in the field of Applied Linguistics. It was an important criterion to select the recent research articles because the present study aims to find out whether there is a change in genre or not.

For the international writers group, the corpus was selected from Language

Learning(6), Applied Linguistics(2), English for Specific Purposes(1), Journal of Second

Language Writing(1), International Journal of Bilingual Education and Bilingualism(1), The

Canadian Journal of Applied Linguistics(1), Journal of Language Education and Research(1)

and The Journal of Language Teaching and Learning(2). These journals were selected since
they were listed among the top journals with regard to their impact factors. The corpora

consisted of the articles published between 2013-2017. The numbers given next to each
journal show how many articles were selected from the journals.

The articles in the Turkish authors writing in English (TAWE) corpus consisted of 15 articles drawn from the following journals and the numbers of the articles selected from each journal was presented: Language Learning(1), Applied Linguistics(1), Hacettepe University Journal of Education(4), Journal of Foreign Language Education and Technology(3),

Boğaziçi University Journal of Education(3), Uludağ University Journal of Education(1), Journal of Language Education and Research(1) and Education and Science(1). These journals were among the important journals where Turkish authors publish their articles mostly. These RAs were chosen from the articles published between the years of 2003-2017.

The articles in the Turkish authors writing in Turkish (TAWT) corpus were selected from Journal of Language and Linguistic Studies(1), Atatürk University Journal of Social Sciences Institute(2), Ağrı İbrahim Çeçen University Journal of Social Sciences Institute(1), Boğaziçi University Journal of Education(3), Abant İzzet Baysal University Journal of Education(1), Uludağ University Journal of Education(1), Marmara University Journal of Educational Sciences(1), Education and Science(2), Turkish Studies(2) and Kastamonu Education Journal(1). These journals were selected because they included articles related to Applied Linguistics. These RAs were selected from journals published between the years of 2009-2017.

All the RAs in the corpus were randomly selected from articles that included separate "discussion" and "conclusion" sections. It was an important criterion for the present study because every section in RAs has a distinct function concerning the overall purpose of the genre. The selection of the research articles for the present study was based on purposive sampling. 5 RAs from each group (i.e., International, TAWE and TAWT) were selected for the pilot analysis.

3.2. Analytical Framework

A pilot study with 5 RAs from each group was carried out to determine if there was an organizational pattern or not. The pilot study was based on models proposed by Yang and Allison (2003) (see, Fig.1) and Baştürkmen (2009, 2012) (see, Fig.2).

Move 1—Background information

Move 2—Reporting results

Move 3—Summarizing results

Move 4—Commenting on results

- -Interpreting results
- -Comparing results with literature
- -Accounting for results
- -Evaluating results

Move 5—Summarizing the study

Move 6—Evaluating the study

- -Indicating limitations
- -Indicating significance/advantage
- -Evaluating methodology

Move 7—Deductions from the research

- -Making suggestions
- -Recommending further research
- -Drawing pedagogic implication

Yang & Allison (2003)

Figure 1. The model proposed by Yang & Allison (2003) for RA discussions

- Move 1—Background information
- Move 2—Summarizing results
- Move 3—Reporting a result

Move 4—Commenting on the result

- A. Explaining
 - A1,A2,A3 providing alternative explanations for the result
- B. Comparing results with literature
- C. Evaluating
- Move 5—Evaluating the study

Move 6—Implications for further research ,clinical practice or policy

Baştürkmen (2009, 2012)

Figure 2. The model proposed by Baştürkmen (2009, 2012) for RA discussions

The pilot study revealed that the models needed some modifications and additions. In the present study a new modified model presented in Fig.3 below was used:

Move 1-Background information (Restatement)
Step 1- Restating purpose
Step 2- Restating findings
Step 3- Restating methodology
Move 2- Reporting a result
Move 3- Commenting on results
A- Explaining the result
B- Comparing the results with the literature

Figure 3. The model used in the analysis of data in this study

C- Evaluating the results

D- Hypothesizing for further research

Discussion sections in 45 RAs were coded by using MaxQDA 11. It is a software program which is designed for computer-assisted qualitative and mixed methods data and text analysis. The *sentence* was taken as the unit of analysis. In the software, each clause was labelled with the related move and step. Each move and step was coloured with different colours and highlighted according to the function of the clause (see, Figure 4). In order to provide interrater reliability, 15 of the research articles were analysed by a researcher who specialized in Applied Linguistics and conducted many researches in academic discourse.

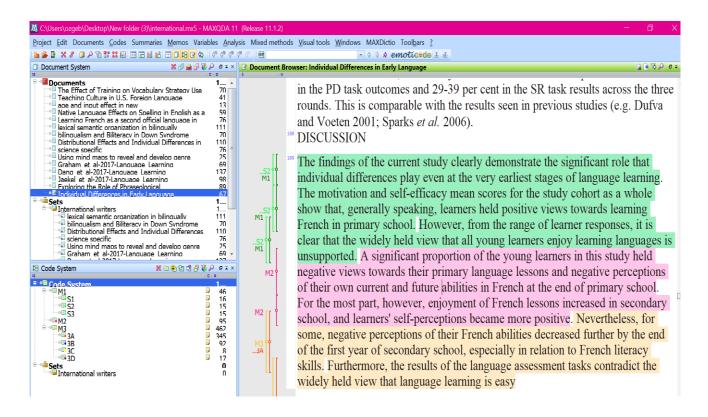


Figure 4. A sample analysis of each move and step using MaxQDA 11

However, in some occasions it was difficult to identify the moves and steps because more than one move or step were embedded in one sentence or a sentence included more than one function. Therefore, each clause in a sentence was labelled according to its function (Baştürkmen, 2012) or the most salient purpose was regarded (Yang and Allison, 2003). Another difficulty while analysing the data was that similar content was used for different functions. For instance, the most common one was about the reference to literature. References to literature were utilized both to compare the results with the literature and to explain the results (Baştürkmen, 2012) as in the following example (see, Figure 5):

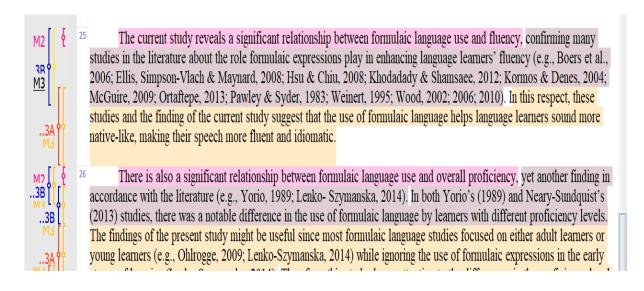


Figure 5. A sample analysis of each move and step with different functions

A subset of data (5 discussions from each data set) was analysed by an independent researcher.

