

**AN ANALYSIS OF FUNCTIONAL MOVES IN THE INTRODUCTION SECTIONS
OF RESEARCH ARTICLES WRITTEN BY TURKISH SCHOLARS**

Eda DURUK

Ph.D. THESIS

Anadolu University Graduate School of Educational Sciences

June, 2014

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Ph.D. THESIS

In English Language Teaching

Prof. Dr. Ümit Deniz TURAN

Anadolu University Graduate School of Educational Sciences

June, 2014

To Mehmet Ali, my son and Can Aslan, my nephew

JÜRİ VE ENSTİTÜ ONAYI

Eda DURUK'un "AN ANALYSIS OF FUNCTIONAL MOVES IN THE INTRODUCTION SECTIONS OF RESEARCH ARTICLES WRITTEN BY TURKISH SCHOLARS" başlıklı tezi 05.05.2014 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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ÖZET

TÜRK ARAŞTIRMACILAR TARAFINDAN YAZILAN BİLİMSEL MAKALELERİN GİRİŞ BÖLÜMLERİNDE YER ALAN İŞLEVSEL ADIMLARIN ÇÖZÜMLENMESİ

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Akademik ortamda İngilizcenin temel iletişim aracı olması nedeni ile uluslararası dergilerde yayın yapmak ana dili İngilizce olmayan araştırmacılar arasında yaygınlaşan ortak bir hedef ve bunun sonucunda karşılaştıkları bir zorluk olarak ortaya çıkmaktadır. Bugüne kadar yapılmış olan çalışmalarda İngilizce ve başka dillerde yazılan bilimsel makalelerdeki metinsel yapı özellikleri incelenmiştir. Bununla birlikte, yabancı bir dil olarak İngilizce yazılmış metinlerin kültürlerarası incelendiği çalışmalar- özellikle de akademik ortama yeni adım atan yazarlar için zorlayıcı olarak bilinen giriş bölümlerine odaklanan çalışmalar- oldukça azdır (Ahmed, 2004; Jogthong, 2001).

Buna ek olarak, günümüzde akademik yazıda öz bölümleri dikkat çekerken çok az araştırma giriş bölümlerini incelemiştir; disiplinler arası farklılık da dâhil olmak üzere bu bölümlerin adım yapısını inceleyen çok az betimsel çalışma vardır. Araştırma makalelerinin giriş bölümleri önemlidir çünkü bu bölümlerde yazarlar bilgi sahibi olduklarını iddia etmek için sözbilimsel yapı oluştururlar.

Giriş bölümlerini ele alan göreceli az sayıda olan çalışmalardan yola çıkarak bu çalışmada Türklerin iki disiplin olarak okul öncesi öğretmenliği ve özel eğitim

bölümlerinde Türkçe ve İngilizcede yazdıkları makalelerin giriş bölümlerinin Swales'in (2004) CARS Modelini kullanarak adım yapılarının incelenmesi amaçlanmıştır.

Verilerin incelenmesi sonucunda gruplar arasında önemli benzerlik ve farklılıkların olduğu gözlenmiştir. Bulgular ana dili İngilizce olan yazarlar ile ana dili Türkçe olan yazarların araştırma makalelerinin giriş bölümlerini yazarken Swales (2004) tarafından sunulan adım yapılarının farkında olduklarını göstermiştir.

Bulgular çalışmada incelenmiş olan makalelerin yarısından azında 1-2-3 diziliminde adım yapısı olduğunu göstermiştir; ancak, dizilim göz önünde bulundurulmadığında araştırma makalelerinin giriş bölümlerinde adım yapılarının hepsinin yüksek bir miktarda kullanıldığını göstermiştir.

Bu çalışmada elde edilen sonuçlar göz önüne alınarak genel olarak ikinci dilde yazma dersleri ve ileri seviyede İngilizce bilen Türk öğrenciler ile Türk akademisyenler için akademik yazma dersleri öğretimine yönelik yansımalar üzerinde durulmuş ve önerilerde bulunulmuştur.

Anahtar Kelimeler: Araştırma Makalesi, Giriş Bölümü, Karşılaştırmalı Sözbilim, CARS Modeli, Akademik Yazı Öğretimi

ABSTRACT**AN ANALYSIS OF THE FUNCTIONAL MOVES IN THE INTRODUCTION
SECTIONS OF RESEARCH ARTICLES WRITTEN BY TURKISH SCHOLARS****Eda DURUK****English Language Teaching Department****Anadolu University Graduate School of Educational Sciences****Supervisor: Prof. Dr. Ümit Deniz TURAN**

English is the main medium of communication among academic researchers. Publishing in international journals may become very challenging for non-native speakers who may have different conventions of writing research articles.

In the existing literature, research articles (RAs) written in English and in other languages have been examined in order to explore whether the textual organization in various languages is similar or different. However, intercultural studies of texts produced by L2 writers in English are few in number - in particular studies focusing on the introduction section which is known to be troublesome for novice writers (Ahmed, 2004; Jogthong, 2001).

Moreover, while abstracts in academic writing have received attention recently, much less research has investigated introduction sections and there has been little descriptive investigation of their move structure, including interdisciplinary variation. Introduction sections of RAs are of great importance because in these sections writers create rhetorical patterns in each language to claim knowledge.

Due to lack of enough research in the introduction sections of RAs, this study aimed to examine research article introductions (RAIs) written in English and Turkish by Turkish speakers across two disciplines- Preschool Education and Special Education, using Swales' (2004) CARS Model to focus on the move and step structures.

The analyses of the data indicated the existence of both similarities and also differences. The findings demonstrated that both native and non-native writers are well aware of the functional moves of the introduction sections of the research article proposed by Swales (2004).

The results demonstrated that although less than half of the RAIs followed the move sequence of 1-2-3 in both of the disciplines, regardless of the sequence, all of the moves were existent to a high degree in the RAIs.

A couple of implications were drawn from the study and some suggestions were made regarding teaching second language writing in general and also teaching English academic writing for Turkish advanced learners and Turkish scholars.

Key words: Research Articles, Introduction Sections, Contrastive Rhetorics, CARS Model, Teaching Academic Writing.

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ÖZGEÇMİŞ

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LIST OF ABBREVIATIONS

- CR: Contrastive Rhetoric
CA: Contrastive Analysis
ESL: English as a Second Language
EFL: English as a Foreign Language
ESP: English for Specific Purposes
EAP: English for Academic Purposes
CARS: Create a Research Space
L1: First Language
L2: Second Language
NS: Native Speaker
NNS: Non-native Speaker
RA: Research Article
RAI: Research Article Introduction
PE: Preschool Education
SE: Special Education
EngL1: English as a First Language
EngL2: English as a Second Language
TrL1: Turkish as a First Language
M: Move
S: Step

CHAPTER I

INTRODUCTION

1.1. Background to the Study

As an important tool of communication academic writing has been playing a crucial role in academic discourse communities. Such kind of centrality has made written academic discourse appreciated and analyzed from different aspects of significance and interest. Over the past decades, researchers have analyzed quite an assorted span of textual components and features like the use of tense and aspect (Burrough-Boenisch, 2003; Hinkel, 2004), modality (Vassileva, 2001), the use and function of adjectives (Soler, 2002), nouns (Flowerdew, 2003), the use of reporting verbs (Thompson & Ye, 1991) etc. and various academic written genres such as textbooks (Hyland, 2000; Moore, 2002), and conference papers (Rowley-Jolivet, 2002). Recently, for several reasons, research articles have become one of the most commonly examined genres in academic discourse.

Most importantly, the increasing dominance of scholars with L1 English in the world of academia has made researchers to claim new knowledge in English in order to get greater visibility and increased professional advancement (Swales, 1990). Therefore, there is no doubt that English has become the world's major language of international scientific communication. Smith (1983), for instance, discusses several factors that appear to have caused English to become the most frequent language used internationally in academic settings, among them power, political influence and technological advancement of the countries which use the English language natively, or the fact that much of world's scientific communication either originates from a country where English is a first language or is directed to such an audience. The dominance of English has finally led to the situation where the editorial boards of many Turkish academic journals require that research articles are accompanied by abstracts written in English. Similarly, to be up-to-date with the most recent literature in their fields, Turkish scholars need to be acquainted with the latest research published in English. However, those scholars have faced with challenges because communicating new knowledge in a genre (e.g., of the research article) which meets the requirements of a disciplinary discourse and its

readership is a complex task for all novice writers, specifically those for whom English is a second language (Ahmad, 1997; Berkenkotter & Huckin, 1995; Curry & Lillis, 2004; Martín-Martín, 2005; Swales, 1990). As a result, as one of the outstanding media for sharing research findings among researchers, RAs have been claimed to be the most conducted and analyzed type of academic written discourse, and a large number of studies have explored the holistic aspects of RA: historical evolution (Salager-Meyer, 1999), social construction (Myers, 1990), the structural / organizational aspect of RA including introduction, (Swales 1990, 2004; Swales & Najjar 1987), the result section (Thompson, 1993; Brett, 1994; Williams, 1999), discussions and conclusions (Holmes, 1997; Hopkins & Dudley-Evans, 1988; Yang & Allison, 2003), the abstracts (Salager-Meyer, 1992; Hyland, 2000; Samraj, 2005). Besides, different sections of articles in a range of disciplines have been also examined, including Language Teaching and Applied Linguistics (Basturkmenos, 2009, Lim, 2010; Öztürk, 2007; Yang & Allison, 2003), Art History (Tucker, 2003), Education (Lim, 2010), Geology (Dressen, 2003), Management (Lim, 2006), Biomedicine (Dubois, 1997) and Social Sciences (Brett, 1994; Holmes, 1997; Lewin, Fine, & Young, 2001). Such kind of studies have thrown light on the nature of the research article genre by investigating its macro-structure in terms of moves and the linguistic features within each move.

In light of this, several researchers have motivated themselves to compare the discourse organization of RAs in English with those of other languages to understand and list cultural assumptions underlying each written culture (Ahmad, 1997; Duszak, 1994; Fredrickson & Swales, 1994; Hirano, 2009; Mur Dueñas, 2008, 2009; Taylor & Chen, 1991). They have also sought to answer whether generic and rhetorical elements are inherent in the discourse of any individual language because, in the words of Mauranen (1993, p. 4), “culture influences writing habits in an important way”. Following the reformulation of cross-cultural writing in those studies, the present study views culture as a dynamic combination of the broad realms of social action and the communicative links between them.

Because of the fact that RAs in the disciplines– Preschool Education and Special Education– do not appear to have attracted the kind of genre-based research described

above, the present study focuses on rhetorical and disciplinary variations in the RAIs in the discussed disciplines. In the rest of this chapter, the problem, aim, importance of the study and the rationale for a genre based contrastive study will be presented. Then, the limitations of the study will be stated, and finally, the definitions of the important terms for the thesis will be given.

1.2. Problem

Scientists in academic discourse communities are characterized by the wish to share new knowledge with the other members of the same community. This communication can occur through various tools such as the presentation of papers at conferences, participation in seminars or even informal media such as e-mail and list servers. Publication of research articles in scientific journals is one of the basic tools that the members of an academic community use to report the results of their research. Although the new media have had an enormous impact on academic communication, the RA still holds way and it is thus an important channel for research into academic discourse.

Turkish researchers can enjoy a good deal of success when publishing in Turkish-language journals because of using their native language. However, they might find publication in international English-language journals an additional hurdle to overcome as non-native speakers of English. The fact of the matter is that those Turkish researchers who wish to get international recognition through their publications increasingly find themselves compelled to write in English. Therefore, Turkish researchers who seek to publish in English try to achieve a competence in that language which will allow them to write their academic papers (including the accompanying introductions) in English. Besides competence of English, academics apparently need to become aware of the writing conventions of their field in English.

Considering the importance of this situation, it can be argued that the conventions of academic discourse are in fact cross-linguistic and have cultural boundaries. Widdowson (1979), for example, has propounded the idea of a universal scientific discourse which is acquired through education:

Scientific exposition is structured according to certain patterns of rhetorical organization which, with some tolerance for individual stylistic variation, imposes a conformity on members of the scientific community no matter what language they happen to use. (Widdowson, 1979, p. 61)

On the other hand, since Kaplan's (1966) previous work on contrastive rhetoric (CR), a large number of studies in this field (for example, Clyne, 1987; Connor, 1996; Hinds, 1987; Ventola & Mauranen, 1996, among many others) have shown that textual organization of academic discourse is governed by socio-cultural factors and that these in turn produce rhetorical variation across cultures. Whereas the early work in CR saw these differences rather simplistically as being related to the first languages of the speakers themselves, more recent studies (for example, Leki, 1991; Connor, 1996) suggest that there are differences in the expectations of the discourse communities as the primary reason for cross-cultural differences in writing styles. Lack of awareness of such cross-cultural differences in text structures and reader expectations is believed to be the main cause of non-English speaking writers' relative lack of success in the international community. Ventola and Mauranen (1996) have pointed out that if an article is not written in a way that has become standard in its field, it may be very often rejected even though the research itself may be relevant. Clyne (1991) has also noted that editors of international journals have the tendency to react negatively when encountering discursive structures which do not adhere to the norms of academic writing in English. As a result, it is not surprising that, according to Swales (2004), only 20% of the research papers published in international journals come from countries where English is not the national or official language.

Although there have been important initiatives among genre theorists and English for Academic Purposes (EAP) practitioners in English-speaking universities to provide linguistic support to the non-native English speaking student who needs to adopt the discourse conventions which characterize academic genres, in most countries where English is not the official language, EAP is referred to as Technical English, and the courses focus almost exclusively on reading and are offered only in the first years of study (Jogthong, 2001). Moreover, as can be seen in the programs of most graduate schools in Turkey, in this type of situation, there is a general lack of EAP courses aimed

at teaching post-graduate students and novice academic staff the conventions of English academic writing in order to help them publish and communicate their research work in English.

It is in this context that the present study attempts to make a contribution to genre analytic research into academic discourse. In the present study, the researcher attempts to expand the area of research by analyzing the rhetorical strategies that Turkish writers use in English and Turkish to construct the RA introduction genre in the disciplines of Preschool Education and Special Education. From an alternative perspective, this study also investigates the rhetorical preferences of writers in Turkish, with the aim of providing similar insights to those obtained for English academic writing for writing in Turkish. It is thus hoped that postgraduate students and novice writers who will be working primarily with the Turkish disciplinary communities- in the fields of Preschool Education and Special Education, may also benefit from the findings of the study.

1.3. Aim

Considering that genres essentially employ dynamic communicative settings where members of a particular community share mutual understanding (Bhatia, 1993; Swales, 1990), this study focuses on rhetorical and disciplinary variations in the RAIs in the following disciplines: Preschool Education and Special Education, in terms of genre, moves and steps. The articles were written by (1) native speakers of English (Eng L1), (2) native speakers of Turkish using their own language (Tr L1), and (3) native speakers of Turkish writing in English (Eng L2). The study also investigates whether the functions of the RAIs signal common written disciplinary practices, and whether participants have created similar rhetorical patterns in each language to claim knowledge. Besides, few studies have tested Swales' (2004) amended model in languages other than English, and to the best of the researcher's knowledge, no literature has been reported which compares English and Turkish research papers using this model. Despite the great interest of rhetorical differences in different sections of RAs across various languages, no studies contrasting RAIs in English L1, Turkish L1 and English L2 across different disciplines have been reported. This kind of analysis is expected to shed light on the question to what extent Turkish researchers writing in English transfer, underuse,

overuse or deviate from rhetorical features of the writer's first language, thereby risking rejection by international journals.

The present study draws on Swales' (2004) CARS schema, which is based on three rhetorical moves, and is intended to accommodate different disciplinary needs and variations between languages. It represents a development of his previous 1990 model, following criticism by, for example, Anthony (1999), Kanoksilapatham (2005) and Samraj (2002). As Swales' (2004) model is more flexible than the 1990 model, it will more readily accommodate the discourse practices of the three groups of writers in this study.

1.4. The Rationale for a Genre-based Contrastive Study

Genre analysis might be used to categorize texts depending on significant similarities and differences in rhetorical purpose, form and audience (Dudley-Evans, 1989) and is attested in the literature as of pedagogical value for different reasons. Genre analysis pays close attention to distinguishing characteristics (Cheng, 2005), which include language features significant to the particular genre, rhetorical structures and style. Novice writers often find it useful to identify these language features and the communicative purposes intended by the texts (Swales, 1990) and in turn to "gain insights into generic practices and disciplinary cultures embodied in the formal properties" (Cheng, 2005, p. 22). Learners can exploit these features themselves (Brett, 1994). Genre analysis provides useful information for novice writers who do not have enough experience in a genre, by exposing them both to the conventions of a particular genre and the reasons assumed to underlie these conventions in the social practices of a community (Bhatia, 1997a). With this awareness of genre practices, novice writers should be able to explore and produce more complex genres independently and creatively. Another advantage of genre analysis is that it is not prescriptive. Once novice writers have mastered using the conventions of a particular genre, they can produce their own representations of the genre based on genre exemplars. As Bhatia (1993, p. 40) suggests:

exploiting rules and conventions for the sake of creativity and innovation is good but it is much better to do so after one has developed at least a good awareness of, if not a good mastery over, such conventions. Moreover, analysis of generic conventions need not always be used prescriptively.

Moreover, the fact that explicit knowledge of genre conventions is used in practice has the potential to provide long term benefits and aid students in retaining genre knowledge over an extended period of time (Hyon, 2001).

Students' understanding of the "socio-rhetorical parameters underlying the linguistic features in genre exemplars" can be facilitated through explicit discussions of rhetorical structures and their use in different languages and cultures (Cheng, 2005, p. 22) and also of the communicative purposes of these texts which are produced within and according to the conventions of a particular discourse community (Swales, 1990). Genre analysis can provide learners with a thorough and complete understanding of specific texts with its focus on both the social context in which the text is created and the linguistic realizations of discourse. This, then, has the possibility to help learners in producing effective discourse. Once the rules and conventions are made explicit through genre analysis as described above, contrastive rhetoric could then play its role by comparing and contrasting genres across two languages and attempting to link their similarities and differences to cultural patterns.

Contrastive rhetorical studies are able to provide teachers and students with knowledge about the preferred patterns of writing (Connor, 2003) by uncovering specific rhetorical patterns, which might be culturally and contextually specific (Shim, 2005). Such knowledge could provide the basis for explicit strategies which Turkish ESL students might use to comprehend and produce effective English academic writing. Thus, the rationale for undertaking the genre-based contrastive rhetorical study described in this paper, is that it provides a wide range of insights from the fields of genre analysis and contrastive rhetoric, which form the basis for a comprehensive discussion of the distinctive rhetorical structures found in research article introductions written in the two different languages—English and Turkish.

1.5. Importance of the Study

The most important ground for the need of genre research is that it provides input for important and popular courses on academic writing, particularly for those who want to join the academic discourse community (Dudley-Evans, 1994, p. 228). Hopkins and Dudley-Evans (1988, p. 113, 120) claim that descriptions of text organization, particularly the notion of cycles, assist teachers and learners. They add that it is important to understand disciplinary differences to prepare ESP courses and that ESP materials must be informed by genre research. Swales and Feak (1994, p. 200-202) and Paltridge (2001, p. 66-67) advise students to examine the genre conventions of their own discipline because of the variation. Bhatia (1997a,b), supporting this point of view, notes that it is disastrous for authors to flout generic conventions. Berkenkotter and Huckin (1995, p. 29, 43) add that understanding genres is crucial to take part in the practices of the relevant discourse community.