Also, in order to see whether there was a statistically significant difference between international and Turkish authors writing in both English and Turkish with regard to occurrences of moves in discussions, the chi-square test was applied.

Here some example sentences taken from the analysis of discussion sections are presented below:

Move 1 Step 1: Restating Purpose:

"The present paper analyzed keystroke and latency data recorded from a spelling task asking participants, native speakers of four different languages, to spell irregular English words." (INT12)

Move 1 Step 2: Restating findings:

"The motivation and self-efficacy mean scores for the study cohort as a whole show that, generally speaking, learners held positive views towards learning French in primary school." (INT10)

Move 1 Step 3: Restating Methodology:

"With reference to our second goal, we compared bilingually developing deaf children's semantic performance in their L1 (ASL) to monolingual hearing children's English performance." (INT1)

Move 2: Reporting a Result:

"On examining the distribution of foreign language prospective teachers' levels of professional concerns according to their branch of study, it was found that prospective English language teachers' levels of task-centred, student-centred, and self-centred concerns were statistically higher than the others' levels." (TAWE1)

Move 3A: Explaining the Result:

"These responses suggest ongoing negative attitudes towards ELF and positive attitudes towards a native-speaker model of English". (TAWE4)

Move 3B: Comparing the Results with the Literature:

"Similarly, Abednia et al. (2013) and Genq (2010) revealed in their studies that the teachers were able to question and evaluate their own behaviors and practices through reflective diaries. (TAWE8)

Move 3C: Evaluating the Results:

"The current study makes an important contribution to our understanding of the nature of individual differences in young learners and in particular of the role of first language literacy in second language attainment and attitudes." (INT10)

Move 3D: Hypothesizing for further research:

"Therefore, more evidence provided by similar studies with larger and statistically more appropriate samples seems necessary to see a clearer picture of the characteristics of spelling development in Turkish." (TAWE3)

Chapter IV

Results

This section provides the results concerning the move structure of RA discussion sections written by international writers and Turkish writers. Section 4.1 displays results concerned with the number of words and move units in the discussion sections written by international and Turkish writers writing both in English and Turkish. In section 4.2, the study provides results related to the move structure of discussion sections. In section 4.3, the frequency analysis of moves and steps in discussion sections is presented.

4.1. Comparison of Discussions Written by International and Turkish Authors in terms of Length

The first research question was about the similarities and differences between

International and Turkish authors writing in English and those writing in Turkish in terms of
the length of discussions. Length was measured by using number of words and move units.

The results are given in Table 1.

Table 1
Number of words and move units (average)

	No. of words	No. of move units
International	40,07	1447,2
Turkish authors writing in English (TAWE)	29,47	1186,30
Turkish authors writing in Turkish (TAWT)	27,40	703,60

As it can be seen in Table 1, in the discussion sections of research articles analysed, international writers used more words than TAWE (i.e., Turkish authors writing in English) (40,07 versus 29,47). Also, TAWE used more words than TAWT (i.e., Turkish authors writing in Turkish) (average words, 29, 47 versus 27,40). Moreover, international scholars

used higher number of sentences regarding move units than TAWE, with the average move units 1447,2 versus 1186,30. Similarly, TAWE used much more move units than TAWT, with the average move units 1186, 30 versus 703, 60).

4.2. Comparison of Discussions Written by International and Turkish authors in terms of Move Structure

The second research question was concerned with the comparison of the discussions written by International and Turkish authors writing in English and Turkish with regard to move structure. The results of move structure are shown in Table 2.

Table 2

Move structure of discussion sections

Move structure	Move structure	Move structure
INT1 1-2-3-2-3-2-3-1-2-3-2-3-2-3-2-3-2-3	TE1 1-3-2-3-2-3	TT1 2-3-2-3-2-3
INT2 1-2-3-2-3-1-2-3-2-3	TE2 2-3-2-1-3-2-3-2	TT2 2-3-2-3
INT3 1-3-2-3-2-3-1-2-3-1-2-3-2-3	TE3 1-3-2-3-2-3-2-3-2-3	TT3 2-3-2-3-2-3-2-3-2-3
INT4 1-2-3-2-3-1-2-3-1-2-	TE4 3-1-2-3-3-2-3	TT4 1-2-3-1-2-3-1-3
INT5 1-2-3-2-3	TE5 1-3-1-2-3-2-3-2-3	TT5 2-3-2-3-2-3-2-3-2-3-2-3
INT6 1-3-1-2-3-2-3	TE6 1-3-2-3-2-3-2-1-2-3-2-3-2-3-2	TT6 2-3-3-3-3-2-3-3-2-2-3-3
INT7 2-3-2-3-2-3-2-3-2-3	TE7 1-2-3-2-3-2-3-2-3	TT7 2-3-2-3-2-3-2-3-2-3-2-3-2-3-2-3-2-3
INT8 3-1-2-3-2-3-2-3-2-3-2-3-2-3	TE8 2-3-3-2-3-2-3-2-3-2-3-2-3	TT8 1-2-3-2-3-2-3
INT9 1-2-3-2-3	TE9 1-2-3-2-3-2-3	TT9 1-2-3-2-3-2-3-2-3-2-3
INT10 1-2-3-2-3	TE10 2-3-2-3-2-3-2-3	TT10 3-2-3-2-3-2-3-2-3-2-3-2
INT11 1-2-3-1-2-3-2-3-2-3	TE11 2-3	TT11 2-3-2-3
INT12 1-2-3-1-2-3-1-2-3	TE12 3-2-3-2-3	TT12 2-3-2-3
INT13 1-2-3	TE13 3-2-3-2-3-2-3-2-3-2-3-2-3-2-3-2-3-2-3-	-3 TT13 3-2-3-2-3-2-3
INT14 1-2-3-2-3-2-3-2-3	TE14 2-3-2-3-2-3	TT14 2-3
INT15 1-2-3-2-3-2-3-2-3-2-3	TE15 2-1-2-3-2-3	TT15 2-3-2-3