On the other hand, move analysis has also been examined in contrastive rhetoric, studying cultural variation in discourse structure. As stated by Taylor and Chen, “The cultural background of the author might lead to variation of the rhetorical structures of texts, and that such variation should be considered in ESP teaching programs” (1991, p. 319). By considering the variations of RA structures among languages, researchers wanting to succeed through publication in the international community will need to acquire awareness of cross-linguistic differences in text structures. Because of this, in the majority of cross-linguistic analyses of the RA structure, English RAs have always been compared with RAs in other languages. There have been several calls for NS/NNS comparison. Paltridge (1993, p. 175) claims that, for NNS, research writing is particularly difficult when they need help joining the discourse community of international academic research. Cooley and Lewkowicz (1997, p. 118) found that Hong Kong post-graduate students had problems with discourse elements and conventions. According to Ventola (1992, p. 191) and Golebiowski (1999, p. 240), to teach academic writing to NNS, the first thing to do is to research NS/NNS differences, and that the results will feed directly into the design of such courses. Taylor and Chen (1991, p. 332) emphasizes discipline differences, taking account of NS/NNS differences, while Yakhontova (1997, p. 105) notes that the main difficulty of NNS research writers is unawareness of

genre conventions, which differ in an L2. According to Ahmad (1997, p. 273), this difficulty could be critical for NNS academics, who may not get published if their work is coded in the wrong rhetorical style. Vassileva (1997, p. 217) says that NS/NNS differences in academic writing result from constructed standards from the writer's L1: it is "extremely difficult to overcome them irrespective of the degree of command of the foreign language".

In this regard, the results from the cross-disciplinary analysis in the study can be a guide in helping students to realize disciplinary variations in terms of moves and the function of each move in introduction writing. The knowledge gained from the cross-linguistic analysis can show how move-step analysis is a useful analytical tool for understanding cultural differences in the rhetorical structure of RA introductions. The rhetorical structure of English academic writing will become more visible to Turkish writers because they will realize the expectations from native English readers as they acquire the knowledge of the different rhetorical features in English and Turkish. Teaching the prototypical rhetorical structure of an RA introduction to students, especially to non-native authors, can help them recognize these specific features of each move and how moves are used in writing. ESP writing instructors can become aware of the fact that the preferred rhetorical strategies in both languages are different, and guide non-native authors writing to produce academic discourse following the norms of the international academic community. The findings of this study can help Turkish authors better understand the changes or development of RA introductions in the fields of Pre-school Education and Special Education, both structurally and linguistically. Hopefully, by being aware of the linguistic and disciplinary variation in terms of rhetorical structure, students and non-native writers will increase their chances for publication and effectively participate in the international academic discourse communities.

1.6. The Rationale for the use of the CARS Model

Swales (1990, 2004) offers an empirically-derived model of how research article introductions commonly proceed. It is important to note that it is not a set of rules, but rather something of a guide as to what readers of research articles and academic essays are likely to expect (and find), a set of patterns in introductions that facilitate their reading

and comprehension. Each “move” can be considered as a kind of verbal action—a “move” a scholar will make to have a particular effect on the reader. By constructing an introduction more or less along these lines, scholars ensure their readers have enough information to follow their essays and make use of the information they contain.

Following the basis for the analysis of research article introductions, Loi and Evans (2010) adapted the existing CARS Model to examine their data from the discipline of Educational Psychology. The present study also employed the adapted form of the CARS Model to analyze the data. Table 1 provides some examples taken from research article introductions which exemplify the functions of the moves taken into account during the coding process of the present study.

Table 1. Samples from research article introductions (taken from Loi and Evans, 2010)

| Move | Its Function | Examples |
|-------|---|--|
| M1/S2 | Defining terms/concepts | <i>“Wineburg (1991) defined heuristics as sense-making activities [that help] their user resolve contradictions, see patterns and make distinctions among different types of evidence”</i> |
| M1/S4 | Reviewing literature of previous research | <i>“Mead (1934) elaborated on this account by arguing that it is not perceptions of specific significant others that influence the self-concept but rather the generalized other—the individual’s assessment of how he or she is generally perceived by others.”</i> |
| M2/S1 | Indicating a gap | <i>“The available literature suggests that vocabulary knowledge may play a role in writing; however, there is no available research investigating the question developmentally.”</i> |
| M2/S2 | Raising a question | <i>“Yet how do these self-perceptions develop? Do students’ beliefs about what others think of them inform their own self-perceptions?”</i> |
| M3/S1 | Announcing the purpose of the study | <i>“The central goal of this study is to examine the interplay between motivational styles, agency beliefs, and how one calls on them to regulate academic actions related to school adjustment.”</i> |
| M3/S2 | Specifying the focus | <i>“The focus of this part of the article is on examining helping behaviors, conditions for receiving help and task structure.”</i> |

As can be seen in the examples, while writing research article introductions scholars use moves and steps to clearly and convincingly preface their articles. The first move is specifying the topic which is like providing a background to the whole article. It can be seen in Table 1 that scholars give definitions of the concepts that are important in their study or cite other studies to support or explain their work, which are some of the steps of the first move.

The next move is making links between past and present research which exhibits that there is a need for the article to fill an empty space of research. This can be done by counter-claiming, indicating a gap or question raising. In the examples above, scholars claim that there is no research about the relevant topic or they ask questions to make the reader get involved in the topic, both of which enable scholars to move from the past to the present research.

The final move is introducing the present research where scholars introduce their present research in some ways. Table 1 shows that scholars give the goal of the study or present the focus to make their studies more clear to the reader.

Following Loi and Evans (2010), to clarify the functions of each move in relation to the rhetorical structures, samples from the present study are grouped and they are given below.

When the overall rhetorical structures employed in both English and Turkish research article introductions are considered, it appears that they are characterized by three major features, namely explicitness, specifying the value of research and taking a critical stance. Each function will be exemplified below.

Explicitness

Both English and Turkish research article introductions establish the context explicitly by defining the terms/concepts (M1/S2), presenting the background of the study (M3/S3), reviewing literature/findings of previous research (M1/S4), announcing the purpose (M3/S1) and the focus of the study (M3/S2). The data shows that these steps help establish clear contexts.

In defining the terms/concepts (M1/S2), scholars provide explicit meanings to the terms and concepts related to the research topic. Examples from the data are given below.

Example 1:

From this point of view, inclusion can be defined as "an individual's receiving education in the same class with typically peers which was customized for him/her and given to him with support services instead of being labeled as "visually impaired" or "hearing impaired" etc. and being put into separate classes. [EngL2-SE-19]¹

Example 2:

Kişiler arası çatışmaya vurgu yapan bir tanımda ise çatışma, iki ya da daha çok kişi arasındaki anlaşmazlık olarak ifade edilmiştir. [TrL1-PE-5]

(In a definition which emphasizes conflict among individuals, conflict was defined as disagreement between two or more people.)

As shown in examples 1 and 2, scholars explain concepts like "inclusion" and "conflict" in their research article introductions to avoid ambiguity and to be straight forward. By making clarifications, they try to be clear to their audiences. Effective scholars seek to avoid misunderstanding by clearly explaining the meanings they assign to key terms in their investigations.

In presenting the background of the study (M3/S3), scholars provide background information on issues closely related to the reported studies before they are dealt with in detail in the subsequent sections of the articles. The following examples clarify the step.

Example 3:

Our protocol included two days of intensive training rather than one day. Furthermore, we implemented and monitored the pre-training activities systematically in order to gain insights regarding the intensive training days. [EngL2-SE-17]

Example 4:

¹ See Appendix B for the articles

Bundan dolayı, bu araştırmada veri analizinin regresyon yöntemi ile gerçekleştirilmesine karar verilmiştir. [TrL1-SE-1]

(As a result, in the study regression analysis was decided to be used in data analysis.)

Examples 3 and 4 show that scholars briefly talk about the ongoing activities, procedures and methodology in their research article introductions to make readers alerted about the up-coming nature of their studies, which can help readers focus on types of studies that they are searching for.

In reviewing previous research or findings (M1/S4), scholars refer to other studies in the specific domain which is addressed in the article. The examples are given below.

Example 5:

Çetin, Bilbay and Kaymak (2001) suggested that these humiliated children would isolate themselves more and have greater risk of being in a withdrawal process than the others. [EngL2-SE-19]

Example 6:

Yablonsky (1991), babalar ve oğullar arasındaki ilişkileri açıklarken, babanın da anne kadar önemli olduğundan bahsetmektedir. [TrL1-PE-10]

(While explaining relationships between fathers and their children, Yablonsky (1991) claims that fathers are as important as mothers.)

As shown in examples 5 and 6, in research article introductions there is considerable reference to related research and theory in the field; it is where connections are made between the source texts that scholars draw on and where scholars position themselves amongst these sources. It is scholars' opportunity to engage in a written dialogue with researchers in their area whilst at the same time showing that they have engaged with, understood and responded to the relevant body of knowledge underpinning their research.

In announcing the purpose (M3/S1), scholars present clear indications on the direction and the scope of their studies. The examples are as follows:

Example 7:

The purpose of the current report is to present the pilot implementation process and outcomes regarding the above-mentioned toilet training program which consisted of pre-training, intensive training, and post-training activities with two children with autism. [EngL2-SE-17]

Example 8:

Bu çalışmada, zihin engelliler sınıf öğretmenlerinin; (a) BEP'i öğrenmelerine ilişkin düşünceleri, (b) BEP'i hazırlamalarına ve uygulamalarına ilişkin düşüncelerinin belirlenmesi amaçlanmıştır. [TrL1-SE-5]

(The aim of this study is to explore mental handicapped class teachers' thoughts about (a) learning individualized education program and (b) preparing and applying individualized education program.)

In examples 7 and 8, scholars indicate their purpose behind the studies. By announcing the purpose of their studies in research article introductions, scholars summarize the specific topic and goal of their research. It is a way to give the reader an accurate, concrete understanding of what the document will cover and what he/she can gain from reading it.

The focus of the research (M3/S2) also helps scholars present clear indications on the direction and the scope of their studies. The following examples illustrate the step.

Example 9:

The focus of this part of the article is on examining helping behaviors and conditions for receiving help. [EngL2-SE-17]

Example 10:

Bu araştırma yoğun davranışsal eğitime ilişkin bir Türkçe program olarak OÇİDEP'i konu almıştır. [TrL1-SE-9]

(The focus of this study is on OCIDEP which is a Turkish program about intensive behavioral intervention.)

As can be seen in examples 9 and 10, in research article introductions scholars talk about the focus of their research in a sentence which makes an assertion about a topic and predicts how the topic will be developed.

In introducing the research questions (M3/S5), scholars offer the readers a yardstick by which to measure the success of the studies. The examples are given below.

Example 11:

For this purpose, questions below were tried to be answered in this study; (a) Is the self-management skills training program effective for students with intellectual disabilities to acquire, maintain and generalize presenting anger without harming others skill? (b) Is the self-management skills training program effective for students with intellectual disabilities to acquire, maintain and generalize solving dissimilarities by talking skill? [EngL2-SE-4]

Example 12:

Bu temel amaç doğrultusunda aşağıdaki sorulara yanıt aranmıştır: 1. OÇİDEP ev uygulamasını bir otistik çocuk için yürütme süreci nedir? 2. OÇİDEP ev uygulamasının katılımcı çocuk üzerindeki etkileri nelerdir? [TrL1-SE-9]

(Considering the aim, the following research questions were sought to be answered:

- 1. What is the implementation process of OCIDEP home program for a boy with autism?*
- 2. What are the effects of the program for the participant?)*

In examples 11 and 12 scholars ask research questions that are clear, focused, concise, complex and arguable questions around which scholars center their research. Such kind of research questions help scholars focus their research by providing a path through the research and writing process. The specificity of a well-developed research question helps scholars work toward supporting a specific, arguable research.

Specifying the value of research

The value of the research is highlighted when scholars claim the centrality of their research (M1/S1) both in English and in Turkish. The function is exemplified below.

Example 13:

Recently, there has been an observable increment in the number of children diagnosed with Autistic Spectrum Disorder (ASD). [EngL2-SE-19]

Example 14:

Sınıf öğretmenlerine de dil ve konuşma bozukluklarına müdahale programlarında konuşma terapistlerine eşlik etme rolünün önerilmesi son yıllarda önem kazanan bir konu olmuştur. [TrL1-SE-10]

(Recently, the suggestion for teachers to be in collaboration with speech therapists during the intervention process of speech and language disorders has gained importance.)

In examples 13 and 14 scholars make centrality claims to convince readers by stating that the topic of research is important, relevant or worth investigating since it forms part of a significant or well-established research area.

In addition, the value of the research is established through the indication of the significance of the study (M3/S8) in both English and Turkish. The following examples illustrate the step.

Example 15:

Seeking to identify the effect of certain variables on reading readiness, this study is useful in that it may present important findings concerning the preparation and application of native language activities for the development of reading readiness. [EngL2-PE-10]

Example 16:

BEP'in öğrenilmesi, hazırlanması ve uygulamasına ilişkin zihin engelliler sınıf öğretmenlerinin tutum ve görüşlerinin belirlenmesi önemli bir gerekliliktir. [TrL1-SE-5]

(It is crucial to identify mental handicapped class teachers' thoughts about learning, preparing and applying individualized education program.)

Similar to the previous step, indicating the significance of the study helps scholars convince their readers about the possible benefits of their studies. For instance, in example 15, scholar claims that the study is useful when the possible outcomes are considered.

Taking a Critical Stance

Finally, it is evident that in both English and Turkish, scholars take a critical stance when they indicate a gap (M2/S1) in the introductions. Some examples are as follows:

Example 17:

However, further investigations are needed to examine the effects of such toilet treatment packages for children with ASD in order to better solve toileting problems. [EngL2-SE-17]

Example 18:

Ayrıca ülkemizde okul öncesi öğretmenlerinin sınıf yönetimi becerilerini ve bunun ilişkili olduğu faktörleri inceleyen herhangi bir çalışma bulunmamaktadır. [TrL1-PE-9]
(*Besides, there is no research in our country which investigates preschool teachers' classroom management skills and the variables in relation to these skills.*)

As shown in examples 17 and 18, scholars identify a need for their research somewhere in research article introductions to show the reader that they are not duplicating existing research. In other words, they imply that the paper is worth reading. This is best done by surveying the current research and then identifying a gap that they are going to fill in.

As can be seen in above, English and Turkish research article introductions broadly share the use of functional steps characterized by the three major moves by Swales (1990, 2004). Thus, the present study aims to explore if there are variations in the move-step preference among Turkish and English scholars.

1.7. Limitations

The current study only includes written discourse analysis and design of the studies is not taken into account while analyzing RAIs. Moreover, the researcher disregarded scholars' backgrounds and assumed that Turkish scholars working in an institution in Turkey are living in that country because it is not possible to find out detailed information for each scholar.

1.8. Definitions

1.8.1. Academic Discourse: Presentation of ideas (usually in written form) in academic or scholarly contexts that exhibits conventional characteristics in form and expression -- traditionally, such communication has been objective, analytical, and expository, and has generally advanced an argument for a particular thesis.

1.8.2. Genre Analysis: "Genre analysis, a recent development of discourse analysis, has concerned itself with describing the higher level organization and structure of written or spoken texts. It aims to study communicative purposes and strategies in using the language" (Qin, 2000). The application of the findings of genre analysis to English teaching has been greatly encouraged in the field of English for Specific Purposes (ESP) (Hyland, 2000; Swales, 1990; Bhatia, 1993).

1.8.3. Rhetorical Analysis: Rhetorical analysis refers to analyzing a text or a given source. That text may be a piece of writing or some different sort of communication which includes the consideration of the rhetorical situations-purpose, audience, genre, stance, and media/design. In other words, the analysis explores not only what everything means in the given source (content), but also why the author wrote about it (the purpose), who the author is (background), how the piece was organized (structure), and where and/or when it was published (forum), etc.

1.8.4. Disciplinary variation: The concept drawing attention to the idea that we do generally use language to communicate not with the world at large, but with individuals and with other members of our social groups. In studies of academic discourse, then, "communi-

ty” provides a principled way of understanding how meaning is produced in interaction and has proved useful in identifying disciplinary-specific rhetorical practices.

1.8.5. CARS Schema: Swales (1981), analyzing some forty-eight research article introductions from fourteen journals ranging from molecular physics through electronics, chemical engineering, neurology, radiology, educational research, educational psychology, management, language and linguistics, discovered remarkable similarities displayed by the authors of academic research papers in organizing their article introductions. Based on what he had discovered, Swales (1981) posited a four-move structure for a typical article introduction, which he, after some modifications in his later publication (1990), presented as the CARS model (Create a Research Space).

CHAPTER 2

LITERATURE REVIEW

The present study can be called a dual contrastive genre analysis, comparing the effects of languages and disciplines on RA introductions. It involves sets of RA introductions from two different disciplines- Preschool Education and Special Education - written in two languages, English and Turkish. First, general information about the contrastive rhetoric paradigm will be discussed. Next, the concept of "discourse community" and "genre" will be introduced. Then, move-step framework used in the existing literature will be discussed. In section 2.4, previous studies that have shaped this present study will be discussed. These studies involve analyses of rhetorical divisions of RAs, especially RA introductions. Lastly, a review of studies on the comparison of writing in different languages and different disciplines will be presented.

2.1. The Contrastive Rhetoric Paradigm

Studies of cross-cultural rhetorical variation, and how the influence of the L1 may affect the way individuals express themselves in an L2 are often labeled “Contrastive Rhetoric research”. As the term suggests, Contrastive Rhetoric (CR) has been influenced, to some extent, by Contrastive Analysis (CA), the branch of applied linguistics which has traditionally been concerned with the analysis of pairs of languages at the levels of phonology, grammar and lexis (James, 1980). A prime concern of CA was to establish aspects of the L1 that might result in interference or negative transfer to the L2. The view was that these phonological, syntactic and lexical features should in turn inform syllabus design. Contrastive Rhetoric, at least in its initial stages (see, Connor, 1996), built on the CA tradition, while extending the approach beyond the sentence level to the paragraph and the whole text.

Robert Kaplan was, in 1966, the first to articulate the notion of CR as a reaction to this narrowly sentence-bound perspective on which English as a Second Language (ESL) instruction was based at that time. Kaplan (1966) observed that although the existence of cultural variation was a factor which had been recognized in ESL teaching at

the level of the sentence (i.e. grammar, vocabulary and sentence structure), foreign students who had mastered syntactic structures still struggled to produce adequate term papers, theses or dissertations. Some grammatically correct ESL texts still seemed to violate native English reader expectations at the discourse level, since native speakers of different languages produced what came to be regarded characteristic violations of the discourse norms of English.

While there is still a good deal of controversy surrounding the specific role of the L1 in conditioning discourse-level patterns, there is little doubt that CR continues to provide a research framework and a number of insights that are valuable to ESP and EAP teachers and materials designers.

2.1.1. The notion of ‘rhetoric’ in academic discourse

For many people, the term ‘rhetoric’ *per se* has negative connotations because of its connection with political discourse in classical Greece. In the last few decades there has been a lively revival of interest in rhetoric among linguists. This new wave of interest has seen the taking up of the notion of rhetoric as persuasion and the stripping away of pejorative connotations. The study of rhetoric has been rediscovered not only as a means of improving efficiency in verbal presentation, but as an analytical tool that can be used for uncovering the structure of texts across languages and disciplines (Mauranen, 1993b, p. 20).