The results provided in Table 2, show that there are 5 different move structures in the discussions analysed. International writers generally followed the pattern M1 'restatement' - M2 'reporting a result' - M3 'commenting on results'. This was the expected pattern from international writers to follow. Also, they followed the pattern M2-M3. If the results were different, they used another restatement for the result. If the results were related, they continued with M3 and commented on the results. Eleven (73%) international writers followed this pattern. However, 4 out of 15 (26%) discussions by international scholars opened with a different move unit. One (6%) discussion employed M1-M3-M2 pattern, but then it continued with M2-M3. Similarly, one (6%) discussion by international writers employed the M1-M3 pattern, but it also followed the cyclical pattern which is M2-M3. On the other hand, one article followed a different pattern from the expected move pattern, as it opened with M2, and it was followed by M2-M3 moves. Moreover, one article started with M3, but subsequently followed the expected move pattern, which is M1-M2-M3. All the discussions in research articles written by international writers finished with M3.

When compared to international writers, Turkish authors writing in English used different move structures. Just 2 out of 15 discussions (13%) employed the M1-M2-M3 pattern. Six out of 15 discussions (40%) opened with M2, and mostly continued with M3, showing M2-M3 move structure. Moreover, 2 discussions (13%) by Turkish writers displayed M3-M2 move pattern which did not appear in the corpus of international writers. Finally, one discussion (6%) opened with M3, but continued with the M1-M2-M3 structure. Except 2 discussions (13%), all discussions ended with M3.

As far as Turkish scholars writing in Turkish are concerned, the results in Table 2 demonstrate that they also used different move patterns than international writers. Out of 15

discussions just 3 (20%) of them displayed the M1-M2-M3 move pattern. The table also shows that 10 discussions (66%) employed the M2-M3 move cycle. Moreover, 2 discussions (13%) followed the M3-M2 pattern. These two move patterns were never used by international authors. In this regard, it appears that Turkish scholars writing in Turkish tend to use M2-M3 move structure in the discussion sections in the RAs. Most of the articles finished with M3, and just one of the articles illustrated an M2 ending.

When we compared Turkish authors writing in English (TAWE) with those writing in Turkish (TAWT), they were similar to each other in terms of the organization of discussions in RAs. They generally followed the pattern of M2-M3. However, Table 2 demonstrates that the rhetorical structure by Turkish authors writing in English was more alike to the rhetorical structure by international writers than Turkish authors writing in Turkish.

4.3. Comparison of Discussions Written by International and Turkish authors in terms of Frequencies of moves and steps

The third research question is whether or not there is any difference or similarity between international writers and Turkish authors about frequencies of moves and steps. The results are displayed in Table 3. In order to see if there is any significant difference between the frequencies of moves and steps in discussions written by international and Turkish authors, the chi-square test was employed.

Table 3
Frequencies of moves and steps of discussion sections in RAs

Moves and Steps	INT		TE	TE		TT	
	F	%	F	%	F	%	
M1	46	4,14	24	3,10	8	1,10	
M1S1	16	1,44	6	0,77	3	0,41	
M1S2	15	1,35	15	1,94	2	0,27	
M1S3	15	1,35	3	0,38	3	0,41	
M2	95	8,55	111	14,35	110	15,15	
M3	462	41,58	307	39,71	300	41,32	
M3A	345	31,05	193	24,96	181	24,93	
M3B	92	8,2	94	12,16	107	14,73	
M3C	8	0,7	7	0,90	1	0,13	
M3D	17	1,53	13	1,68	11	1,51	
TOTAL	1111		773		726		

It can be seen from the results in Table 3 that there are some differences between international writers and Turkish authors writing in English (TAWE) and Turkish authors writing in Turkish (TAWT) with regard to frequencies of moves and steps in the discussion sections in the research articles. The corpus consisted of 15 articles for each research group. In 15 articles, 46 (4. 14%) M1 "*restatement*" were observed in the discussion sections in the RA written by international writers. However, in 15 articles, TAWE used 24 (3,10%) M1s in the discussion sections. Therefore, a significant difference is found (χ 2 (1)=6.914, p<.05) between international and Turkish authors writing in English. On the other hand, Turkish authors writing in Turkish employ 8 (1,10%) M1s in the discussion parts. There is a significant difference between international writers and TAWT (χ 2 (1)=26.741, p<.05) and between

TAWE and TAWT (χ 2 (1)=8.000, p<.05). International scholars used 16 (1,44%) M1S1s "restating purpose", 15 (1,35%) M1S2s "restating findings" and 15 (1,35%) M1S3s "restating methodology" in the discussion sections. Closer inspection of the results in Table 3 shows that Turkish authors writing in English use 6 (0,77%) M1S1s, 15 (1,94%) M1S2s and 3 (0,38%) M1S3s in the discussion sections. There is a significant difference between international and Turkish authors writing in English in terms of M1S1 (χ 2 (1)=4.545, p<.05), and M1S3 (χ 2 (1)=8.000, p<.05), but no difference in terms of M1S2 (χ 2 (1)=0.000, p<.05). On the other hand, 3 (0,41%) M1S1s, 2 (0,27%) M1S2s and 3 (0,41%) M1S3s are seen in the discussion sections in the RAs written by Turkish authors writing in Turkish. When it is compared, it appears that there is a significant difference between international writers and TAWT with regard to M1S1 (χ 2 (1)=8.895, p<.05), M1S2 (χ 2 (1)=9.941, p<.05) and M1S3 (χ 2 (1)=8.000, p<.05). In contrast, while there is a significant difference between TAWE and TAWT in terms of M1S2 (χ 2 (1)=9.941, p<.05), no significant difference is found with regard to M1S1 (χ 2 (1)=1.000, p<.05) and M1S3 (χ 2 (1)=0.000, p<.05).