Other rhetoricians have developed theories which are especially relevant for those interested in second language writing. Connor (1996, p. 67) cites, for example, Toulmin’s (1958) model for argumentative writing, and Perelman’s (1982) “new rhetoric”, which focuses on the achievement of particular effects on the audience. This emphasis on audience, as Connor notes, has been particularly influential in Contrastive Rhetoric research. In her argumentative model Toulmin (1969) identified elements of a persuasive argument which she listed as claim, grounds, warrant, backing, qualifier and rebuttal. Her model is one way of analyzing a text that we read, with an eye toward analyzing and improving the arguments in written discourse, especially in science educa-

tion. In the present study this model is not applied because the focus of this study is on functional moves whereas in Toulmin's model the primary focus is on content.

Rhetoric, in the framework used in the present study, is understood as persuasive written discourse. Purves (1988, p. 9), for example, defines *rhetoric* as “the choice of linguistic and structural aspects of discourse chosen to produce an effect on the audience”. Rhetorical strategies thus consist of the choices that writers make in order to convince readers of their claims. This notion takes into account the participants in persuasive communication: the writer with intentions, the audience on whom the effect is achieved, and the discourse which acts as the medium of persuasion. We could say then that rhetoric is language use with the intention to persuade or with an intention to convince. However, as Mauranen (1993b) points out, the problem with intention is that writers’ rhetorical intentions are not accessible to investigation outside their expression in the text.

Clearly the introductions that make up the data used in this study are not simply instances of expository prose, but texts with a profoundly persuasive function. As was stated above, the writers of research article introductions must persuade editors, peer reviewers and ultimately readers to accept the claims they make. Thus, they are expected to exhibit a range of rhetorical strategies that serve to this end.

2.1.2. Subsequent Contrastive Rhetoric research

As stated earlier in section 2.1, Kaplan’s (1966) paper can be seen as a reaction to formalist approaches to composition teaching, based on the avoidance of systematic errors. In Kaplan’s terms the main problem that overseas students in the United States universities experienced arose because they were employing rhetoric and indeed a sequence of thought which violated the expectations of the English-speaking reader. The thought patterns which native speakers and readers of English appeared to expect as an integral part of their communication was a sequence that was, according to Kaplan, dominantly linear in its development. Kaplan (1966) describes a typical English expository paragraph beginning with a topic statement which is then followed by a series of subdivisions of that topic statement, each in turn supported by examples and illustrations.

These topic statements each relate explicitly to the central idea of the essay or paper. An alternative paragraph structure available to the English-speaking writer is one in which a series of examples is provided and then followed by a final topic statement. Kaplan believes that these two types of paragraph development represent the common *inductive* and *deductive* reasoning which the native English reader expects to be an integral part of any formal communication.

In order to compare English paragraph development with paragraph development in other languages, Kaplan analyzed some 600 essays written in English by foreign students in the United States. On the basis of these analyses he identified four kinds of discourse structures that contrasted with English linearity (shown in Figure 1), each of which he related with the following language groups:

(1) Semitic languages, characterized by a complex series of parallel constructions, with the first idea completed in the second part.

(2) Oriental languages, characterized by circularity, with the topic looked at from different tangents.

(3) Romance languages, characterized by freedom to digress and the introduction of "extraneous" material.

(4) Russian, similar to (3), but with different lengths, and parenthetical amplifications of subordinate elements.

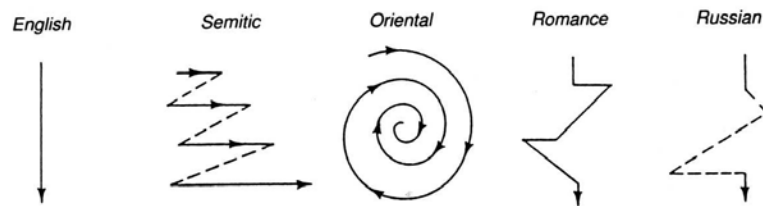


Figure 1. Diagram on cross cultural differences in paragraph organization in Kaplan's (1966, p. 11) study on cultural thought patterns

Following this typology, Clyne (1987) has classified the German language as an instance of (3) and (4). He gives an extreme example of this type of discourse in which

there aren't only digressions but also digressions within digressions. Every time the writer returns to the main line of argument, he has to recapitulate it up to the point before the last digression, resulting in much repetition. Furthermore, Clyne (1987, p. 214) claims that the issue of linearity versus digressiveness cannot be completely separated from grammatical considerations, that is, differences in the language structure may cause contrasts in the discourse structure. Thus he sees German participial clauses and left-branching constructions as contributing to digressiveness. Although Clyne acknowledges the importance of such features, he does not believe that they are decisive. He points to the fact that the tendency towards digressiveness in texts by French speakers, Italians and Russians, being speakers of languages structured very differently to German, suggests that it might be cultural determinants rather than linguistic typologies that underlie degree of linearity in discourse.

As regards Kaplan's description of Oriental languages, Mohan and Lo (1985) have disputed Kaplan's claim of the importance of indirectness in Chinese. They argue that both classical and modern Chinese styles taught at schools today favor a direct rather than an indirect expressive mode. These authors provide evidence of linearity from both classical and modern Chinese sources which, they claim, indicate very little difference between the discourse structure of English and Chinese. Furthermore, Hinds (1987) has also shown that there are significant differences in writing among related languages such as Japanese, Chinese, Thai, and Korean, which Kaplan had included in a single Oriental group. Clyne (1987) too is unhappy with the rough grouping of disparate languages used by Kaplan and claims that the argument style of Saxonian (English) has less in common with Teutonic (German) than it does with Nipponic (Japanese). This suggests that rhetorical variation may reflect different intellectual styles or academic conventions learned in a specific culture.

Another criticism of Kaplan's (1966) study is aimed at the pedagogical applications he saw as arising from it. He regarded the culture-specific patterns of organization as a negative influence on ESL writing. To combat these, he recommended that ESL students learning to write essays in an Anglo-American style should study model compositions constructed in the linear fashion thought typical of writing in English. Alt-

though Kaplan's intentions were undoubtedly very worthy, some researchers have criticized his approach on the grounds that it is excessively prescriptive (see, for example, Leki, 1991), and ethnocentric (see, for example, Melander, 1998), since textual patterns other than those produced by native speakers of English are effectively treated as anomalous rather than simply different.

A third motive for criticism is at the level of theory. Martin (1992) suggests that Kaplan fails to ground his work in a broader theoretical context of ESL writing. This lack of a developed theoretical base is also a target of criticism according to Purves (1988). Kaplan himself, in a later (1988) article, points to the need for theory formulation within Contrastive Rhetoric. This theoretical void is explained by Martin (1992) as a consequence of the newness of the field, the lack of communication among researchers working on CR projects, and a lack of agreement about what exactly constitutes CR research. According to Martin (1992, p. 11), much of the CR research done in the past three decades is not easily available because it is in unpublished form, often consisting of papers presented at scholarly conferences, unpublished master's theses and doctoral dissertations. He also observes that even some published work is relatively inaccessible since it is published in local non-English journals.

Kaplan's (1966) early study is also innovative since it reflects his interest in rhetoric and logic, interests which typically lay outside the scope of concerns of most ESL professionals whose training was primarily in linguistics (Connor, 1996). Kaplan maintained that logic and rhetoric are interdependent as well as culture specific:

"Logic (...) which is the basis of rhetoric is evolved out of culture; it is not universal. Rhetoric, then, is not universal either, but varies from culture to culture and even from time to time within a given culture"

(Kaplan, 1966, p. 2)

His view was based on the Sapir-Whorf hypothesis that suggests that linguistic structures condition thought and that it is this which accounts for discourse variation across cultures. Kaplan effectively built on what Connor (1996) terms "the weak version" of the hypothesis (i.e. language is influential but not a determining factor).

Martin (1992) draws a distinction between two conceptualizations of CR, “narrow” and “broad”, that can be seen as parallels to the weak and strong versions of the Sapir-Whorf hypothesis. A narrow definition of CR would be one that postulates that the rhetorical organization of L2 written texts is the result of the transfer of L1 rhetorical organization, that there are a finite number of rhetorical forms for any language, and that these forms are discoverable by analysis of written texts. It is implied that the native language rhetoric of the writer determines the rhetorical organization of the second language texts he or she writes. This traditional notion of CR, as Martin (1992) notes, was readily translated into an approach for the teaching of writing that applied contrastive analysis techniques similar to those used for sentence-level error to discourse-level issues, that is, the negative transfer from the L1 accounted for all error. The broader view of CR would postulate that L1 rhetorical norms and culturally determined linguistic strategies, while undoubtedly making an impact on the shape of L2 texts, do not necessarily act alone. It has been this broad version that has achieved wider acceptance among researchers in the CR paradigm (Martin, 1992).

Söter (1988), for example, argues that the ways in which we express thought in writing are very strongly influenced by our experiences with discourse generally and written text specifically, and the related conventions that govern each of these within our social and cultural contexts. Other authors such as Mohan and Lo (1985) attribute organizational problems in English academic writing by L2 learners to developmental factors rather than to interference from the first language. They argue that ability in rhetorical organization develops late even among writers who are native speakers of English and, because of this, ability is derived especially from formal education, that is, previous educational experience may facilitate or retard the development of academic writing ability. Leki (1991) argues that most students come to L2 writing with some previously learned discourse schemata which is the result of their experience of school. As Leki (1991, p. 124) puts it: “writing, for most school children, is nearly always school sponsored and inevitably, therefore, reflects the culture of the school system and reproduces culturally preferred discourse styles”. Purves (1988) also sees the role of school as the primary agent in the transmission of cultural, rhetorical and stylistic norms.

Clyne (1987), Mauranen (1993a, 1993b) and Golebiowski (1998), among others, also consider that intercultural variation in the rhetorical preferences of writers may be promoted by the educational systems, and other factors such as the varying intellectual styles and attitudes to knowledge and content rather than the structure of a language. While pointing to socio-cultural, historical, sociopolitical and situational constraints as the source of rhetorical differences across languages, Hinds (1990) proposes in his (1987) critique of Kaplan's first study a new typology of language based on speaker/writer responsibility as opposed to listener/reader responsibility. Hinds contends that in some languages, such as English, the person primarily responsible for effective communication is the speaker/writer while in other languages, such as Japanese or German it is the responsibility of the listener/reader to understand what it is that the speaker or writer had intended to say. In such reader-responsibility languages writing explicitly is not valued. Hinds (1990, p. 90) terms reader-responsibility styles as "quasi-inductive", since they involve "delayed introduction of purpose", with the topic implied, rather than stated. Hinds goes on to argue that English-speaking writers and readers are only familiar with strictly deductive (i.e. the thesis statement in the initial position) and inductive (i.e. the thesis statement in the final position) organizational patterns, and if they find that a text does not conform to one of the two patterns they naturally assume that the essay is arranged in an inductive style, or simply see it as lacking in coherence.

Following Hinds's (1987) typology of languages, Connor (1996) characterizes Finnish as a reader-responsibility language, whose text linguistic features such as topic development are closer to German than to English writing. She attributes the similarities between Finnish and German discourse patterns to the influence of the German academic traditions on Finnish schools and universities. In this regard, Connor argues that the unique structure of Finnish (a non-Indo-European language) does not contribute to Finnish rhetoric, and that, as with Japanese, the Whorfian hypothesis is insufficient to explain cross-linguistic rhetorical variation. She suggests that rhetorical differences do not reflect different patterns of thinking, but rather, that differences may reflect different writing conventions that are learned in the culture. Furthermore, Connor takes issue with Kaplan's first study for operating on the assumption that the rhetorical organiza-

tion of expository prose is culturally-determined without analyzing the reasons that give rise to the different writing styles associated with a specific culture.

Many contrastive studies, as noted above, have focused on the rhetorical differences between texts written in English by academics with different cultural backgrounds (e.g. Kaplan, 1966; Mauranen, 1993a, 1993b). However, this approach has received a great deal of criticism. Vähäpassi (1988, p. 51), for example, argues that in order to draw valid conclusions as to what extent writing is culturally and situationally influenced written discourse in the native language and in national contexts should be used. Reid (1988, cited in Moreno, 1998, p. 551) also notes that texts written by non-native speakers do not constitute “a sufficient data sample for valid analysis because they use second language texts to investigate first language rhetorical patterns”. The two main approaches to CR today, as Leki (1991) points out, seem either to establish textual criteria and search for those qualities in samples of successful and unsuccessful texts by students writing in their L1, or to examine L1 texts from different cultures, often professional, published work, and the rhetorical contexts in which these texts are inscribed. An example of the first approach is Mohan and Lo (1985), who examined the written compositions of learners still at school whereas some examples of studies which have analyzed the writings of experienced academics in their own fields of knowledge are Taylor and Chen (1991) and Burgess (1997, 2002).

As we have seen, much of the direction of recent CR research has been, explicitly or implicitly, a reaction to Kaplan’s pioneering work. This early study, in its theoretical assumptions and its methodology (i.e. the use of L2 texts to arrive at descriptions of the supposed rhetoric of the writer’s L1, the use of the paragraph as the unit of analysis, and a contrastive approach to data) has functioned as a model for many researchers, and inspired intense critical appraisal from others.

In a more recent work, Kaplan (1987) recognized many of the shortcomings of his 1966 paper, including the neglect of exophoric factors such as sociolinguistic and genre constraints on the production of written discourse. He also uses expressions such as “tendencies” of a language to follow a certain pattern, while readily admitting that

many different patterns are possible in almost any language. Unfortunately, as Martin (1992) notes, this broader evolution in Kaplan's later work has been largely ignored by many contrastive rhetoric researchers, who tend to address only his earliest, most tentative explorations of the notion of CR, and which Kaplan (1987, p. 10) himself refers to as his "doodles article".

2.1.3. Development of CR studies

Two main trends in form and content of CR research have evolved in recent years. Martin (1992, p. 15) makes distinction between "metarhetorical" and "empirical". The former concept -"metarhetorical", is used for studies which present discussions about rhetorical features of languages, and selectively use language data as examples to illustrate these features, and to support hypotheses about rhetorical differences among various languages (e.g. all of Kaplan's articles). The latter one -"empirical", refers to attempts to empirically analyze actual occurrences of cross-language or L2 written discourse by applying some system of analysis to a larger number of written texts and then postulate rhetorical characteristics or tendencies suggested by the results of the analysis (e.g. Hinds, 1987, 1990; Mohan & Lo, 1985).

Although much early CR work was metarhetorical in form, as a reaction to Kaplan's flaws in his original research methodology and conceptualization of the CR notion, the major focus of attention in recent CR work has been in the direction of empirical studies. This has, in turn, brought about an expansion in the parameters of CR research. Approaches such as the use of L1 data from languages other than English, exploration of the applicability of a variety of text analysis instruments, comparisons made between languages other than English as L1s and L2s, and analysis of texts of various genres all point to the increasingly sophisticated and complex nature of issues that current CR researchers are addressing in their work (Connor, 1996).

As Leki (1991) reports, empirical contrastive studies in the 1970s still continued to focus primarily on lower level differences, despite the recognition that discourse phenomena present ESL writers with major difficulties. Some researchers continued Kaplan's approach, examining the writing in English of non-English-speaking-

background students to detect systematic textual differences in their written English and that of English speakers. Others focused on textual analysis of L1 writing. An example of this second approach is Santana-Seda (1974, cited in Moreno, 1998, p. 546). This author analyses the organization of English and Spanish paragraphs written by native speakers of each language. According to Moreno (1998, p. 546), Santana-Seda finds differences in aspects such as sentence length, number of sentences per paragraph, and number of digressive sentences.

In the 1980s there was a renewed interest in CR and in the exploration of more than strictly surface features of discourse (Leki, 1991). Contrastive studies began to analyze discourse-level features of texts such as superstructures (e.g. Connor, 1987), discourse development (e.g. Hinds, 1987; Clyne, 1987) or combined analyses of several text levels (e.g. Connor & Lauer, 1988; Indrasuta, 1988). There were also explorations of the broad political, economic and historical contexts of text production. Kachru (1988), for example, in her examination of Hindi, points out that while oral exposition was common in Sanskrit and that this influenced Hindi, there was no Hindi expository writing as such before British colonization and that therefore Hindi can be expected to show the influences both of oral Sanskrit exposition and written British exposition. Researchers also began to consider diachronic and synchronic factors. A case in point is Hinds (1987), who suggested that Chinese is becoming a writer-responsibility language having once been reader-responsible (see above). Researchers also turned to examining writers and writing in particular settings (e.g. Bazerman, 1988; Becher, 1989; Myers, 1989). These studies showed that writers' plans, goals and other process-based strategies are dependent on the particular purpose, settings and audiences (Connor, 1996). The concept of "discourse community" became an integral part of research into academic writing. Researchers in applied linguistics addressed the existence of conventions in the practices of discourse communities, and focused on how these conventions are learned in social contexts.

The 1990's saw the continued expansion of the Social Constructionist approach, which points to the linguistically mediated relationship between knowledge and the social context. This notion refers to the idea that we know the world only as we perceive

it (subjective perception). The “real conditions” of our existence are not subjective; however, they only have meaning through social interaction. As we interact, we (re)construct the “reality” of our world. Reality is then situational or pragmatic in that the context governs our interpretation. The socio-constructionist approach to discourse analysis is the view that knowledge begins as an individual emotional response to a written text, which is then negotiated into communal knowledge to which all members of a discourse community freely assent. This implies that many aspects of academic texts can be explained by the social and cultural contexts from which those texts emanate.

In this decade a great deal of research on CR began to focus on genre-specific texts. As Swales (1990) notes, it is not enough to describe text types (e.g. narrative, descriptive, argumentative) or situations (writing in certain discourse communities), but one also needs to consider the specific tasks and purposes of writing, that is to say, genre.

The enhanced research activity on genre-specific writing cross-culturally in recent years, as Connor (1996) notes, has led to a broadening in scope of the type of writing analyzed to include a variety of school writing genres (e.g. essays written for narrative, reflective and persuasive purposes), as well as professional writing in academic and workplace situations such as the writing of research articles and grant applications. This is seen particularly in the increasing number of cross-cultural studies comparing English academic writing to other languages such as Chinese (e.g. Taylor & Chen, 1991; Bloch & Li, 1995), Finnish (e.g. Mauranen, 1993a, 1993b), Czech (e.g. Cmejrková, 1996), Polish (e.g. Duszak, 1994, 1997), Swedish (e.g. Melander, 1998), Malay (e.g. Ahmad, 1997), and many others.

One of the most valuable contributions of CR research, according to Canagarajah (2002), is that it treats the discursive deviations of non-native students of English with more tolerance and appreciation. As Canagarajah (2002, p. 34) points out, “CR is informed by relativism that treats the features of each community as motivated by their unique linguistic and cultural traditions that one cannot be generalized as superior over

others”. However, although CR respects differences, Canagarajah (2002, p. 35) argues that it displays a “static and homogeneous orientation to culture”, that is, the cultures of different communities are treated as separate and unvarying, as if there were no common features or overlaps, and by doing so, CR overlooks the considerable hybridity and heterogeneity that exists. He gives the example of the diversity of styles one may find in the Japanese community and the changes Japanese rhetoric has gone through in recent history. Canagarajah also illustrates the case of Sri Lankan scholars who shift from local to western academic communities belonging to their fields as they publish their findings. He depicts the present stage of heterogeneous orientation to culture as follows:

In this age of globalization, when we shuttle between communities and enjoy multiple memberships, it is hard to pin down any person or community as characterized by an immutable set of values (Canagarajah, 2002, p. 35).