As far as M2 is concerned, what stands out in Table 3 is that no statistically significant difference is observed between international and Turkish authors writing in English (χ 2 (1)=1.243, p<.05). International scholars employ 95 (8,55%) M2s "reporting a result" whereas 111 (14,35%) M2s are used by TAWE in the discussions sections. Also, 110 (15,15%) M2s are seen in the discussion sections in RAs written by Turkish authors writing in Turkish. Similarly, there is no statistically significant difference between international writers and TAWT (χ 2 (1)=1.098, p<.05) and between TAWE and TAWT (χ 2 (1)=0.005, p<.05).

It is apparent from Table 3 that the most striking difference is seen in M3 "commenting on results" in the discussion sections. International writers employ 462 (41,48%) M3s in the discussion sections while Turkish authors writing in English employ 307 (39,71%). A significant difference is found between two groups (χ 2 (1)=31.242, p<.05). On

the other hand, Turkish authors writing in Turkish employ 300 (41,32%) M3s in the discussion parts in the RAs. Although there is a statistically significant difference between international writers and TAWT (χ 2 (1)=34.441, P<.05), there is no significant difference between TAWE and TAWT (χ 2 (1)=0.081, p<.05).

Closer examination shows that 345 (31,05%) M3As "explaining the results" are employed in the discussion sections by international scholars. A striking observation which emerges from the comparison of the results was the frequencies of M3As in the discussion sections. Turkish authors writing in English employ 193 (24,96%) M3As and Turkish scholars writing in Turkish use 181 (24,93%) M3As in the discussions. There is a significant difference between international writers and Turkish authors writing in English (χ 2 (1)=42.944, p<.05) and Turkish authors writing in Turkish (χ 2 (1)=51.133, p<.05). However, there is no significant difference between TAWE and TAWT (χ 2 (1)=0.385, p<.05).

Table 3 shows that 92 (8,2%) M3Bs "comparing results with the literature" are used in the discussion sections by international scholars. Similarly, TAWE employ 94 (12,16%) M3Bs and TAWT employ 107 (14,73%) M3Bs. This result shows that there is no significant difference between the three groups. Also, 8 (0,7%) M3Cs "evaluating the result(s)" are employed in the discussion sections by international scholars. Similarly, TAWE use 7 (0,90%) M3Cs and TAWT use 1 (0,13%) M3C in the discussion sections. From the data comparison, no statistically significant difference is found between international writers and TAWE. However, there is a significant difference between international writers and TAWT (χ 2 (1)=5.444,p<0.5) and between TAWE and TAWT (χ 2 (1)=4.500, p<.05). 17 (1,53%) M3Ds "hypothesizing for further research" are employed in the discussion sections by international scholars. Likewise, 13 (1,68%) M3Ds and 11 (1,51%) M3Ds are employed by TAWE and TAWT respectively. This data reveals that there is no significant difference between international and Turkish authors writing both in English and Turkish.

Chapter V

Discussion

This study aimed to compare the structural organization of discussion sections in RAs written by international and Turkish writers writing in English and Turkish in the field of Applied Linguistics. 45 articles were analysed and compared.

5.1. Number of words

The findings revealed that discussions written by international authors were longer than the discussions written by Turkish scholars. There was a difference even between Turkish writers writing in English and those writing in Turkish. Moreover, the discussions written by Turkish authors writing in English (TAWE) were longer than the discussions written by Turkish authors writing in Turkish (TAWT). This difference may result from the structural organization of RAs. Moreno and Swales (2018) suggest that rhetorical variation can occur due to the influence of cultural factors. Hence, non-native writers may not make use of some moves or steps.

5.2. Move Structure of Discussion Sections

The analysis displayed that there were five different move patterns in the discussions in RAs (see, Table 1). However, most discussions written by international authors followed the same move structure: Move 1 "background information", Move 2 "reporting results" and Move 3 "commenting on results". This finding is in line with the results of Jin (2018), which was a M1-M2-M3 pattern in chemical engineering. However, most Turkish authors followed the M2-M3 pattern no matter what language they used. A possible explanation for this difference might be that Turkish writers may not need to restate the background information of the result again. Moreover, Turkish writers may believe that the most important part of the study is the results part. That is why, they may only focus on stating the results of the study.

As indicated previously, the opening move in RAs written by international authors was Move 1. This result is consistent with the data obtained in other studies (Liu & Buckingham, 2018; Baştürkmen, 2012). However, the discussion parts in the articles by Turkish authors opened with Move 2, and this finding is in accord with the result of the study by Holmes (1997) and Hopkins & Dudley-Evans (1988). Holmes (1997) points out that three moves which are "background information", "statement of results" and "generalization" are used as opening moves in the discussion sections. He also claims that "statement of results" is a preferred opening for discussions. No other moves are observed in the corpus as the opening move. Turning to the closing moves in discussion sections in the RAs in the present study, all discussion sections in RAs written by the three groups ended with Move 3. This result agrees with the findings of most of the studies in the literature. In this study, most of the results closed with "explaining the result" and "comparing results with literature". However, in the corpus, "recommending further research" occurred as a closing part in the discussions. This result suggests that writers have combined the discussion and conclusion sections. Although the function of the discussion section is commenting on the results and interpreting them, the function of the conclusion section is summarizing the whole article and recommending further research. A possible explanation for this finding may be that authors give more significance to the discussion section in RAs and use the conclusion section as a closing part of the whole article. In fact, most writers seem to eliminate the conclusion section in their studies. That is why, in recent studies, recommendation for further research and deductions from the research can be seen in the discussion section.

5.3. Frequencies of Moves and Steps in Discussions

When it comes to the frequencies of moves and steps in the discussion sections in RAs, the results revealed that there were some differences between the three groups of authors. International authors used M1 more than Turkish authors did. Turkish authors used

more M1 while writing in English than writing in Turkish. A possible explanation for this finding is that Turkish authors try to write similar to international writers while they are writing in English. In discussions written by international writers and Turkish authors writing both in English and Turkish the most frequent moves were "commenting on results", "reporting the results" and "background information" respectively. This finding is in agreement with most of the studies in the literature. Jin (2018) claims that "commenting on results" move has a significant role in discussion sections. Similarly, Amnuai and Wannaruk (2013) found that English writers gave more importance to the "commenting on the result" move and less frequent moves were "reporting the results" and "background information". Moyetta (2016) suggests that background information, providing explanation and implication occur more frequently in discussions of articles written by native writers. Another difference between international and Turkish writers was about the frequency of Move 2 (reporting the result). Turkish writers were depended on Move 2 more than international writers. The most striking difference was about the "commenting on results" move. From Table 3 we can see that international writers give much more significance to explaining results, comparing the results and evaluating the results. In contrast, Turkish writers generally report that their results and discussions lacked explaining the result, comparing the results and evaluating them. It seems that Turkish writers cannot differentiate between the result section of the article and the discussion section. It may be possible for Turkish writers to combine the results and discussion sections of the article. This finding is in agreement with the finding of Safnil (2013). In Safnil's (2013) study, reporting the results was the most frequent move, and nonnative authors did not give importance to the commenting on results move including reference to previous studies and explaining the results, which is in contrast with native writers. Peacock (2002) also suggests that the most prominent reason for the differences between native and non-native writers' articles may be the fact that non-native authors have some difficulty with

the conventions of a genre which is different from their native language. As Amnuai and Wannaruk (2013) point out, non-native writers may not meet the cognitive demands of the discussions in RAs and may have limited ability to write in an argumentative and persuasive way. While evaluating the results, international writers and Turkish authors writing in English use similar patterns, Turkish authors writing in Turkish fall behind them. This result is likely to be related to the fact that Turkish researchers writing in Turkish have difficulty in organizing the discussion. It is really difficult to explain the differences between the structural organization of discussions written by international, TAWE and TAWT groups, but it might be related to the fact that Turkish researchers writing in English were more prone to the expected discussion pattern while searching the literature. However, Turkish scholars writing in Turkish may not be exposed to that pattern because they may have limited access to articles written in English and they may not have enough proficiency in English. It also seems possible that these differences are due to the fact that international researchers suggest clear and specific explanations and solutions concerning the results of the study while Turkish researchers provide and present superficial comments and explanations related to the findings.

Chapter VI

Conclusion

This study investigated the rhetorical organization of discussions in RAs written by international writers, Turkish authors writing in English and Turkish authors writing in Turkish. Also, this study explored the generic similarities and differences between these three groups in terms of move structure and frequencies of moves and steps. The following research questions were addressed:

- 1. What are the similarities and differences between the number of words and moves in RA discussions written by international authors, Turkish authors writing in English and Turkish authors writing in Turkish?
- 2. What are the generic similarities and differences between RA discussions written by international authors, Turkish authors writing in English and Turkish authors writing in Turkish in terms of move structure?
- 3. What are the generic similarities and differences between RA discussions written by international authors, Turkish authors writing in English and Turkish authors writing in Turkish in terms of the frequency of moves and steps?

This chapter includes a brief summary of the study, the results, limitations and implications.

6.1. Summary of the Study

This study consisted of 45 research articles written by international authors (N:15), Turkish authors writing in English (N:15) and Turkish authors writing in Turkish (N:15) in the field of Applied Linguistics. All analyses were performed using MaxQDA 11.

The results showed that discussions written by international writers were longer than discussions written by Turkish authors. Also, discussions written by Turkish authors writing in English were longer than discussions written by Turkish authors writing in Turkish. When it comes to the move structure of discussion sections, the most common pattern seen in discussions written by international writers was M1-M2-M3. However, the most common pattern seen in discussions written by Turkish authors writing in both English and Turkish was M2-M3. This result shows that Turkish authors consider the result parts as the most important part. When the frequencies of moves were taken into consideration, international authors used more M1s (background information) than Turkish authors. Also, Turkish authors writing in English utilized more M1s than Turkish authors writing in Turkish. The most frequent move in the discussions written by the three groups was M3 (commenting on results) unit. The most striking result was that Turkish authors reported their results more than international authors, so M2 (reporting results) was more frequent in discussions written by Turkish authors than international ones. It can be concluded that results and discussions written by Turkish authors lacked the following moves, which are explaining the result, comparing the results and evaluating them. Turkish authors may confuse the result section and discussion section of the article. As Safnil (2013) suggests non-native authors do not give much significance to the commenting on results move.

6.2. Pedagogical Implications

The present study has significant implications. First of all, this study made a contribution to the analysis of genre in terms of comparative studies including native and non-native authors. This study is the first study aiming to investigate the similarities and differences between research articles written by native and Turkish authors. Also, it is the first study aiming to analyse the rhetorical organization of research articles written by Turkish authors writing in both English and Turkish.

Second, the present study used the facilities of MaxQDA 11, a move-step analysis tool, to analyse the moves and steps cycles. This tool made the move and step analysis more accurate. With the help of this tool, identification of moves and step was faster when it was compared to the manual analyses. Sentence-level coding revealed a new step which was not included in the discussion sections in the previous models. Therefore, move and step analysis was described in a detailed way to be inspirational for genre analysis in future studies.

Finally, the present study also has implications for academic writing, especially in terms of Turkish authors. Academic writing has its own conventions and these conventions should be learned for being a member of the discourse community. With the help of the study, it is revealed that there are some differences between native and Turkish authors writing in both English and Turkish with regard to these conventions of academic writing. Also, there are differences between Turkish authors writing in English and Turkish.