The findings of recent CR studies have revealed that the patterns of any language culture are complex and dynamic, responding to the interactions between discourse communities and individual writers over time and in varied contexts. This interactive approach to text involves factors relevant to the contextual environment (e.g. authorial intention, or cultural/educational background). Approaches to text analysis are thus increasingly multidimensional and interactive. More and more exophoric features are seen as intimately connected with the very notion of discourse production and reception across languages and cultures (Martin, 1992).

The expanding discipline of CR is hence of considerable interest to the field of second language teaching, particularly to those involved in teaching composition and Languages for Specific Purposes. Apart from providing information about text structure preferences which are considered to represent successful communication across cultures, CR studies can also make students aware of the fact that specific difficulties in L2 writing derive from their own particular rhetorical tradition. In this regard, CR studies are particularly beneficial for novice writers. As Leki (1991, p. 138) points out, “the metacognitive awareness students can develop is one more step along the road to the realization that writing consists of making choices, an important insight for young writers to develop”.

In light of this, the current CR paradigm includes the analysis of written products in academic discourse and raises the issue of determining which aspects of academic discourse are subject to restrictions of the writing conventions of the genre and the discipline, and which aspects are governed by socio-cultural factors.

2.2. The notion of ‘Discourse Community’ and ‘Genre’

2.2.1. The concept of ‘Discourse Community’

In his definition of genre, Swales (1990, p. 58) conceptualizes the discourse community as “the parent of genre”. He attributes the notion of ‘discourse community’ to the work of various social constructionist theorists, quoting Herzberg (1986):

Use of the term “discourse community” testifies to the increasingly common assumption that discourse operates within conventions defined by communities, be they academic disciplines or social groups. The pedagogies associated with writing across the curriculum and academic English now use the notion of discourse community” to signify a cluster of ideas: that language use in a group is a form of social behavior, that discourse is a means of maintaining and extending the group’s knowledge and of initiating new members into the group, and that discourse is epistemic or constitutive of the group’s knowledge (Herzberg, 1986, p. 1, as cited in Swales, 1990, p. 21).

Swales (1990, p. 24) goes one step further by developing the idea of ‘discourse community’ by comparing it with ‘speech community’. He talks about several reasons for separating the two concepts: The first reason is that for a discourse community, a network of communication and common goals are necessary while there may be considerable distance between the members both ethnically and geographically. In contrast a speech community requires physical proximity. As the second reason Swales indicates that a discourse community is a socio-rhetorical unit that consists of a group of people who link up in order to pursue objectives that are established prior to those of socialization and solidarity, both of which are characteristic of a speech community (i.e. a socio-linguistic unit). Finally, it was added that discourse communities are centrifugal (they tend to separate people into occupational or specialty-interest groups), while speech

communities are centripetal (they tend to absorb people into the general fabric of society).

Six defining criteria are suggested by Swales (1990, p. 24-32). Any discourse community should meet the following criteria:

1. A discourse community has a broadly agreed set of common public goals.
2. A discourse community has mechanisms of intercommunication among its members.
3. A discourse community uses its participatory mechanisms primarily to provide information and feedback.
4. A discourse community utilizes and hence possesses one or more genres in the communicative furtherance of its aims.
5. In addition to owning genres, a discourse community has acquired some specific lexis.
6. A discourse community has a threshold level of members with a suitable degree of relevant content and discourse expertise.

These criteria emphasize that, for Swales, a discourse community is a social group using language to succeed work in the world and that discourse maintains and extends a group's knowledge. The implicit emphasis given to the international character, as Bloor (1998, p. 58) points out, is of particular importance for ESP teaching, as it raises the status of non-English-speaking background students, and fosters the understanding of the relationships between the members of particular disciplines across political and geographical boundaries.

Notwithstanding, Swales' definition of discourse community has been criticized for being narrow and for the very restrictive role he gives to it. Mauranen (1993b, p. 14), for example, argues that there are discourse communities of many different kinds that fit Swales' definition, that discourse communities are subject to change, and that the tension between tendencies towards change and stability can be perceived in the use that communities make of language. Furthermore, Mauranen argues that Swales' defini-

tion of discourse community excludes the academic or scientific community as a whole, since only individual disciplines might meet all or most of his criteria.

2.2.2. The concept of ‘Genre’

The term ‘genre’ has long been used in literary studies to refer to different types of literary text, and has been widely used with a similar meaning in related fields such as film studies. Today, as Swales (1990, p. 33) points out, this term is used to refer to “a distinctive category of discourse of any type, spoken or written, with or without literary aspirations”. The concept of genre has been discussed in various areas, including folklore studies, linguistic anthropology, the ethnography of communication, conversational analysis, rhetoric, literary theory, the sociology of language, and applied linguistics (Paltridge, 1997a). Most interpretations of the notion of genre, in the various different areas in which it is used, appear to agree at least implicitly on one point: genres are types or classes of cultural objects defined around criteria for class membership (Mauranen, 1993b).

In linguistics, the first explorations of the concept of genre are to be found in the work of ethnographers of communication, who took genre to refer to “a type of communicative event” (Swales, 1990, p. 39). Some of the first linguistic descriptions were provided by researchers such as Biber (1988), who approached genre by making quantitative analyses of surface linguistic features of texts in the hope that statistical properties would reveal significant differences between them so that they could be grouped according to shared features. Similarly, Grabe (1987) made an extensive statistical survey of elements such as prepositions, tenses, passives, etc., in order to determine the distinguishing features of expository prose in English. Although this level of linguistic analysis tells us very little about what aspects of genres are textualised and to what ends, as Bhatia (1993) notes, linguistic analyses of frequency of lexico-grammatical features are useful in the sense that they provide empirical evidence to confirm or disprove some of the intuitive claims that are frequently made about the lexical and syntactic characteristics of spoken and written discourse. Yunick (1997, p. 326) too argues for the importance of these types of analyses, since quantitative work serves to identify not only

phenomena general to many genres across cultures and languages, but also significant patterns of meaning which might not emerge from ethnographic analyses alone.

2.2.3. The relationship between Discourse Community and Genre

The close relation between discourse community and genre has been frequently acknowledged in the literature. Bhatia (2002), for instance, sees genres as conventionalized communicative events embedded within disciplinary or professional practices. The socially situated nature of genres is typically foregrounded by the notion of discourse community. As Hyland (2002, p. 121) points out, “by focusing on the distinctive rhetorical practices of different communities, we can more clearly see how language is used and how the social, cultural, and epistemological characteristics of different disciplines are made real”. Swales (1990) characterizes the relationship between discourse community and the generic forms that they produce, suggesting that genres belong to discourse communities, not individuals. Similarly, Bazerman’s (1988) study of the development of the experimental article establishes an important connection between the formation of a scientific community and the development of discourse strategies for making claims about experiments.

Freedman and Medway (1994) have raised the question of the circularity of the relationship between genres and discourse communities. Mauranen (1993b) considers that it is the genre which defines or selects its user groups rather than the other way around. According to Mauranen different social groups have access to different genres. It is the social purpose of the linguistically realized activity that determines who is allowed to use it. Paltridge (1997a), on the other hand, holds that it is the discourse community that determines the conditions for identification of genres. For Berkenkotter and Huckin (1995, p. 25) genres are also determined by their users. They further argue that a close examination of genres may reveal a great many of a discourse community’s social practices, ideology and epistemological norms. Similarly, recent research (e.g. Hyland, 1998, 2000, 2002) suggests that content, structure, and interactions are community defined, and that genres are often the means by which intutions are constructed and maintained.

The importance of giving consideration to how genre is viewed by a particular community can be seen in the work of Myers (1989, 1990). He explores interactions between writers and readers within discourse communities. This approach, as Paltridge (1997a) notes, considers the role of audience both in terms of shared understanding and expectations of how a text should be written. Myers (1989, p. 3) makes a distinction between two types of audience: the wider scientific community (exoteric audience), to whom a research report is ostensibly addressed, and an immediate audience of individual researchers doing similar work (esoteric audience). As Myers argues, although the writer really addresses the esoteric audience, s/he has to use forms as if s/he were addressing a general scientific audience. In this way, although knowledge of some terms is assumed, well-known researchers and relevant studies have to be cited as if the reader did not know them. According to Myers, this is evidence of the way in which the relationship between writers and readers (the discourse community) shapes the rhetorical features of academic texts.

The study of reader-writer relations within discourse communities contributes to an understanding of why some linguistic features are used in the production of academic genres. The examination of textual features reveals how writers adapt their practices to their audience and how participants collectively construct genres. This approach constitutes a major concern in the present study.

2.3. Academic Writing

The last two decades have witnessed a steady growth in research on academic writing. One of the most striking findings of this body of research is that “students entering academic disciplines need a specialized literacy that consists of the ability to use discipline-specific rhetorical and linguistic conventions to serve their purposes as writers” (Berkenkotter, Huckin, & Ackerman, 1991, p. 19). Therefore, a sociocultural dimension of academic literacy has been emphasized and it has been claimed that writing in academic contexts is governed by the communicative purposes shared, and communicative conventions sanctioned, by members of specific discourse communities (Berkenkotter & Huckin, 1995; Geisler, 1994; Hyland, 2000; Swales, 1990).

A significant amount of research has focused on the genres/tasks students are expected to perform in university content classrooms (Braine, 1989, 1995; Carson, 2001; Hale et al., 1996; Zhu, 2004). In one of the first studies on student writing tasks, Horowitz (1986) analyzed 54 writing assignments from one graduate and 28 undergraduate courses taught in 17 departments of an American university. Horowitz identified seven categories of writing tasks expected of students: summary of/reaction to a reading; annotated bibliography; report on a specified participatory experience; connection of theory and data; case study; synthesis of multiple sources; and research project. In a current study Altunay (2009) examined the use of connectives in unplanned argumentative written discourse by 132 Turkish ELT department students. She found that learners did not use a large variety of connectives in their essays and added that there were still some grammatical and punctuation errors, which might have stemmed from L1 transfer or from the cognitive and syntactic complexity of the relation that the connective indicates. While Horowitz's and Altunay's studies did not have a particular disciplinary focus, other studies examined written genres required of students in specific disciplines (e.g., Braine, 1989, 1995; Zhu, 2004). One finding is that much of what students need to write, particularly in upper division undergraduate and graduate level courses, is specifically tied to their disciplines.

Academic writing research that has examined writing in specific disciplinary courses indicates that writing involves different purposes in different courses and requires students to take different social roles, and that communicative conventions are intricately intertwined with the content for, the aims of, and student roles in writing. More specifically, academic readers approach student writing with different sets of expectations, depending on the goals of writing, the perceived roles of the student writers, and the academic readers' own disciplinary expertise. Therefore, it was thought to be important to conduct a study which investigates discipline-specific rhetorical patterns of scholars cross-culturally to gain some insights on academic writing.

2.3.1. The Research Article

2.3.1.1. 1990 Version of the CARS Model for the Introduction Parts of the Research Article

Genre analysis of research writing has been deeply influenced by Swales' (1990) Create A Research Space Model (See Figure 2). Swales' (1990) CARS Model is in fact a revised version of his earlier CARS Model (1981). In the 1990 version of the CARS Model, Swales elaborated on some aspects of the model. Ecological analogy is one of these aspects. According to Swales (1990), ecological analogy employs a number of characteristics of the research article introductions: the necessity to re-establish in the eyes of the discourse community the importance of the research area itself: the need to "situate" the actual research in terms of that importance; and the need to show how this niche in the wider ecosystem will be taken place and supported. It was added that the extent of rhetorical work needed to create such a space depends on the existing ecological competition, on the size and importance of the niche established, and on various other factors such as the writer's reputation.

In the 1990 version of the CARS Model, Move 1 has a "narrowing" effect, which is called "claiming centrality" by Swales (1990). In Step 1, centrality claims are directed to the discourse community who are asked to accept the research about to be reported as part of a lively, significant or well-established research area. Centrality claims can be made in several ways: by claiming interest or importance, by referring to the classic, favorite or central character of the issue, or by claiming that there are many other investigators active in the area. Two of the typical examples of linguistic exponents of centrality claims given by Swales are the following.

Recently, there has been a wide interest in ...

In recent years, applied researchers have become increasingly interested in ...

(1990, p. 144)

In Step 2, making a topic generalization, a more neutral general statement than Step 1 is made. Step 2 can be divided into two categories: statements about knowledge or practice, or statements about phenomena. Two examples of this step are the following.

Education core courses are often criticized for...
A standard procedure for assessing has been...

(Swales, 1990, p. 146)

Step 3 in “establishing a territory” is the review of one or more items that are regarded by the authors as relevant to that establishment. This step is one of the occasions where the research article author needs to relate what has been found (or claimed) with who has found it (or claimed it). More specifically, the author needs to provide a specification of previous findings, attribution to the researchers who established those results, and a stance towards the findings themselves.

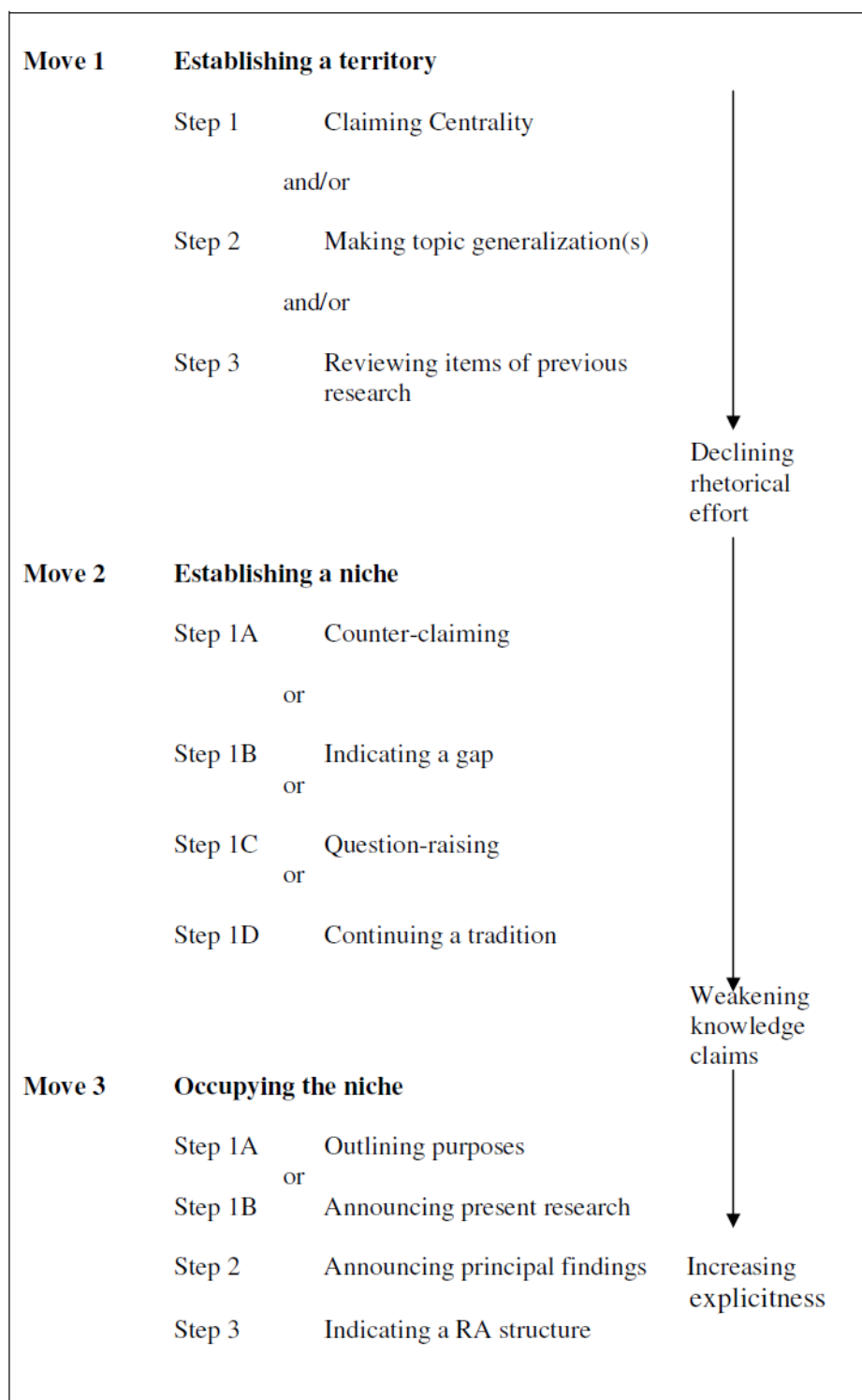


Figure 2. A CARS Model for Research Article Introductions (Swales, 1990, p. 141)

Move 2 of the CARS Model is “establishing a niche”. Swales’ (1990) study with 100 research articles in different disciplines revealed that the gaps in previous research are presented with the following linguistic exponents:

1. Negative or quasi-negative quantifiers (28 Instances)

No 12

Little 7

None (of) 4

Few/very few 4

Neither...nor 1

2. Lexical negation (26 instances)

Verbs 15 (fail, overlook etc.)

Adjectives 7 (inconclusive, complex etc)

Nouns 3 (failure, limitation etc.)

Other 1 (with regard for etc.)

3. Negation in the verb phrase (16 instances)

Not 14

Rarely 1

Ill 1

4. Questions (8 instances)

Direct 6

Indirect 2

(e.g. “A question remains whether...”)

5. Expressed needs/desires/interests (8 instances)

E.g. “The differences need to be analysed...”

“It is desirable to perform test calculations...”

“It is of interest to compare...”

6. Logical conclusions (6 instances)

Must 3

Seem/appear 2

“One would intuitively expect...”

7. Contrastive comment (6 instances)

“The research has tended to focus on...rather than...”

“They center mainly on ...rather than on...”

“Researchers have focused primarily on..., as opposed to...”

“Emphasis has been on...with scant attention given to...”

“Although considerable research has been done on...much less is known as to”

8. Problem-raising (2 instances)

“The application presents a problem...”

“A key problem in many...is...”

(1990, p. 156)

With regard to Move 2, the other important issue is “cyclicity”. Swales suggests that it possible for one research article not to have niche-establishment necessarily at the end of a literature review, but may follow reviews of individual items, so that cycles of Move 1/Step 3 and Move 2 recur.

The third and the last move in the CARS Model, is labeled as “occupying the niche”. The role of Move 3 is to turn the niche established between the moves into a strong one. Whenever a Move 2 occurs, Move 3 offers to validate the particular counter-claim that has been made, fill the created gap, answer the specific question or continue the rhetorically established tradition. The obligatory element in Move 3 is Step 1. This can take one of the two forms:

Step 1A The authors indicate their main purpose or purposes

Step 1B The authors describe what they consider to be the main features of their research.

(1990, p. 160)

Two of the typical examples of linguistic exponents of Step 1 in Move 3 given by Swales are the following:

This paper reports on the results obtained...

The aim of the present paper is to give...

(1990, p. 160)

As far as the language of Move 3 is considered, firstly, there is a strong tendency for the deictic signal to appear early and in general, the only items that precede them are the occasional linking phrases such as “In view of these observations”. Secondly, the

tense is restricted to the present. However, in cases where the deictic refers to the type of inquiry (investigation, study, experiment, etc.), authors may choose between present and past.