6.3. Recommendations for Future Research

For further studies concerning the similarities and differences between research articles written by native and Turkish authors in terms of rhetorical organization, similar studies can be carried out in order to obtain more data with more research articles to get a more comprehensive picture. Moreover, this study analysed the research articles within the field of Applied Linguistics, as for to obtain data about similarities and differences between native and Turkish authors, similar studies can be conducted in other fields.

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Appendices

Appendix I. List of Research Articles Written by International Authors in the Corpus

INT1- Mann, W., Sheng, L., & Morgan, G. (2016). Lexical-semantic organization in bilingually developing deaf children with ASL-dominant language exposure: Evidence from a repeated meaning association task. *Language Learning*, 66(4), 872-899.

INT2- Burgoyne, K., Duff, F.J., Nielsen, D., Ulicheva A., & Snowling, M. J. (2016). Bilingualism and biliteracy in down syndrome: Insights from a case study. *Language Learning*, 66(4), 945-971.

INT3- Brooks, P.J., Kwoka, N., & Kempe V. (2017). Distributional effects and individual differences in L2 morphology learning. *Language Learning*, *67*(1), 171-207.

INT4- Rolls, H., & Rodgers, M. P. H. (2017). Science-specific technical vocabulary in science-fiction fantasy texts: A case for "language through literature". *English for Specific Puposes*, 48, 44-56.

INT5- Wette, R. (2017). Using mind maps to reveal and develop genre knowledge in a graduate writing course. *Journal of Second Language Writing*, 38, 58-71.

INT6- Graham, S., Courtney, L., Marinis, T., & Tonkyn, A. (2017). Early language learning: The impact of teaching and teacher factors. *Language Learning*, 67(4), 922-958.

INT7- Dang, T.N. Y., Coxhead A., & Webb, S. (2017). The academic spoken word list. *Language Learning*, 67(4), 959-997.

INT8- Jaekel, N., Schurig M., Florian M., & Ritter, M. (2017). From early starters to late finishers? A longitudinal study of early foreign language learning in school. *Language Learning*, 67(3), 631-664.

INT9- Kremmel, B., Brunfaut, T., & Alderson, J. C. (2017). Exploring the role of phraseological knowledge in foreign language reading. *Applied Linguistics*, *38*(6), 848-870.

INT10- Courtney, L., Graham, S., Tonkyn, A., & Marinis, T. (2017). Individual differences in early language learning: A study of English Learners of French. *Applied Linguistics*, *38*(6), 824-847.

INT11- Mady, C. (2014). Learning French as a second official language in Canada: Comparing monolingual and bilingual students at grade 6. *International Journal of Bilingual Education and Bilingualism*, 17(3), 330-344.

INT12- Dich, N., & Pedersen, B. (2013). Native language effects on spelling in English as a foreign language: A time-course analysis. *The Canadian Journal of Applied Linguistics*, 16(1), 51-68.

INT13- Proietti Ergün, A. L. (2017). Age and input effect in simultaneous bilingual: Turkish and Italian. *Journal of Language Education and Research*, *3*(3), 152-163.

INT14- Galeano, R. A., & Torres, K. M. (2014). Teaching culture in U.S. foreign language classrooms: Meeting goals of intercultural competence? *The Journal of Language Teaching and Learning*, 4(2), 63-75.

INT15- Lavoie, C. (2016). The effect of training on vocabulary strategy use: Explicit teaching of word family, word network and word card strategies. *The Journal of Language Teaching and Learning*, 6(1), 20-34.

Appendix II. List of Research Articles Written by Turkish Authors Writing in English in the Corpus

TAWE1- Yalçın, P. (2014). The professional concerns of prospective teachers enrolled in English, French and German teaching departments. *Hacettepe University Journal of Education*, 29(4), 256-266.

TAWE2- Demir, Ü. G. (2017). The effect of pictures and sentence examples on foreign language vocabulary learning. *Journal of Foreign Language Education and Technology*, 2(1), 24-38.

TAWE3- Sönmez E., Babür, N., & Haznedar, B. (2015). Learning how to spell in Turkish. *Boğaziçi University Journal of Education*, 32(1), 34-50.

TAWE4- Soruç, A. (2015). Non-native teachers' attitudes towards English as a lingua franca. *Hacettepe University Journal of Education*, *30*(1), 239-251.

TAWE5- Üstünbaş, Ü., & Ortaçtepe, D. (2016). EFL learners' use of formulaic language in oral assessments: A study on fluency and proficiency. *Hacettepe University Journal of Education*, 31(3), 578-592.

TAWE6- Eraslan, A., & Asmalı, M. (2017). From students' perspectives: EFL learners' metaphors about English instructors in Turkey. *Journal of Uludağ University Faculty of Education*, 30(2), 419-442.

TAWE7- Silsüpür, B. (2017). Does using language games affect vocabulary learning in EFL classes? *Journal of Foreign Language Education and Technology*, 2(1), 83-104.

TAWE8- Fakazlı, Ö., & Kuru Gönen, S. İ. (2017). Reflection on reflection: EFL university instructors' perceptions on reflective practices. *Hacettepe University Journal of Education*, 32(3), 708-726.

TAWE9- Yılmaz, Y. (2013). Relative effects of explicit and implicit feedback: The role of working memory capacity and language analytic ability. *Applied Linguistics*, *34*(3), 344-368.

TAWE10- Yılmaz, Y. (2012). The relative effects of explicit correction and recasts on two target structures via two communication modes. *Language Learning*, 62(4), 1134-1169.

TAWE11- Şakar, A. (2007). Exploring the relationship between annotation use of EFL learners and their learning styles. *Boğaziçi University Journal of Education*, *24*(1), 33-45.

TAWE12- Altan, M. Z. (2003). Language learning strategies and foreign language achievement. *Education and Science*, 28(129), 25-31.

TAWE13- Özdemir, F., Haznedar, B., & Babür, N. (2012). The development of reading in early bilingualism: Evidence from Turkish-child L2 learners of English. *Boğaziçi University Journal of Education*, 29(1), 1-27.

TAWE14- Dinç, A., & Keşli Dollar, Y. (2017). The role of parental involvement on language development of Turkish EFL learners. *Journal of Language Education and Research*, *3*(1), 52-74.

TAWE15- Sunar, İ. (2016). Does learner autonomy affect the language learning process? Journal of Foreign Language Education and Technology, 1(1), 1-17. Appendix III. List of Research Articles Written by Turkish Authors Writing in Turkish in the Corpus

TAWT1- Kaçar, I. G., & Zengin, B. (2009). İngilizceyi yabancı dil olarak öğrenenlerin dil öğrenme ile ilgili inançları, öğrenme yöntemleri, dil öğrenme amaçları ve öncelikleri arasındaki ilişki: Öğrenci boyutu. *Journal of Language and Linguistic Studies*, *5*(1), 55-89.

TAWT2- Bozavlı, E. (2017). Yeni teknolojiler ışığında eğitim aktörlerinin yabancı dil öğretiminde sana sınıf algıları. *Atatürk Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, 21*(1), 347-358.

TAWT3- Ergür, D. O. (2016). İngilizce öğrencilerinin öz benlik saygısı ve akademik öz yeterlik algılarının bazı değişkenler açısından incelenmesi. *Ağrı İbrahim Çeçen Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 2(2), 125-148.

TAWT4- Yalçın, Ş., Çeçen, S., & Erçetin, G. (2015). Dil öğrenme yatkınlığının tanımlanmasında işler bellek ve açık/örtük bilgi türlerinin rolü. *Boğaziçi Üniversitesi Eğitim Dergisi*, 32(2), 1-18.

TAWT5- Öztekin, E., & Hazneder, B. (2015). Dillerarası etkileşim: Çokdilli ortamlarda sözdizimsel gelişim ve nesne düşürme. *Boğaziçi Üniversitesi Eğitim Dergisi*, *32*(2), 37-47.

TAWT6- Öztürk, G. (2017). İngilizce hazırlık programındaki öğrenci ve okutmanların İngilizce konuşma sınavlarına dair görüşleri. *Abant İzzet Baysal Üniversitesi Eğitim Fakültesi Dergisi*, 17(4), 2081-2095.

TAWT7- Alyaz, Y., Gürsoy, E., & Kazanoğlu, F. (2013). Yabancı dil öğretmeni adaylarının dil seviyeleri ve öğrenimini gördükleri dile ilişkin tutumları. *Uludağ Üniversitesi Eğitim Fakültesi Dergisi, 26*(1), 123-148.

TAWT8- Korumaz, M., & Özkılıç, R. (2015). Yabancı dil öğretmenlerinin yansıtıcı öğretime yönelik tutumlarının incelenmesi. *Marmara Üniversitesi Atatürk Eğitim Fakültesi Eğitim Bilimleri Dergisi*, 42, 299- 316.

TAWT9- Akyel, A. (2006). Deneyimli İngilizce öğretmenleri ile öğretmen adaylarının eğitsel düşünceleri ve eylemleri üzerine bir karşılaştırma. *Boğaziçi Üniversitesi Eğitim Dergisi*, 23(1), 1-18.

TAWT10- Genç, Z. S. (2014). İngilizce öğretiminde sözlü iletişim hatalarının düzeltilmesi: Farklı dil düzeylerindeki Türk öğrencilerin tercihleri. *Eğitim ve Bilim*, *39*(174), 259-271.

TAWT11- Çelik, S., & Keser, H. (2010). Veri yönlendirmeli öğrenme yaklaşımının öğrencilerin sözcük edinimi üzerindeki etkisi. *Eğitim ve Bilim, 35*(158), 184-198.

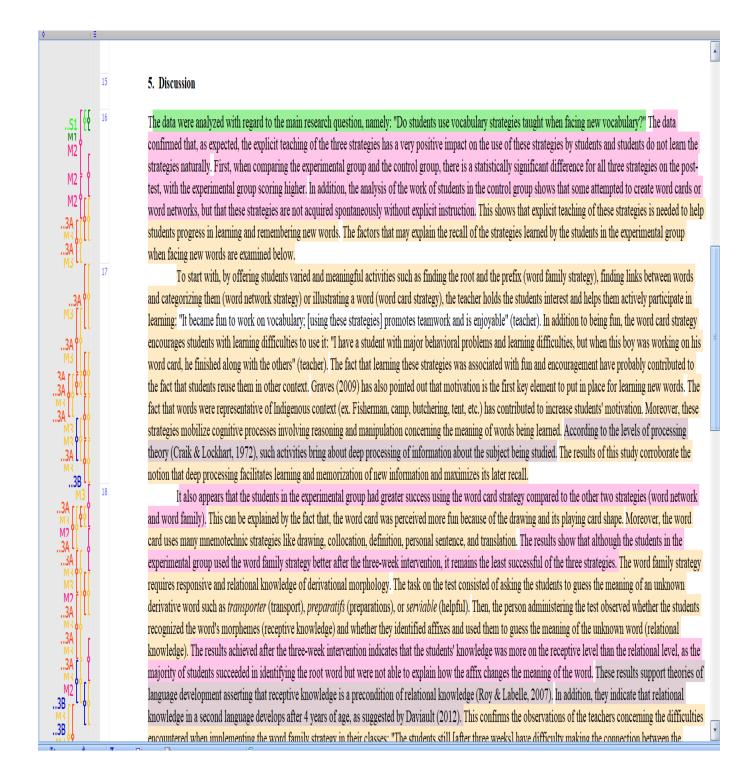
TAWT12- Tunçel, H. (2014). Türkçenin yabancı dil olarak öğretilmesinde yöntem seçimine ilişkin bir durum çalışması: Farklı yöntemler üzerinden geçmiş zaman öğretimi. *Turkish Studies-International Periodical for the Languages, Literature and History of Turkish or Turkic*, 9(6), 1023-1042.