2.3.1.2. 2004 Version of the CARS Model

In 2004, Swales revised some aspects of the 1990 version of the CARS model in line with the results of the research studies that utilized the 1990 version. In the 1990 version of the CARS Model, Move 2 offers four steps of establishing a niche: counterclaiming, raising a question, indicating a gap, and continuing a tradition. However, in the 2004 version of this model (Figure 3), Swales comments that “continuing a tradition” seems a rather odd choice of categorization, since it does not clearly answer the question of continuing a tradition of what? Additionally, Swales (2004) accepts that “indicating the gap” is by far the most common option. Also, the rarer other options of “counterclaiming”, or “question raising” may not functionally be very different from “gap-indication”. Therefore, in the 2004 version of the model, Swales proposes that these four realizations be reduced to two, and also that the model take on board the potential cycling of Move 1 and Move 2 sequences, which many investigators have found to be prevalent especially in longer introductions.

Another aspect of the CARS Model revised in the 2004 version is the third move. In the 2004 version, occupying the niche is seen as more complex and elaborated than the earlier version. Swales (2004) notes that it is apparent that separating the opening step (outlining purposes/announcing present research) from later ones is not always easy. Moreover, he adds that more options such as summarization, especially in papers whose principal outcome can be placed in their methodological innovations, extended definitional discussions of key terms, detailing (and sometimes justifying) the research questions or hypotheses, and announcing the principle outcomes. Swales (2004) points out that in the 2004 version of Move 3 there are opportunities for the writers of research papers to expand upon the news value or interestingness of their work towards the end of their introductions. The availability of these options, as well as their actual uptake depends on a host of factors, such as the nature of the research, researchers’ aspirations,

the status of the researchers themselves, the disciplinary conventions of their field and the like.

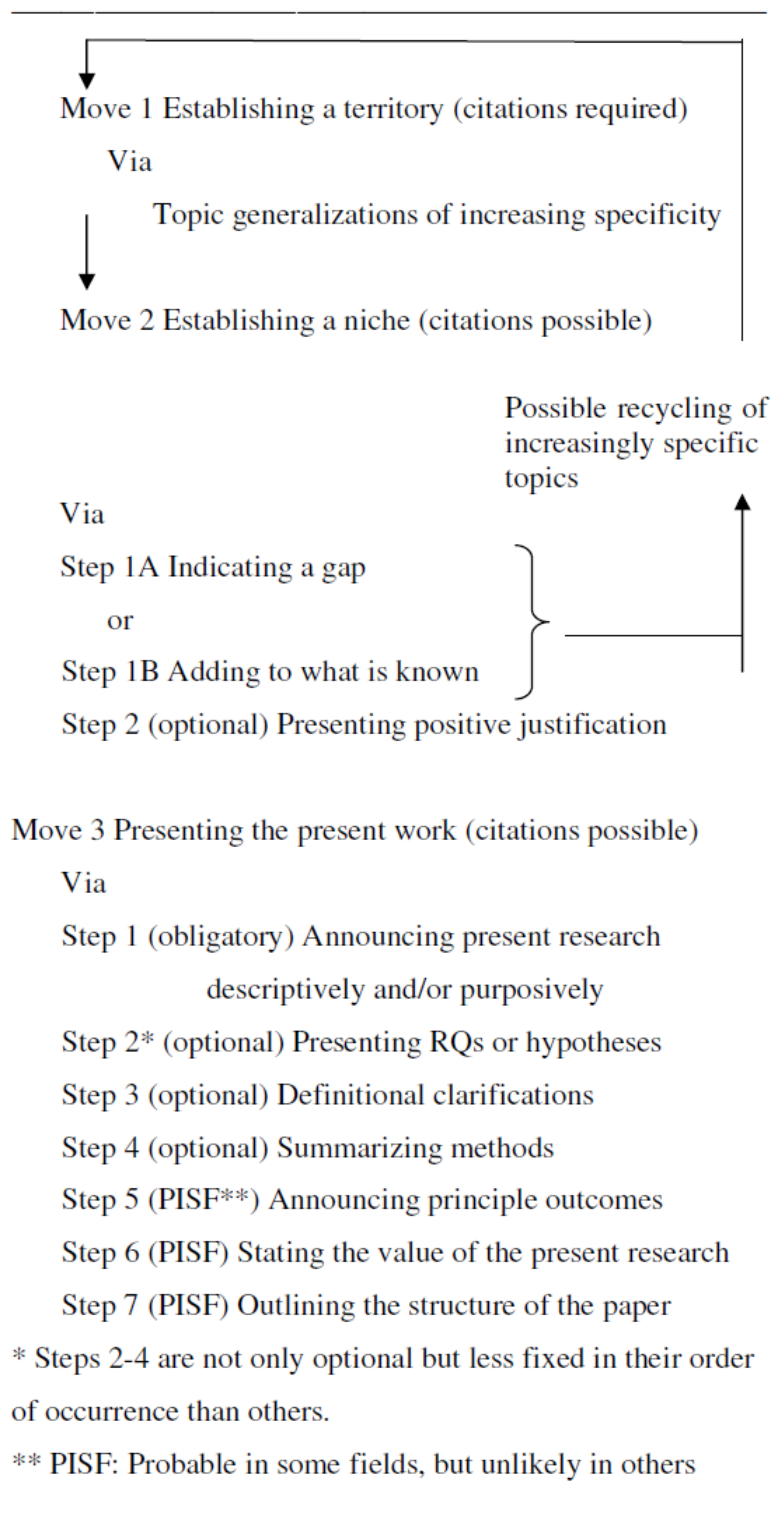


Figure 3. 2004 Version of the CARS Model (Swales, 2004, p. 232)

2.4. Previous Studies on Moves in Research Article Introductions

Swales' CARS model has been adopted in many studies which has analyzed the rhetorical structure in research article introductions, not only across disciplines but also across languages and cultures. In this section, previous studies on moves in research article introductions are reviewed by language. Generalizations about rhetorical patterns of language based on the results of the studies are highlighted.

Arabic

The rhetorical structure of 48 research article introductions written in Arabic in the field of agriculture was examined by Najjar (1990). He found that 27 fit the CARS model while the others had some deviations from the model. With the 27 cases fitting the CARS model, the introductions began with a step in Move 1, however, out of 27 research article introductions, 3 had Move 1 Step 3 (Reviewing items of previous research) missing. The review of literature ranged from a few statements to three or four paragraphs in terms of its length. Only limited numbers of cycling were found between Step 1 and Step 2, depending on which the author concluded in the following way:

In general, the results confirm the claim made for this model, perhaps particularly in terms of the possible steps of Move 1 and their sequence.

Further, the linguistic exponents used to express centrality claims in Arabic introductions have shown a close similarity with those found in English language RA introductions. (Najjar, 1990, p. 102-103).

Indicating a gap in the previous research (Move 2 Step 1B) was the major step found in 7 cases out of 27, the others were minor strategies found by Swales, particularly an expression of the needs for the research and a problem-raising. On the other hand, the author added that the number research article introductions with the gap-indication step was more limited than that found by Swales (1981) in which gaps occurred in twenty out of 48 introductions in English from different disciplines. Mentioning the lack of previous research of the topic in question was the only technique used for this move-step. There was no evaluation of the previous research or the challenge to the work of others. Because of that the author commented that the finding could be attributed to both the nature and the newly emerging of the field, as he indicated:

It would seem that the limited linguistic exponents and signals of gap-indicating steps occurring in the present Arabic sample might very likely be tied both to the applied nature of the field and to the degree of maturity of agricultural research in the Arab World. (Swales, 1981, p. 105).

With respect Move 2, the author found that, when compared to those of other researchers from various languages, the total number of Move 2 occurrence in the introductions was various. There were 44% in this study, 57% in Lopez's (1982) study of Spanish sample introductions, 61% in Crookes' (1986) and Swales' (1981) study of English corpus. However, the author claimed that rather than being a variable, language seemed to be a cross-disciplinary variation and partly to the sampling procedures and the validity of the analysis.

As for Move 3, the common function found in the corpus was outlining purpose(s) of the current study (Move 3 Step 1A). The most widely preferred signal of purpose statement was the verb "to aim" (translated by the author), which occurred in approximately 90% of the statements. The other signal frequently applied in Move 3 statements was the demonstrative -this research or study (translated by the author) which was different from that in Swales (1981) English sample that preferred the adjective- present in Move 3 statements. Significantly, in this sample, the author also found that, out of 27 introductions, 4 did not have a Move 3. He emphasized that it was not a common phenomenon to indicate the absence of Move 3 from the findings of the previous studies. However, he did not mention why it was omitted.

For the final remarks, the author concluded that the results of the analysis supported the claims made for the CARS model, especially in terms of the sequence of moves and their associated steps and in terms of the linguistic exponents used to express moves and their associated steps.

Fakhri (2004) was one of the other researchers having a research article introduction written in Arabic. The researcher applied the CARS model as a standard model to examine the structure of twenty-eight research article introductions in the field of humanities and social sciences. The results revealed important differences between the Arabic data and the global structure of introductions suggested in the CARS model. He

noted that the global organization of the introductions had variations with the CARS model because only 11 introductions (39%) revealed some instantiation of the three moves proposed by this model, whereas the rest clearly differed from it; the discussion of previous research in the introductions was qualitatively and quantitatively limited and only 9 introductions (32%) included some indication of the structure of the article; repetition and flowery language, which had been shown to characterize Arabic prose (see discussion further), were present in the data of the study.

English

Several studies have been found in English which explored the use of the CARS model. A comparative genre analysis of research articles and their popularizations chosen from Scientific American journal had been conducted by Bisenbach-Lucas (1994). The corpus in the study included six articles in each genre from six different fields (namely, medicine, zoology, geology, biology, astrophysics and antiquity). Using the CARS model as a framework, rhetorical structure and sequence of moves of the research article introductions were examined. The analysis of the moves in the introductory sections of the research articles showed the typical occurrence of the moves in the sample research article introductions. Two of them appeared in linear fashion while the others appeared cyclically and were very close to that suggested by the model. Almost all of the research article introductions began with Move 1 and ended with Move 3. Generally, the cycling was found between Move 1 and the other two moves. It was only the astrophysics article which did not have Move 2 of any kind. In all research article introductions Move 1 Step 3 (Reviewing items of previous research) and Move 3 Step1B (Announcing present research) had the most frequent occurrence. The author had suggested that,

This fits in exactly with the claim that the purpose of the introductions in research is to show how the work presented fits in with current literature on the same topic and to present the writers own research.

(Bisenbach-Lucas, 1994, p. 334)

Anthony (1999) conducted another previous study on research article introductions written in English. The researcher employed the CARS model as a standard model to investigate the structure of twelve research article introductions in the field of soft-

ware engineering. The results revealed that the sample research article introductions fit well in the main framework. All three moves identified in the CARS model were found in the research article introductions. The only difference was the preference of some particular move-steps and some features. The researcher found that the features that had some variations from the description of the model were an extensive review of background literature, the inclusion of many definitions and examples and the inclusion of evaluation of research article introductions in terms of application or novelty of the results.

As for Move 1, the researcher found that the authors of the sample research article introductions included the wide use of making generalizations about the field (Move 1 Step 2) and/or summarizing previous research (Move 1 Step 3). The average number citations for electrical and electronic engineering articles as a whole were considerably frequent (14.6 and 42.9 respectively). Furthermore, the extensive definitions and examples were also employed in the very last part of Move 1. At this point, the researcher pointed out that these aspects contradicted the views of many authors who stated that there should be a brief review of literature in the introductions.

The finding regarding Move 2 was that only Move 2 Step 1B (Indicating a gap) and Move 2 Step 1D (Continuing a tradition) occurred in the articles which was similar to Najjar's (1990) study as presented earlier. The researcher noted that this result supported Swales comment that the occurrence of steps would depend on disciplines. Swales said that the hard sciences would show a tendency for the preference of using Step 1B and Step 1D over Step 1A (Counter-claiming) and Step 1C (Question-raising) which were more frequent in education management and linguistics. Anthony also claimed that:

... variations in step occurrence among different disciplines may be greater than originally thought. They also suggest that even within a single field such as engineering, there may be considerable variations between its associated sub-disciplines. (1999, p. 41).

As the longest move in this sample followed by Move 1 and then Move 2, in Move 3 the researcher had found the occurrence of evaluation of research in the entire

sample. This section had been mentioned before Move 3 Step 3 (Indicating research article structure) in Swales' CARS model which functioned as an evaluation of the present research for the applicability of the research. It was also one of the longest steps in Move 3. Besides, the researcher found that the sample introductions were long and showed a large amount of cycling. Also noticed by Swales, there was a wide use of Move 1 and Move 2 cycling, which were also commonly found in long introductions.

Some researchers later modified the CARS model so as to account for the texts examined. For example, Samraj (2002) analyzed twelve RA introduction sections from two disciplines, conservation biology and wildlife behavior, by using the CARS model. She revealed that one element "the discussion of previous research" was not only found in M1, Establishing a territory, but also played an important role in the other two moves, Establishing a niche and Occupying the niche. She called it "a freestanding sub-step" (p. 16) and claimed, "it can be employed in the realization of any step in the introduction" (p. 16). She presented a revised CARS model.

English and Chinese

Taylor and Tingguang (1991) compared and contrasted 31 research articles: 10 written in Chinese by Chinese writers; 10 written in English by Chinese writers; and 11 written in English by English-speaking writers. The papers were selected from published sources both in the United States and in the People's Republic of China in the fields of geophysics, metallurgy and mineral processing; materials science and materials engineering. Swales' four-move version (1981) was used to examine the introductions of these articles. Variations were found among groups; however, the difference appeared to be more consistent between the English-speaking writers and the two Chinese groups. Compared to the articles written by the English-speaking writers, the articles written by the Chinese writers both in English and in Chinese showed various types of move-sequence, had fewer cited references and had shorter length. It was also noted that the Chinese writers tended to pay less attention to reviewing previous research. The authors had mentioned that the Chinese writers "find it less acceptable to identify by name and to summarize the work of others whom they will then proceed to 'expose',..." (p. 331). The authors suggested that the reluctance to present the previous literature in their fields

of study by the Chinese writers was due to the absence of argumentative nature in Chinese scientific tradition and the lack of bibliographic sources in China. It was interesting that their explanations for the differences involved socio-political and cultural aspects.

One of the other studies which analyzed English and Chinese research articles in terms of moves was conducted by Loi and Evans (2010). They examined 40 introductions of research articles – 20 Chinese and 20 English – in the field of educational psychology and concluded that the rhetorical structures employed in both English and Chinese research article introductions appeared to be characterized by the three major features, namely explicitness, specifying the value of research and taking a critical stance. Both English and Chinese research article introductions established the context explicitly by defining the terms/concepts (Move 1 Step 2), presenting the background of the study (Move 3 Step 3), reviewing literature/findings of previous research (Move 1 Step 4), announcing the purpose (Move 3 Step 1) and the focus of the study (Move 3 Step 2).

English and Czech

Cmejrkova (1996) studied 30 research article introductions written in English by Czech scholars in the fields of linguistics and literary theory and aesthetics, and contrasted them with those of English research article introductions established by Swales (1990). The author reported that a number of variations of Move 1 and Move 2 were found in the sample articles. In presenting these two moves, Czech writers employed different language signals and different strategies from those described by Swales in English research article introductions. One or more of the features appeared on the sample of Czech texts, which included the delayed purpose, reader's responsibility, multiplicity of standpoint and free-writing rather than purpose-oriented. The author suggested that this was probably due to the influence of cultural specific style of Czech academic writing that developed through the contact with German and Russian style in the Central Europe. As a result, it made the texts alien and difficult to read in the eyes of English native speakers.

Similar to the Polish texts in Duszak's (1994) study discussed in the following section, the main area of difference between Czech texts in this sample and English

texts proposed by Swales lied in Move 3. Czech scholars were reluctant to commit themselves early on an announcement of the purpose of the studies and preferred indirect declaration, if any, or rhetorical questions. Being interviewed by the author as to why they preferred the delayed purpose style of writing as oppose to the English writers' immediate, the Czech writers replied as the following quotations:

"I do not feel like stating at the beginning what I want to reach in the end."

"The article should read like a detective story, it had analogic principles. I wish my reader to follow the course of my thought."

"If I were to formulate the purpose of my article, I would have to repeat my exposition word by word." (Cmejrkova, 1996, p. 18).

The above expressions indicated that the Czech writers viewed this style of writing as beneficial for readers to read carefully to capture their thoughts and for the writing itself worth reading thoroughly to the end.

English and Polish

Duszak (1994) investigated and made a comparison of a total of 40 articles in the related fields of language studies written in Polish by Polish writers (20), and in English by English-speaking writers (20). The articles were chosen from different established academic sources in Poland and the United States. The researcher reported that the sample research article introductions were interpretable in terms of all three moves put forward by Swales (1990). The results supported the accountability of Swales' CARS model of the prediction of research article introductions in general. The researcher's comparisons of the rhetorical structure of the two languages showed that, different from their English counterparts that followed Swales' CARS model closely, a number of cycling and various sequences of moves were commonly noticed in the Polish introductions. Both Move 1 and the other two moves were positioned at the beginning of the research article introductions. The striking differences between the two languages are about the expression of Move 3 (Occupying the niche). Whereas the English researchers preferred the style relevant to Swales' prediction of Move 3, which was to indicate their attention directly, the polish writers were reluctant to do so. Instead, they tended to announce their Move 3 indirectly by using the 'strategies of avoidance' which included 'presenting some reflec-

tions', 'taking a bird's eye view', and 'making some tentative observations' (p. 303). They also employed 'face-saving devices' to defend their position and evaluation of the position of others. To decrease negative tone of their criticisms, the Polish researchers employed some techniques like using tentative and mitigated language, adding back-up references, and referring to some positive aspects of the claim. In addition, the Polish writers were more concerned than the English writers with making use of overt declaration of clarifying conceptual terminologies as to demonstrate the expertise in the field and to defend their position. The researcher claimed:

Typically, Polish authors tended to adopt a defensive position as if trying to shun the responsibility for misreading of their intentions, to anticipate criticisms and questions, or else to clarify their intentions. This, they tried to attain by stating explicitly what they did *not* mean/say/intend, or else by what they *did* mean/say/intend. (Duszak, 1994, p. 307).

As a conclusion, depending on the findings the researcher had claimed that the Polish researchers preferred indirect, affective and tentative styles of writing more than direct, assertive and rather positive style preferred by the English researchers.

Malay

Ahmad (1997) examined the organization of the rhetorical structure of scientific research article introductions. The articles were written in Malay by Malaysian academics using the CARS model suggested by Swales (1990). Twenty research article introductions were selected from published scientific and technical research papers; 7 from agriculture, 7 from biological sciences, 4 from applied science and 2 from engineering. The results revealed that 13 (65%) of the 20 of Malay research article introduction sections had the move patterns frequently found in English articles proposed by Swales. The significant difference concerned the missing of Move 2 (Establishing a niche) in 6 (30%) of the sample research article introductions. One research article (5%) had only move 1. It was also indicated that those research articles that did not have Move 2 in their introductions, described and summarized, but rarely criticized or evaluated previous work of others. Moreover, in this study, Move 3 in most research article introductions consisted of only one short sentence. The researchers of the research articles in this sample also tended to be cautious and hesitant in announcing their Move 3 (Occu-

pying a niche). Ahmad had linked these differences to the nature of the Malayan discourse community and the developmental stage of the Malayan language as a medium for expressing scientific arguments. According to the researcher, the readership audience was small and local for these areas of research, so, the research article writers did not feel themselves obliged to compete for a research space and that the research areas were quite new and had not yet developed their own convention. Table 2 presents the summary of the studies discussed above.