TAWT13- Tunçel, H. (2014). Yabancı dil olarak Türkçeye yönelik kaygı ve kaygının yabancı dil başarısına etkisi. *Turkish Studies-International Periodical for the Languages, Literature and History of Turkish or Turkic*, 9(5), 1987-2003.

TAWT14- Han, T. (2016). Yabancı/ikinci dil olarak Türkçe ve İngilizce sınıflarında kültür öğretimi. *Kastamonu Eğitim Dergisi*, 24(2), 703-718.

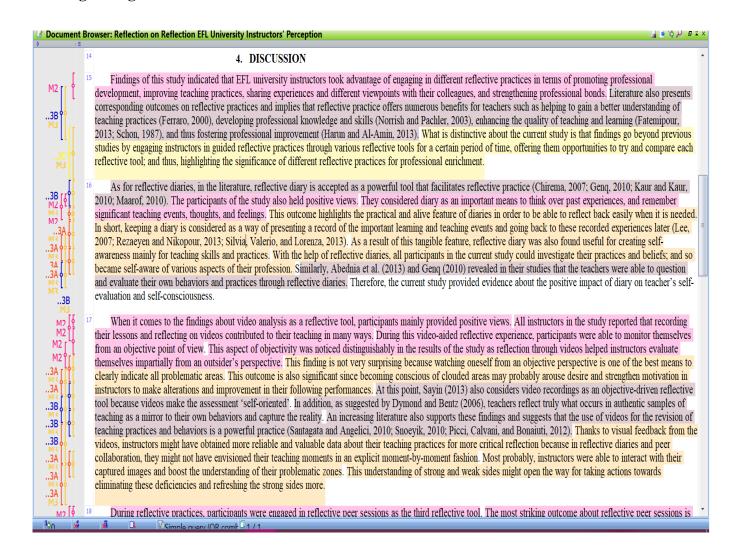
TAWT15- Tunçel, H. (2016). Yunan üniversite öğrencilerinin yabancı dil olarak Türkçeye yönelik algıları ve Türkçe öğrenme sebepleri. *Atatürk Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 20(1), 107-128.

Appendix IV. A Sample Analysis of the RA Discussion Written by an International Author



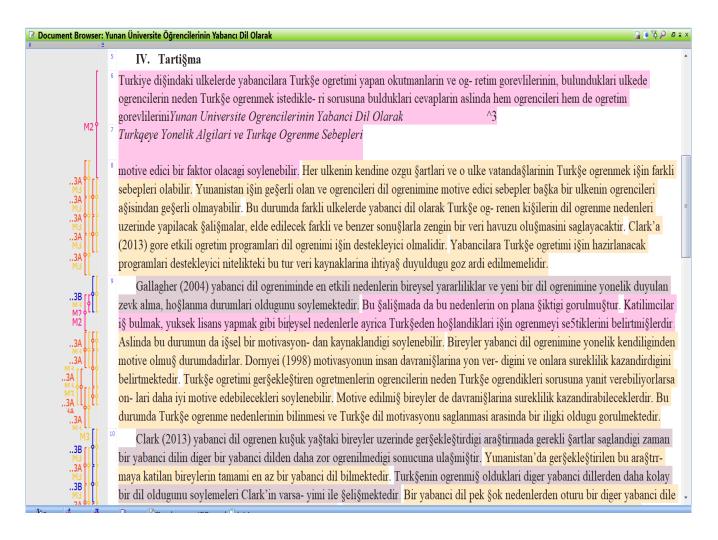
Lavoie, C. (2016). The effect of training on vocabulary strategy use: Explicit teaching of word family, word network and word card strategies. *The Journal of Language Teaching and Learning*, 6(1), 20-34.

Appendix V. A Sample Analysis of the RA Discussion Written by a Turkish Author Writing in English



Fakazlı, Ö., & Kuru Gönen, S. İ. (2017). Reflection on reflection: EFL university instructors' perceptions on reflective practices. *Hacettepe University Journal of Education*, 32(3), 708-726.

Appendix VI. A Sample Analysis of the RA Discussion Written by a Turkish Author Writing in Turkish



Tunçel, H. (2016). Yunan üniversite öğrencilerinin yabancı dil olarak Türkçeye yönelik algıları ve Türkçe öğrenme sebepleri. *Atatürk Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 20(1), 107-128.

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PUBLISHED ARTICLE

Gürsoy, E. & Bulut, Ö. (2016). The effects of writing portfolios on students' language learning at the tertiary level. *International Journal of Language Academy*, *4*(3), 174-187.

ULUDAĞ ÜNİVERSİTESİ

TEZ ÇOĞALTMA VE ELEKTRONİK YAYIMLAMA İZİN FORMU

Yazar Adı Soyadı	ÖZGE ÇALIŞKAN
razar Adi Soyadi	OZGE ÇALIŞKAN
Tez Adı	An investigation of the structure of discussion sections in research articles written by native English and Turkish researchers in the field of Applied Linguistics
Enstitü	Eğitim Bilimleri Enstitüsü
Anabilim Dalı	İngiliz Dili Eğitimi Anabilim Dalı
Tez Türü	Yüksek Lisans
Tez Danışman(lar)ı	Dr. Öğr. Üyesi İsmet ÖZTÜRK
Çoğaltma (Fotokopi Çekim) izni	☐ Tezimden fotokopi çekilmesine izin veriyorum
	Tezimin sadece içindekiler, özet, kaynakça ve içeriğinin % 10 bölümünün fotokopi çekilmesine izin veriyorum
	☐ Tezimden fotokopi çekilmesine izin vermiyorum
Yayımlama izni	☐ Tezimin elektronik ortamda yayımlanmasına izin Veriyorum
	ř

Hazırlamış olduğum tezimin belirttiğim hususlar dikkate alınarak, fikri mülkiyet haklarım saklı kalmak üzere Uludağ Üniversitesi Kütüphane ve Dokümantasyon Daire Başkanlığı tarafından hizmete sunulmasına izin verdiğimi beyan ederim.

Tarih: 30.09.2019

Imza: Bulu7,