Table 2. Summary of the main features of previous studies on move analysis in research article introductions

| Author(s) | No.of Articles | Areas of RAs | Language(s) | Findings |
|-------------------------------|----------------|--|---------------------|---|
| 1. Swales (1981) | 48 | Mixed | English | 61% M2 and 42% M2/S1 occurrence |
| 2. Lopez (1982) | 21 | Mixed | Spanish | 57% M2 occurrence |
| 3. Najjar (1990) | 48 | Agriculture | Arabic | 56% fit the Model, 44% M2 occurrence, M2/S1 and M3/S1 were the major steps |
| 4. Taylor and Tingguang(1991) | 31 | Hard Sciences | English and Chinese | Chinese writers showed various types of move sequences and they used M1/S4 less |
| 5. Duszak (1994) | 40 | Language | English and Polish | English writers followed the Model closely, Polish RAIs had a number of cycling and various sequences of moves |
| 6. Bisenbach-Lucas (1994) | 12 | Sciences | English | All RAIs began with M1 and ended with M3 M1/S4 and M3/S1 were the major steps |
| 7. Cmejrkova (1996) | 30 | Mixed | English and Czech | Czech writes used M3/S1 less, they employed different language signals in presenting M1 and M2 |
| 8. Ahmad (1997) | 20 | Sciences | Malay | 65% fit the Model but 30% didn't include M2 and there was very short use of M3 |
| 9. Anthony 1999) | 12 | Software | English | All RAIs included the three moves and theyEngineering fit the Model, M1/S4 and M1/S2 were the major steps, they had M1-M2 cycling |
| 10. Samraj 2002) | 12 | Conservation biology and wildlife behavior | English | M1/S4 was the major step and it was employed in the realization of any step |
| 11. Fakhri (2004) | 28 | humanities and social sciences | Arabic | 39% included the three moves, use of M1/S4 was limited |
| 12. Loi and Evans(2010) | 40 | educational psychology | English and Chinese | Both group had extensive use of M1/S2-S4, M3/S1-S2-S3 |

In summary, the above studies have discovered variations in writing in English and in writing in different languages and cultures, and variations in writing across fields. It is likely that writers from different languages and cultures have their own preferred style of writing. Many dimensions such as sociology, cultural and even political aspects have been exploited in the explanations for the results of the comparisons. Furthermore, Swales' move analysis has been used successfully to capture the rhetorical structure of research article introductions in various languages and cultures. These studies also point out similarities and differences between English and other languages and between fields of study.

Turkish

Studies in which researchers examined academic writing in Turkish come from different genres. Doyuran (2009) examined the role of hedges in Turkish scientific articles by identifying the purposes, distribution and major forms of hedges from the disciplines of geological engineering and linguistics. The researcher found that in both disciplines, writers use hedging devices in seeking acceptance for knowledge claims. In both disciplines, hedges are the ways of strengthening arguments by admitting limitations and uncertainties. Karahan (2005) investigated Turkish wedding invitations as a different genre in terms of the discourse community, the communicative purposes, the formal move structure, the salient formal linguistic and non-linguistic elements in each move. Özyıldırım (2001), from a theoretical perspective, explained the concept of “genre-analysis”. Within this framework, Otkar’s study (1991) is one of the earliest ones conducted in Turkey. The researcher examined the rhetorical relations in Turkish expository paragraph writing. Altun ve Rakıcioğlu (2004) had a corpus based approach to abstracts in academic writing and analyzed writers’ word choice. Özyıldırım (2003) analyzed the cognitive-move-structure of feature articles of the daily Turkish newspapers and found that Turkish feature articles have a certain common cognitive structure. Taş (2008) had a contrastive analysis of the genre-specific features of introductions in PhD theses in order to specify the similarities and differences in the writers’ use of lexicogrammatical, discursal and rhetorical features. Finally, another study regarding Turkish written discourse was conducted by Zeyrek (2003). The researcher examined metadiscourse markers within the move-step occurrence found in the research articles.

Despite the research conducted so far, analysis on various languages is still needed in order to find the nature of academic writing of those languages. Turkish is one of the languages that has not been explored enough in this area. Therefore, with respect to Swales' move analysis, this present study examines strategies of introducing research articles written in English and Turkish by Eng L1, Eng L2 and Tr L1 scholars and compares them with the already established results of studies done for English and other languages. In this analysis the CARS model (2004) is chosen because it has been widely applied by text analysts to study the introduction section of research articles across disciplines as well as across languages and cultures.

CHAPTER 3

METHODOLOGY

This chapter includes the research questions, data selection and data analysis of the study.

3.1. Research Questions

As has been previously stated, the present study aims to offer a genre-based disciplinary description of the rhetorical structure of the introduction section in Preschool Education and Special Education, disciplines whose research writing have not been analyzed cross-culturally to date. These disciplines were randomly selected from Educational Sciences. Moreover, they do not have a much longer history and they are considerably newly developed areas within the larger interdisciplinary field of Educational Sciences in Turkey. This increases the effectiveness of this research for making recommendations for teaching.

The study makes a close investigation of Swales' CARS schema (2004) about written discourse and is intended to accommodate different disciplinary needs and variations between two languages- English and Turkish, with the aim of providing insights into how writers in these disciplines claim knowledge in the research article introductions. The study addresses the following research questions:

1. Is the frequency of move-step preference in research article introductions affected by (a) Turkish scholars writing in Turkish, (b) Turkish scholars writing in English, and (c) English scholars writing in English?
2. Is the frequency of move-step preference in research article introductions determined by the conventions of (a) the discipline of Special Education, and (b) the discipline of Preschool Education?

The study seeks to answer the three questions by examining three different language uses – namely native speakers of English (Eng L1), native speakers of Turkish using their own language (Tr L1) and native speakers of Turkish writing in English



(Eng L2). Moreover, in the analysis of move-step preference, each of the moves – move 1, move 2 and move 3, and their constituent steps has been examined separately.

3.2. Data selection

The data for this study comprises 150 published RAIs (see Appendix B for the list of articles) - 50 by Eng L1, 50 by Eng L2 and 50 by Tr L1- and 75 from each of the two disciplines. Table 3 presents the data distribution.

Table 3. Data distribution as number of research article introductions

| | TrL1 | EngL2 | EngL1 | Total |
|----------------------------|-------------|--------------|--------------|--------------|
| Preschool Education | 25 | 25 | 25 | 75 |
| Special Education | 25 | 25 | 25 | 75 |
| Total | 50 | 50 | 50 | 150 |

With respect to RAIs written in English and Turkish, leading refereed international journals were chosen from each discipline by identifying ten leading journals in the fields and research article introductions were chosen by examining the articles written in the period of 2000 and 2012. Basic criterion in the selection of journals is that they have been published regularly during the recent years. Only empirical data-driven RAs were selected because the CARS model was originally developed from studying research of this type. The list of journals (see Appendix A) consists only of those having these criteria. The other articles that deal with other types of research such as historical and descriptive research were excluded from this study.

The data contains 111,111 words (150 RAIs), [the NS data 100 RAIs (68,907 words): the NNS data 50 RAIs (42,204 words)]. Table 4 shows the distribution of the data.

Table 4. Total number of words in research article introductions

| | TrL1 | EngL2 | EngL1 | TOTAL |
|----------------------------|-------------|--------------|--------------|--------------|
| Preschool Education | 16,236 | 19,903 | 17,074 | 53,213 |
| Special Education | 15,136 | 22,301 | 20,461 | 57,898 |
| TOTAL | 31,372 | 42,204 | 37,535 | 111,111 |

NNS authors were distinguished from NS authors using Wood's (2001, p. 79) "strict" criterion (not his less stringent "broad" criterion): authors had to have names "native to the country concerned" and also work in an institution in that country. The researcher suggests that the disciplinary corpora are acceptably representative of each discipline because of the use of the journals maintaining a regular publication for the last 14 years (fifty RAIs from each language, seventy-five from each discipline). This can be an adequate number that meets the demands of the analysis to be done. The previous genre studies of this type have shown that using a large data of articles from a wide range of disciplines has limited the time that can be given to individual texts - decreasing reliability, and tends to render the corpus size for a particular discipline to be rather small (Jogthong, 2001). Thus, following this point of view, the present study sought to examine two disciplines by narrowing down the focus to Special Education and Preschool Education.

3.3. Analysis of data using Swales' CARS schema

Swales' (1990, 2004) CARS (Create a Research Space) model was selected as the basis for the analysis and coding of the moves and steps in both sets of articles (see Appendix B for the coding scheme). Previous studies (e.g. Taylor and Chen, 1991; Ahmad, 1997; Jogthong, 2001) have confirmed Swales' move-analysis framework as a valid tool for analyzing research article introductions in particular and other research article sections (including complete research articles) in general. As presented earlier in the previous chapter, the CARS model consists of three stages termed "moves" by Swales. Swales and Feak (2000, p. 35) specify a move as "the defined and bounded communicative act that is designed to achieve one main communicative objective". The three moves in Swales' (1990, 2004) CARS model are;

- i. Move 1—establishing a research territory
- ii. Move 2—establishing a niche
- iii. Move 3—occupying the niche (Swales, 1990)/Move 3—presenting the present work (Swales, 2004).

The model is summarized again above for ease of reference. As observed, Move 3 (occupying the niche) in Swales' (1990) version of the CARS model was re-labeled Move 3 (presenting the present work) in Swales' (2004) model, the latter term providing a more explicitly functional label.

In Swales' (1990, 2004) CARS model, these three moves are further sub-divided into their constituent steps. A step is defined by Swales (1990) as a smaller unit of discourse that builds moves. In other words, each step supports and guarantees the validity of the move. However, due to the fact that some of the moves (i.e; move 1) has been criticized as being too broad (Lewin, B. A., Fine, J., & Young, L., 2001), the present study will employ the adapted form of Swales' CARS Model by Loi and Evans (2010). Table 5 shows coding scheme for English and Turkish research article introductions in Special Education and Preschool Education.

Table 5. Coding scheme for English and Turkish research article introductions

| | | | |
|--------|---|--------|---|
| Move 1 | Specifying the topic | Step 1 | *Claiming centrality |
| | | Step 2 | Defining terms/concepts |
| | | Step 3 | Presenting the theoretical basis |
| | | Step 4 | *Reviewing literature/findings of previous research |
| Move 2 | Making links between past research and present research | Step 1 | *Indicating a gap |
| | | Step 2 | *Raising a question |
| | | Step 3 | *Counter claiming |
| Move 3 | Introducing the present research | Step 1 | *Announcing the purpose |
| | | Step 2 | Announcing the focus of the research |
| | | Step 3 | Presenting the background of the study |
| | | Step 4 | *Introducing the research hypothesis |
| | | Step 5 | *Introducing the research questions |
| | | Step 6 | *Presenting positive justification |
| | | Step 7 | Introducing the implications of the findings |
| | | Step 8 | *Claiming the significance of the study |

Note: * refers to steps adapted by Loi and Evans (2010) from Swales' (1990, 2004) CARS model.

As discussed earlier in the introduction section, English and Turkish research article introductions broadly share the use of functional steps characterized by the three major moves by Swales shown in Table 5, but they can differ in the extent of their use. Thus, in the present study variations in the move-step preference among Turkish and English scholars were examined by two raters who attentively considered the rhetorical structures of the sentences in the data. All sentence level analyses of the move-step structures were conducted through the hand-tagged analyses. The moves in the corpora were identified and analyzed in the framework of the revised of the CARS Model (Swales, 2004). The raters helped classify individual sentences into an appropriate move of the adapted form of CARS model by Loi and Evans (2010).

The length of the introductions varied greatly, ranging from one single paragraph to several paragraphs covering one, two or three pages. The main analytical procedure consisted of reading each introduction several times and identifying the different steps of the three moves of the CARS model provided in Table 5 earlier. Two raters coded all of the data separately. They coded the data as “existing” or “not existing” depending on the research article introduction they had examined included or did not include the corresponding moves and steps (See Introduction for the coding procedure). After completing the coding process of non-parametric values, the researcher applied chi-square test to analyze the data.

3.4. Inter-rater Agreement

As the model is descriptive and functional (Swales, 2004, p. 229), its application here has been enhanced through inter-rater agreement. Employing this approach in the full analysis should sidestep the model’s potential shortcomings, as found by Crookes (1986) and Paltridge (1994), for whom the reader’s subjective judgment compromised the objective of move identification. Further, to make the analysis more reliable, the level of agreement between coders has been measured by kappa value, increasing inter-rater agreement.

Each move-step structure in each research article introduction was coded by the researcher and an independent rater for reliability. The independent rater was a universi-

ty lecturer holding a PhD degree in ELT, and she had a background in studies analyzing written discourse. Besides, she read the core articles and chapters related to the topic of the thesis. The raters initially coded 10 research articles from a different discipline to gain the familiarity of the coding process. After discussing their data and reaching a consensus, they moved to the present study. The statistical measure of inter-rater reliability conducted in the present study is Kappa which ranges generally from 0 to 1.0 (although negative numbers are possible) where large numbers mean better reliability, values near or less than zero suggest that agreement is attributable to chance alone. A more complete list of how Kappa might be interpreted (Landis & Koch, 1977) is given below.

| Kappa (p) | Interpretation |
|------------------|--------------------------|
| < 0 | Poor agreement |
| 0.0 – 0.20 | Slight agreement |
| 0.21 – 0.40 | Fair agreement |
| 0.41 – 0.60 | Moderate agreement |
| 0.61 – 0.80 | Substantial agreement |
| 0.81 – 1.00 | Almost perfect agreement |

The raters coded all of the data in the study by reading more than once and, as mentioned earlier, an inter-rater agreement analysis using the Kappa statistic was performed to determine consistency among raters. The inter-rater reliability for the raters was found to be Kappa = 0.991 ($p < 0.001$). There was over 90% agreement between the categorizations of the two raters. Table 6 presents the level of agreement between the raters.

Table 6. The level of agreement between the raters

| | | P | Approx. T ^b |
|--------|--------|------|------------------------|
| Move 1 | Step 1 | 0.97 | 11.88 |
| | Step 2 | 1.00 | 12.25 |
| | Step 3 | 0.97 | 11.92 |
| | Step 4 | 1.00 | 12.25 |
| Move 2 | Step 1 | 1.00 | 12.25 |
| | Step 2 | 0.88 | 10.88 |
| | Step 3 | 0.98 | 11.95 |
| Move 3 | Step 1 | 1.00 | 12.25 |
| | Step 2 | 1.00 | 12.25 |
| | Step 3 | 0.97 | 11.92 |
| | Step 4 | 1.00 | 12.25 |
| | Step 5 | 1.00 | 12.25 |
| | Step 6 | 1.00 | 12.25 |
| | Step 7 | 0.97 | 11.84 |
| | Step 8 | 0.98 | 12.01 |

As can be seen from Table 6, the Kappa statistics ($p < 0.001$) revealed almost perfect agreement between the raters. To solve the cases of disagreement, as Taş (2008) applied in her study, a third rater with a PhD degree in ELT was consulted and consensus was reached. Also, an intra-reliability test by re-categorizing 30% of the data one month after the initial categorization was executed. Except for minor variations between the first and second coding, there was more than 95% agreement between the first and second categorization.

CHAPTER 4

RESULTS and DISCUSSION

This chapter presents the findings of the study for each question and discusses the possible reasons of the findings. In this chapter, the rhetorical patterns of published research article introductions in English and Turkish preferred by Turkish scholars are identified by exploring each move in the sample article introductions and followed by the descriptive analysis of how the moves function in the discourse. A comparison is made with the English speakers as the control group.

Table 7 and Table 8 reflect the range of the moves found in the RAIs. Before analyzing the findings in detail, it can be helpful to see the overall length of moves as number of sentences found in RAIs because it shows how scholars differ in their use of moves when the languages and disciplines are taken into account.

Table 7. Length of moves as number of sentences found in RAIs

| Language | Discipline | Move 1 | Move 2 | Move 3 |
|-----------------|----------------|--------------------|-------------------|--------------------|
| Turkish (TrL1) | Preschool Edu. | 552 | 16 | 243 |
| | Special Edu. | 1188 | 39 | 267 |
| English (EngL2) | Preschool Edu. | 361 | 16 | 241 |
| | Special Edu. | 436 | 70 | 272 |
| English (EngL1) | Preschool Edu. | 573 | 42 | 196 |
| | Special Edu. | 588 | 61 | 256 |
| Total: | | 3698 (100%) | 244 (100%) | 1475 (100%) |

As shown in Table 7, while writing in their native language, Turkish scholars use Move 1 more frequently than Move 3, with the numbers of 1740 (68,6%) and 510 (49,9%), respectively. Similarly, while writing in English, they use Move 1 more frequently than Move 3, with the numbers of 797 (31,4%) and 513 (50,1%), respectively. It is also the case for English scholars with the numbers of 1167 (31,3%) and 452

(30,6%), respectively. In both languages, among the three moves, Turkish scholars use Move 2 the least (with the number of 55 -39%- and 86 -61%-, respectively). Therefore, it can be thought that they make links between past and present research in fewer sentences. When the languages are compared with each other, it is clear that Turkish scholars use Move 2 and Move 3 to a similar degree in Turkish and English whereas the use of Move 1 differs from the former language to the latter one (with the number of 1740 -68,6%- and 797 -31,4%-, respectively). Thus, it can be concluded that when they are writing in Turkish, Turkish scholars give more place to the topic specification than they do in English.

In Table 8, it can be seen that in the introduction part of research articles, Turkish scholars use similar length of sentences in Turkish and English regarding Move 2 (with the average number of sentences 2,2 and 3,44, respectively) and Move 3 (with the average number of sentences 20,4 and 20,5, respectively). Thus, while writing in academic discourse they spend similar number of sentences to make links between past and present research and to introduce the present research. On the other hand, English scholars use Move 2 slightly more than their Turkish counterparts (with the average number of sentences 4.12). There is a big difference in these writers use of Move 1 while writing in Turkish and English, (with the average number of sentences 69,6 and 31,9 respectively). Therefore, it can be concluded that Turkish scholars specify the topic more in detail while they are writing in Turkish than they do in English.

Table 8. Average number of sentences per move in RAIs

| Language | Discipline | Move 1 | Move 2 | Move 3 |
|-----------------|----------------|----------------------|--------------------|------------------|
| Turkish (TrL1) | Preschool Edu. | 22,08 | 0,64 | 9,72 |
| | Special Edu. | 47,52 | 1,56 | 10,68 |
| English (EngL2) | Preschool Edu. | 14,44 | 0,64 | 9,64 |
| | Special Edu. | 17,44 | 2,8 | 10,88 |
| English (EngL1) | Preschool Edu. | 22,92 | 1,68 | 7,84 |
| | Special Edu. | 23,52 | 2,44 | 10,24 |
| Total: | | 147,92 (100%) | 9,76 (100%) | 59 (100%) |

4.1. Move-step Analysis of Research Article Introductions across Languages

4.1.1. Results

Research question 1: Is the frequency of move-step preference in research article introductions affected by (a) Turkish scholars writing in Turkish, (b) Turkish scholars writing in English, and (c) English scholars writing in English?

4.1.1.1. Distribution of M1 and its steps across Languages

Table 9 presents the results of the chi-square test concerning the effect of the use of language on the frequency of Move 1 and its constituent steps.

Table 9. Number and percentages of Move 1 and its steps across different languages

| | | | LANGUAGE | | | | | | | P |
|----|----|--------------|-----------|------------|-----------|------------|-----------|------------|------------|---------|
| | | | TrL1 | | EngL2 | | EngL1 | | TOTAL | |
| | | | N | % | N | % | N | % | N | |
| M1 | S1 | Not Existing | 6 | 12 | 9 | 18 | 3 | 6 | 18 | 0,182 |
| | | Existing | 44 | 88 | 41 | 82 | 47 | 94 | 132 | |
| | | Total | 50 | 100 | 50 | 100 | 50 | 100 | 150 | |
| | S2 | Not Existing | 10 | 20 | 4 | 8 | 23 | 46 | 37 | 0 * |
| | | Existing | 40 | 80 | 46 | 92 | 27 | 54 | 113 | |
| | | Total | 50 | 100 | 50 | 100 | 50 | 100 | 150 | |
| | S3 | Not Existing | 15 | 30 | 31 | 62 | 24 | 48 | 70 | 0,006 * |
| | | Existing | 35 | 70 | 19 | 38 | 26 | 52 | 80 | |
| | | Total | 50 | 100 | 50 | 100 | 50 | 100 | 150 | |
| | S4 | Not Existing | 0 | 0 | 3 | 6 | 5 | 10 | 8 | 0,081 |
| | | Existing | 50 | 100 | 47 | 94 | 45 | 90 | 142 | |
| | | Total | 50 | 100 | 50 | 100 | 50 | 100 | 150 | |

* significant

As presented in Table 9, the results of the chi-square test indicated that language doesn't have a significant effect on Step 1 (S1). [$\chi^2(2) = 3,409$ $p > 0,05$]. It can be seen that Turkish scholars writing in Turkish (TrL1) and in English (EngL2) claim centrality very frequently in their RAIs with the percentages of 88 and 82, respectively. Similarly,

it is one of the major steps used by English scholars writing in English (EngL1), with the percentage of 94.

The results of the chi-square test indicated that language has a significant effect on Step 2 (S2). [$\chi^2(2) = 20,306$ $p < 0,05$]. While defining terms and concepts is widely used by Turkish scholars writing in TrL1 (80%) and in EngL2 (92%), it is not so much used by English scholars writing in EngL1 (54%).

It can be seen that language has a significant effect on Step 3 (S3). [$\chi^2(2) = 10,339$ $p < 0,05$]. Table 9 indicates that there is a significant variation among scholars while they are presenting the theoretical basis of their study. It is striking that while Turkish scholars writing in TrL1 use this step frequently with the percentage of 70, same scholars do not prefer using them while they are writing in EngL2 (38%). Similarly, it is not so much used by English scholars writing in EngL1 (52%).

As shown in Table 9, the results of the chi-square test revealed that language doesn't have a significant effect on Step 4 (S4). [$\chi^2(2) = 5,018$ $p > 0,05$]. As it can be seen, Turkish scholars writing in TrL1 and in EngL2 review literature and findings of previous research very frequently with the percentages of 100 and 94, respectively. Similarly, this step is commonly used by English scholars writing in EngL1, with the percentage of 90. Figure 4 presents the percentages of M1 and its steps used by the scholars.

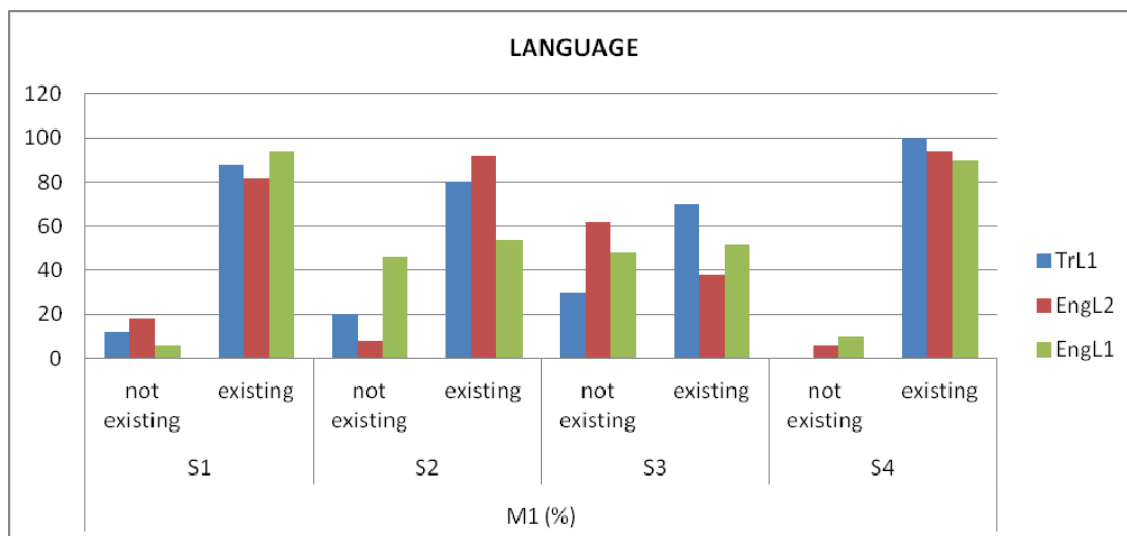


Figure 4. Distribution of M1 and its steps across different languages

The comparison of M1 and its constituent steps across different languages shows that regardless of the language, while claiming centrality and reviewing literature/findings of previous research are the most commonly used steps, presenting the theoretical basis is the less preferred one.

4.1.1.2. Distribution of M2 and its steps across Languages

Table 10 presents the results of the chi-square test concerning the affect of the use of language on the frequency of Move 2 and its constituent steps. As shown in the table, the results of the chi-square test revealed that language doesn't have a significant effect on Step 1 (S1). [$\chi^2(2) = 1,732$ $p > 0,05$]. It can be seen that Turkish scholars writing in TrL1 and in EngL2 indicate a gap in their RAIs to the similar extent with the percentages of 42 and 44, respectively. On the other hand, indicating a gap is preferred slightly more by English scholars writing in EngL1, with the percentage of 68.

Table 10. Number and percentages of Move 2 and its steps across different languages

| | | LANGUAGE | | | | | | | | P |
|----|----|--------------|-----------|------------|-----------|------------|-----------|------------|------------|---------|
| | | TrL1 | | EngL2 | | EngL1 | | TOTAL | | |
| | | N | % | N | % | N | % | N | | |
| M2 | S1 | Not Existing | 21 | 42 | 22 | 44 | 16 | 32 | 59 | 0,421 |
| | | Existing | 29 | 58 | 28 | 56 | 34 | 68 | 91 | |
| | | Total | 50 | 100 | 50 | 100 | 50 | 100 | 150 | |
| | S2 | Not Existing | 50 | 100 | 48 | 96 | 44 | 88 | 142 | 0,025 * |
| | | Existing | 0 | 0 | 2 | 4 | 6 | 12 | 8 | |
| | | Total | 50 | 100 | 50 | 100 | 50 | 100 | 150 | |
| | S3 | Not Existing | 43 | 86 | 41 | 82 | 41 | 82 | 125 | 0,825 |
| | | Existing | 7 | 14 | 9 | 18 | 9 | 18 | 25 | |
| | | Total | 50 | 100 | 50 | 100 | 50 | 100 | 150 | |

* significant

Table 10 shows that language has a significant effect on Step 2 (S2). [$\chi^2(2) = 7,394$ $p < 0,05$]. The results indicate that scholars writing in TrL1, EngL2 and EngL1 do not prefer raising a question in their RAIs with the percentages of 0, 4 and 12, respectively.

As presented in Table 10, the results of the chi-square test showed that language doesn't have a significant effect on Step 3 (S3). [$\chi^2(2) = 0,384$ $p > 0,05$]. As Table 6 presents, both Turkish scholars writing in TrL1 and in EngL2 and English scholars writing in EngL1 do not frequently use counter-claiming with the percentages of 14, 18 and 18, respectively. Figure 5 presents the percentages of M2 and its steps used by the scholars.

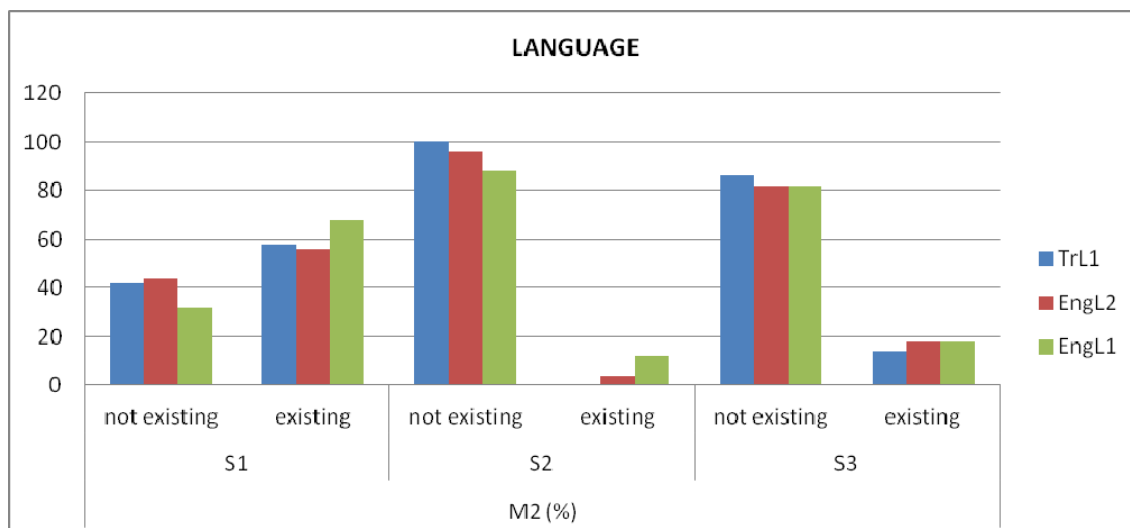


Figure 5. Distribution of M2 and its steps across different languages

The comparison of M2 and its constituent steps across different languages reflects that regardless of the language, while indicating a gap is the most commonly used step, raising a question and counter-claiming are the less preferred ones.

4.1.1.3. Distribution of M3 and its steps across Languages

Table 11 presents the results of the chi-square test concerning the affect of the use of language on the frequency of Move 3 and its constituent steps. As can be seen in the table, the results of the chi-square test showed that language doesn't have a significant effect on Step 1 (S1). [$\chi^2(2) = 3,652$ $p > 0,05$]. The analysis of the results reflects that Turkish scholars writing in TrL1 and in EngL2 announce the purpose of the study very frequently with the percentages of 86 and 72, respectively. Similarly, this step is commonly used by English scholars writing in EngL1, with the percentage of 72.

As shown in Table 11, the chi-square test revealed that language doesn't have a significant effect on Step 2 (S2). [$\chi^2(2) = 1,756$ $p > 0,05$]. As it can be seen in Table 11, Turkish scholars writing in TrL1 and in EngL2 announce the focus of the research very frequently with the percentages of 32 and 24, respectively. Similarly, this step is not commonly used by English scholars writing in EngL1, with the percentage of 36.

It can be seen that language has a significant effect on Step 3 (S3). [$\chi^2 (2) = 14,580$ $p < 0,05$]. Table 11 indicates that there is a significant variation among scholars in presenting the background of the study. It is striking that while Turkish scholars writing in TrL1 do not prefer using this step frequently with the percentage of 26, some scholars prefer using them more frequently while they are writing in EngL2 (64%). It is not so much used by English scholars writing in EngL1 (46%).

Table 11. Number and percentages of Move 3 and its steps across different languages

| | | | LANGUAGE | | | | | | | P |
|----|----|--------------|-----------|------------|-----------|------------|-----------|------------|------------|--------|
| | | | TrL1 | | EngL2 | | EngL1 | | TOTAL | |
| | | | N | % | N | % | N | % | N | |
| M3 | S1 | Not Existing | 7 | 14 | 14 | 28 | 14 | 28 | 35 | 0,161 |
| | | Existing | 43 | 86 | 36 | 72 | 36 | 72 | 115 | |
| | | Total | 50 | 100 | 50 | 100 | 50 | 100 | 150 | |
| | S2 | Not Existing | 34 | 68 | 38 | 76 | 32 | 64 | 104 | 0,416 |
| | | Existing | 16 | 32 | 12 | 24 | 18 | 36 | 46 | |
| | | Total | 50 | 100 | 50 | 100 | 50 | 100 | 150 | |
| | S3 | Not Existing | 37 | 74 | 18 | 36 | 27 | 54 | 82 | 0,001* |
| | | Existing | 13 | 26 | 32 | 64 | 23 | 46 | 68 | |
| | | Total | 50 | 100 | 50 | 100 | 50 | 100 | 150 | |
| | S4 | Not Existing | 47 | 94 | 46 | 92 | 44 | 88 | 137 | 0,555 |
| | | Existing | 3 | 6 | 4 | 8 | 6 | 12 | 13 | |
| | | Total | 50 | 100 | 50 | 100 | 50 | 100 | 150 | |
| | S5 | Not Existing | 33 | 66 | 30 | 60 | 39 | 78 | 102 | 0,145 |
| | | Existing | 17 | 34 | 20 | 40 | 11 | 22 | 48 | |
| | | Total | 50 | 100 | 50 | 100 | 50 | 100 | 150 | |
| | S6 | Not Existing | 4 | 8 | 13 | 26 | 5 | 10 | 22 | 0,02* |
| | | Existing | 46 | 92 | 37 | 74 | 45 | 90 | 128 | |
| | | Total | 50 | 100 | 50 | 100 | 50 | 100 | 150 | |
| | S7 | Not Existing | 43 | 86 | 44 | 88 | 48 | 96 | 135 | 0,211 |
| | | Existing | 7 | 14 | 6 | 12 | 2 | 4 | 15 | |
| | | Total | 50 | 100 | 50 | 100 | 50 | 100 | 150 | |
| | S8 | Not Existing | 35 | 70 | 39 | 78 | 43 | 86 | 117 | 0,155 |
| | | Existing | 15 | 30 | 11 | 22 | 7 | 14 | 33 | |
| | | Total | 50 | 100 | 50 | 100 | 50 | 100 | 150 | |

* significant

As shown in Table 11, the chi-square test revealed that language doesn't have a significant effect on Step 4 (S4). [$\chi^2(2) = 1,179$ $p > 0,05$]. As can be seen, both Turkish scholars writing in TrL1 and in EngL2 and English scholars writing in EngL1 do not frequently introduce research hypothesis with the percentages of 6, 8 and 12, respectively.

As can be seen the language doesn't have a significant effect on Step 5 (S5). [$\chi^2(2) = 3,860$ $p > 0,05$]. It can be seen that Turkish scholars writing in TrL1 and in EngL2 introduce their research questions to the similar extent with the percentages of 34 and 40, respectively. On the other hand, this step is used slightly less by English scholars writing in EngL1, with the percentage of 22.

Table 11 shows that language has a significant effect on Step 6 (S6). [$\chi^2(2) = 7,777$ $p < 0,05$]. The results show that while presenting positive justification is widely used by Turkish scholars writing in TrL1 (92%) and by English scholars writing in EngL1 (90%), it used slightly less by Turkish scholars writing in EngL2 (74%).

The chi-square results of Step 7 indicate that language doesn't have a significant effect on Step 7 (S7). [$\chi^2(2) = 3,111$ $p > 0,05$]. As Table 11 presents, both Turkish scholars writing in TrL1 and in EngL2 and English scholars writing in EngL1 do not frequently introduce the implications of the findings in their RAIs with the percentages of 14, 12 and 4, respectively.

As Table 11 presents, the chi-square test revealed that language doesn't have a significant effect on Step 8 (S8). [$\chi^2(2) = 3,730$ $p > 0,05$]. It can be seen that Turkish scholars writing in TrL1 and in EngL2 claim the significance of their studies to the similar extent with the percentages of 30 and 22, respectively. On the other hand, this step is used slightly less by English scholars writing in EngL1, with the percentage of 14. Figure 6 presents the percentages of M3 and its steps used by the scholars.

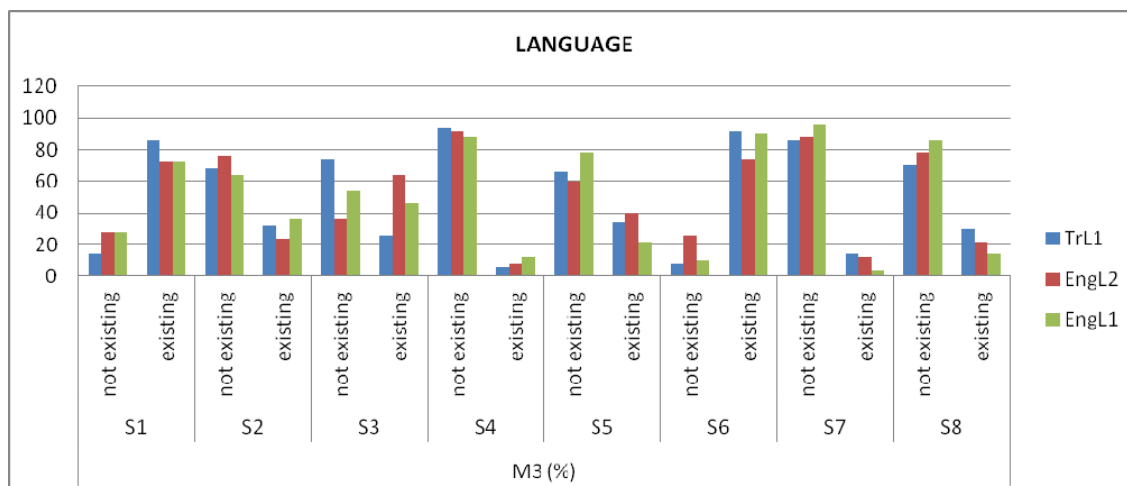


Figure 6. Distribution of M3 and its steps across different languages

The comparison of M3 and its constituent steps across different languages reflects that regardless of the language, while announcing the purpose and presenting positive justification are the most commonly used strategies, introducing research hypothesis and introducing the implications of the findings are the less preferred ones.

4.1.2. Discussion

When the use of each move is taken into account, it is clear that in academic discourse Turkish scholars tend to use similar extent of moves in general no matter in which language they are writing, which is also the case for English scholars. For example, the use of Move 1 by Turkish scholars writing in TrL1 and EngL2 is similar, 100% and 98%, respectively. Similarly, it is 94% for English scholars writing in EngL1. In their study Taylor and Tingguang (1991) found variations among different languages; namely English and Chinese; they claimed that compared to the articles written by the English-speaking writers, the articles written by the Chinese writers both in English and in Chinese showed different amounts of move- sequence. However, as mentioned earlier in the present study such a variation among languages hasn't been found. Moreover, findings reveal that almost all RAIs written by Turkish and English scholars begin with Move 1. The tendency for Turkish scholars to use similar extent of move-step sequences in both TrL1 and EngL2 like their English counterparts can be because they take English scholars as models and they become over-ambitious for their articles to be pub-

lished. In addition, each journal has its own editorial policy which also decreases variation among scholars.

The results indicate that both Turkish and English scholars tend to pay more attention to reviewing previous research (M1/S4). It is possible that the willingness to present the previous literature in their fields of study by Turkish and English scholars is due to the presence of available bibliographic sources and studies conducted currently in Turkey and also around the world.

When the overall distribution of Move 2 is concerned, findings indicate that the frequency of making links between past and present research (M2) is very low for Turkish scholars writing in TrL1 (8%) and EngL2 (12%). Although being slightly more, it is still not very frequent in English scholars writing in EngL1 (22%) as well. These findings are not in line with the findings of Najjar (1990). The author mentioned that the total number of M2 occurrence in the introductions were various when compared to those of other researchers from various languages. There were 44% in his study of Arabic RAIs, 57% in Lopez's (1982) study of Spanish RAIs introductions. However, language doesn't make much difference in the present study as such a great variation hasn't been found in the occurrence of M2.

While writing both in TrL1 and EngL2, Turkish scholars also achieve providing positive justification in their introductions (92% and 74%, respectively), a major strategy for accomplishing Move 3, according to the CARS model. These properties of the Turkish data can be the result of a competitive publishing environment and willingness to be accepted for publishing by claiming that the studies are grounded and needed from various perspectives.

Move 1 Step 1 found in the selected articles focused on the claim that the research topic is significant in some way. Centrality claims often express the importance of the subject studied at hand as a central problem or a major factor that would affect human beings, the society and the national development in general. Swales (1981) and Swales and Najjar (1987) noticed that approximately half of their English sample intro-

ductions used M1/ S1 (Claiming centrality) as the opening strategy. In line with these claims, 47% of the RAIs written by Turkish scholars have been found to reflect such kind of opening in the sample of Turkish RAIs and 43% of the RAIs in English written by Turkish scholars have been found to include this strategy. Swales (1990) has mentioned that variables on the occurrence of Move 1 Step 1 is partly due to the differences in the disciplines. For example, in the medical field where a research topic is well-known among professional readers working in the field, it may be unnecessary to make the centrality claim explicit. On the other hand, in a field with various sub-disciplines like education, the writers may need to make their claims more obvious to readers who have been trained in various disciplines. Thus, it can be concluded that such kind of a need made Turkish scholars start their RAIs with this step while writing in TrL1 and EngL2.

Another interesting aspect of Move 1 is about Step 3 (Reviewing previous research) because in Turkish RAIs, a notably high number of research article introductions begin with this move. 21% of the Turkish RAIs in this data begin with M1/S3. It is unlikely that Turkish research scholars intend merely to make attribution to the researchers or to make comment on the results. It also seems to be too early to provide specific information of the previous literature. A closer look at the sentences reveals that the content is similar to Step 1-centrality strategy as mentioned earlier, in which scholars make statements about the significance of the phenomena. The scholars usually begin their introduction by making a reference to a current study which suggests the topic significance. Instead of asserting the claim specifically, the scholars indirectly point to the significance of the topic of study by citing its role as it has been mentioned in other documents or in the work of others.

In previous studies, indicating a gap (M2/S1) seems to be the predominant step of Move 2. Swales (1981) found indicating a gap in 20 out of 48 introductions in English from various disciplines while Lopez (1982) found that it was used in 10 out of 21 introductions in Spanish. Najjar (1990) reported 7 cases out of 27 Move-2s in his Arabic RAIs sample employed indication a gap strategy. It is interesting to note that while certain amount of the indicating-a-gap steps found in this study offer an evaluation of the

previous research, some of the others simply point to the insufficiency or the absence of research on the topic in the area of study. This evidence is in parallel with previous studies done in a rather new and small research community where some research that would be able to suit the local need by using the local materials in a particular area are highly required (Najjar, 1990; Ahmed, 1997). In developing countries, the need for research cannot be met by the available number of the researchers. Thus, there might be no need for writers to be competitive to situate their work within a research context.

4.2. Move-step Analysis of Research Article Introductions across Disciplines

4.2.1. Results

Research question 2: Is the frequency of move-step preference in research article introductions determined by the conventions of (a) the discipline of Special Education, and (b) the discipline of Preschool Education?

4.2.1.1. Distribution of M1 and its steps across Disciplines

Table 12 and Figure 7 present the results of the chi-square test concerning the affect of discipline type on the frequency of Move 1 and its constituent steps. As shown in Table 12, the chi-square results of Move 1 indicate that discipline type doesn't have a significant effect on S1 [$\chi^2(2) = 1,010$ $p > 0,05$], S2 [$\chi^2(2) = 0,323$ $p > 0,05$] and S4 [$\chi^2(2) = 0,528$ $p > 0,05$]. On the other hand, the discipline type has a significant effect on S3 [$\chi^2(2) = 10,714$ $p < 0,05$].

Table 12. Number and percentages of Move 1 and its steps across different disciplines

| | | | LANGUAGE | | | | | | TOTAL | P |
|----|---------------------|--------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------------|
| | | | TrL1 | | EngL2 | | EngL1 | | | |
| M1 | DISCIPLINE | | N | % | N | % | N | % | N | DISCIPLINE STEPS |
| S1 | Preschool Education | Not Existing | 4 | 16 | 5 | 20 | 2 | 8 | 11 | 0,451 |
| | | Existing | 21 | 84 | 20 | 80 | 23 | 92 | 64 | |
| | | Total | 25 | 100 | 25 | 100 | 25 | 100 | 75 | |
| | Special Education | Not Existing | 2 | 8 | 4 | 16 | 1 | 4 | 7 | |
| | | Existing | 23 | 92 | 21 | 84 | 24 | 96 | 68 | |
| | | Total | 25 | 100 | 25 | 100 | 25 | 100 | 75 | |
| S2 | Preschool Education | Not Existing | 4 | 16 | 3 | 12 | 13 | 52 | 20 | 0,705 |
| | | Existing | 21 | 84 | 22 | 88 | 12 | 48 | 55 | |
| | | Total | 25 | 100 | 25 | 100 | 25 | 100 | 75 | |
| | Special Education | Not Existing | 6 | 24 | 1 | 4 | 10 | 40 | 17 | |
| | | Existing | 19 | 76 | 24 | 96 | 15 | 60 | 58 | |
| | | Total | 25 | 100 | 25 | 100 | 25 | 100 | 75 | |
| S3 | Preschool Education | Not Existing | 11 | 44 | 18 | 72 | 16 | 64 | 45 | 0,001 * |
| | | Existing | 14 | 56 | 7 | 28 | 9 | 36 | 30 | |
| | | Total | 25 | 100 | 25 | 100 | 25 | 100 | 75 | |
| | Special Education | Not Existing | 4 | 16 | 13 | 52 | 8 | 32 | 25 | |
| | | Existing | 21 | 84 | 12 | 48 | 17 | 68 | 50 | |
| | | Total | 25 | 100 | 25 | 100 | 25 | 100 | 75 | |
| S4 | Preschool Education | Not Existing | 0 | 0 | 3 | 12 | 2 | 8 | 5 | 0,719 |
| | | Existing | 25 | 100 | 22 | 88 | 23 | 92 | 70 | |
| | | Total | 25 | 100 | 25 | 100 | 25 | 100 | 75 | |
| | Special Education | Not Existing | 0 | 0 | 0 | 0 | 3 | 12 | 3 | |
| | | Existing | 25 | 100 | 25 | 100 | 22 | 88 | 72 | |
| | | Total | 25 | 100 | 25 | 100 | 25 | 100 | 75 | |

* significant

It can be seen that in Preschool Education most frequently used step by Turkish scholars writing in TrL1 is reviewing literature/findings of previous research with the percentage of 100 while presenting the theoretical basis is the one not so much used by them (56%). With respect to Turkish scholars writing in EngL2, defining terms/concepts and reviewing literature/findings of previous research are used to the same extent with the percentage of 88. As for English scholars writing in EngL1, claiming centrality and reviewing literature/findings of previous research are used to the same extent with the percentage of 92.

Table 12 reflects that in Special Education Turkish scholars writing in both TrL1 and EngL2, reviewing literature/findings of previous research is the most commonly step with the percentage of 100. On the other hand, English scholars writing in EngL1 prefer claiming centrality more than the others with the percentage of 96.

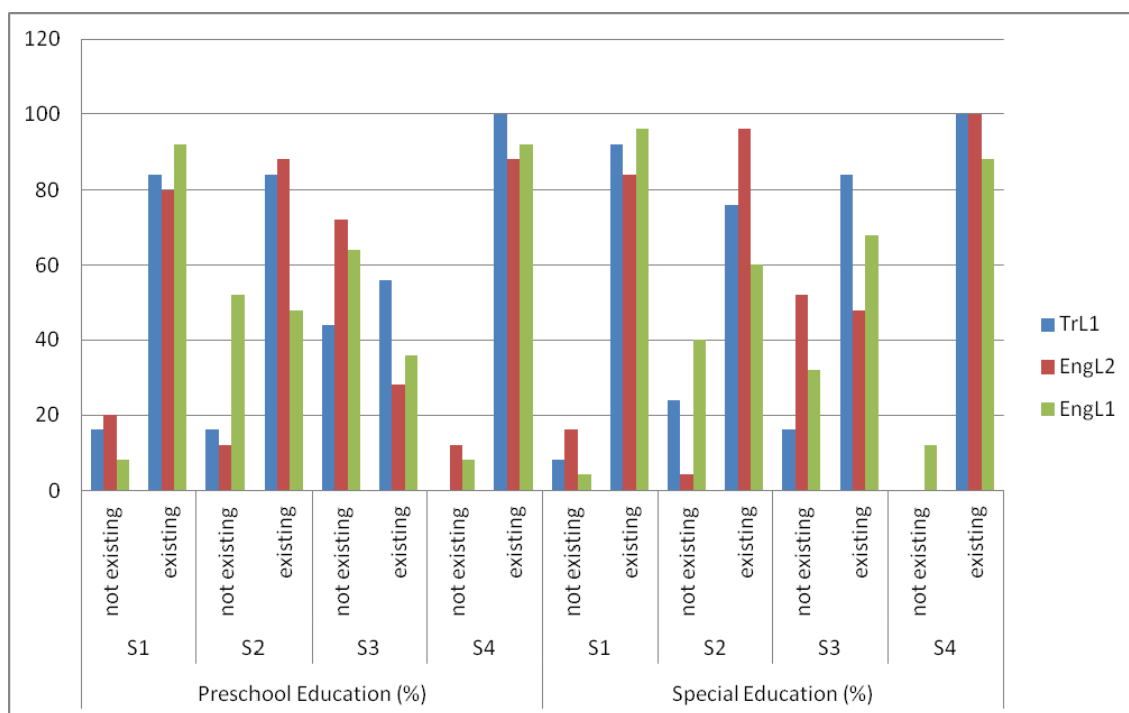


Figure 7. Distribution of M1 and its steps across different disciplines

The comparison of M1 and its constituent steps across different disciplines reflects that regardless of the discipline, while reviewing literature/findings of previous

research is the most commonly used strategy, presenting the theoretical basis is the less preferred one.

4.2.1.2. Distribution of M2 and its steps across Disciplines

Table 13 and Figure 8 present the results of the chi-square test concerning the affect of discipline type on the frequency of Move 2 and its constituent steps.

Table 13. Number and percentages of Move 2 and its steps across different disciplines

| M2 | DISCIPLINE | | LANGUAGE | | | | | | | DISCIPLINE STEPS |
|----|---------------------|--------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------------|
| | | | TrL1 | | EngL2 | | EngL1 | | TOTAL | |
| | | | N | % | N | % | N | % | N | |
| S1 | Preschool Education | Not Existing | 16 | 64 | 18 | 72 | 9 | 36 | 43 | 0 * |
| | | Existing | 9 | 36 | 7 | 28 | 16 | 64 | 32 | |
| | | Total | 25 | 100 | 25 | 100 | 25 | 100 | 75 | |
| | Special Education | Not Existing | 5 | 20 | 4 | 16 | 7 | 28 | 16 | |
| | | Existing | 20 | 80 | 21 | 84 | 18 | 72 | 59 | |
| | | Total | 25 | 100 | 25 | 100 | 25 | 100 | 75 | |
| S2 | Preschool Education | Not Existing | 25 | 100 | 24 | 96 | 22 | 88 | 71 | 1 |
| | | Existing | 0 | 0 | 1 | 4 | 3 | 12 | 4 | |
| | | Total | 25 | 100 | 25 | 100 | 25 | 100 | 75 | |
| | Special Education | Not Existing | 25 | 100 | 24 | 96 | 22 | 88 | 71 | |
| | | Existing | 0 | 0 | 1 | 4 | 3 | 12 | 4 | |
| | | Total | 25 | 100 | 25 | 100 | 25 | 100 | 75 | |
| S3 | Preschool Education | Not Existing | 23 | 92 | 23 | 92 | 20 | 80 | 66 | 0,189 |
| | | Existing | 2 | 8 | 2 | 8 | 5 | 20 | 9 | |
| | | Total | 25 | 100 | 25 | 100 | 25 | 100 | 75 | |
| | Special Education | Not Existing | 20 | 80 | 18 | 72 | 21 | 84 | 59 | |
| | | Existing | 5 | 20 | 7 | 28 | 4 | 16 | 16 | |
| | | Total | 25 | 100 | 25 | 100 | 25 | 100 | 75 | |

* significant

As shown in Table 13, the chi-square results of Move 2 indicate that discipline type doesn't have a significant effect on S2 [$\chi^2(2) = 0,000$ $p > 0,05$] and S3 [$\chi^2(2) = 2,352$ $p > 0,05$]. On the other hand, the discipline type has a significant effect on S1 [$\chi^2(2) = 20,367$ $p < 0,05$].

It can be seen that in Preschool Education most frequently used step by Turkish scholars writing in both TrL1 and EngL2 is indicating a gap with the percentages of 36 and 28, respectively. Similarly, most commonly used step by English scholars writing in EngL1 is indicating a gap with the percentage of 64.

Table 13 presents that similar to Preschool Education, in Special Education both for Turkish scholars writing in TrL1 and EngL2, indicating a gap is the most commonly used step with the percentages of 80 and 84, respectively. Similarly, English scholars writing in EngL1 prefer using the same step more than the others with the percentage of 72.

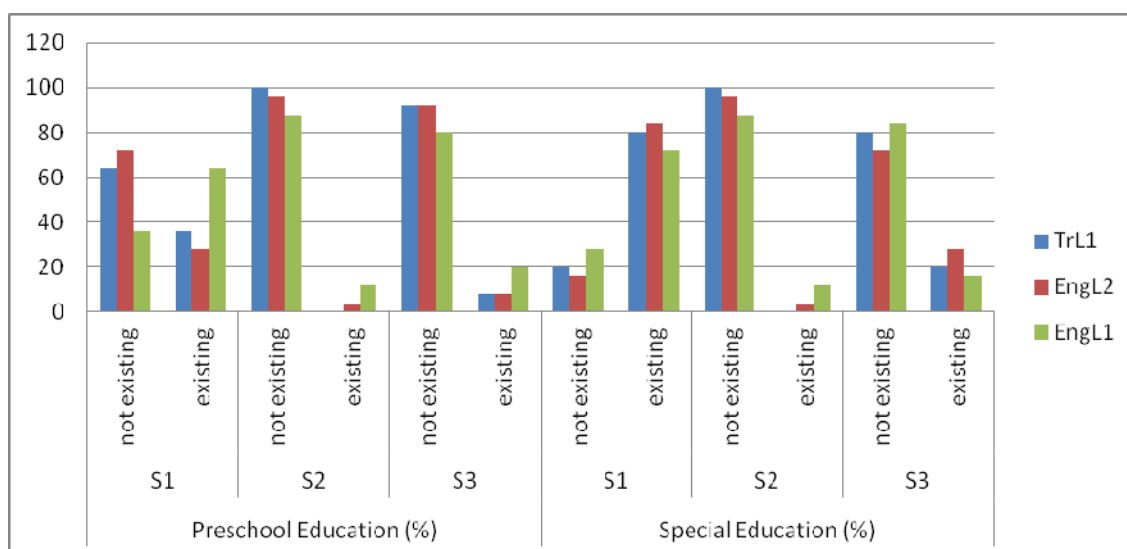


Figure 8. Distribution of M2 and its steps across different disciplines

The comparison of M2 and its constituent steps across different disciplines shows that regardless of the discipline, although indicating a gap is the most commonly used step, there is a variation between the disciplines because this step is more frequent-

ly used in Special Education. On the other hand, raising a question is the less preferred one in both of the disciplines.

4.2.1.3. Distribution of M3 and its steps across Disciplines

Table 14 and Figure 9 reflect the results of the chi-square test concerning the affect of discipline type on the frequency of Move 3 and its constituent steps. As can be seen in the table, the chi-square results of Move 3 indicate that discipline type doesn't have a significant effect on S2 [$\chi^2(2) = 0,000$ $p > 0,05$], S4 [$\chi^2(2) = 2,106$ $p > 0,05$], S5 [$\chi^2(2) = 1,103$ $p > 0,05$], S6 [$\chi^2(2) = 0,213$ $p > 0,05$] and S7 [$\chi^2(2) = 0,074$ $p > 0,05$]. On the other hand, the discipline type has a significant effect on S1 [$\chi^2(2) = 6,298$ $p < 0,05$], S3 [$\chi^2(2) = 5,273$ $p < 0,05$] and S8 [$\chi^2(2) = 6,566$ $p < 0,05$].

As shown in Table 14, in Preschool Education most frequently used step by Turkish scholars writing in both TrL1 and EngL2 is presenting positive justification with the percentages of 92 and 84, respectively. Similarly, most commonly used step by English scholars writing in EngL1 is presenting positive justification with the percentage of 84.

Table 14. Number and percentages of Move 3 and its steps across different disciplines

| M3 | DISCIPLINE | LANGUAGE: | | TrL1 | | EngL2 | | EngL1 | | TOTAL | DISCIPLINE- STEPS |
|----|---------------------|--------------|-----------|------------|-----------|------------|-----------|------------|-----------|---------|-------------------|
| | | N | % | N | % | N | % | N | % | N | P |
| S1 | Preschool Education | not existing | 4 | 16 | 11 | 44 | 9 | 36 | 24 | 0,021 * | |
| | | existing | 21 | 84 | 14 | 56 | 16 | 64 | 51 | | |
| | | Total | 25 | 100 | 25 | 100 | 25 | 100 | 75 | | |
| | Special Education | not existing | 3 | 12 | 3 | 12 | 5 | 20 | 11 | | |
| | | existing | 22 | 88 | 22 | 88 | 20 | 80 | 64 | | |
| | | Total | 25 | 100 | 25 | 100 | 25 | 100 | 75 | | |
| S2 | Preschool Education | not existing | 18 | 72 | 19 | 76 | 15 | 60 | 52 | 1 | |
| | | existing | 7 | 28 | 6 | 24 | 10 | 40 | 23 | | |
| | | Total | 25 | 100 | 25 | 100 | 25 | 100 | 75 | | |
| | Special Education | not existing | 16 | 64 | 19 | 76 | 17 | 68 | 52 | | |
| | | existing | 9 | 36 | 6 | 24 | 8 | 32 | 23 | | |
| | | Total | 25 | 100 | 25 | 100 | 25 | 100 | 75 | | |
| S3 | Preschool Education | not existing | 16 | 64 | 13 | 52 | 19 | 76 | 48 | 0,022 * | |
| | | existing | 9 | 36 | 12 | 48 | 6 | 24 | 27 | | |
| | | Total | 25 | 100 | 25 | 100 | 25 | 100 | 75 | | |
| | Special Education | not existing | 21 | 84 | 5 | 20 | 8 | 32 | 34 | | |
| | | existing | 4 | 16 | 20 | 80 | 17 | 68 | 41 | | |
| | | Total | 25 | 100 | 25 | 100 | 25 | 100 | 75 | | |
| S4 | Preschool Education | not existing | 22 | 88 | 23 | 92 | 21 | 84 | 66 | 0,246 | |
| | | existing | 3 | 12 | 2 | 8 | 4 | 16 | 9 | | |
| | | Total | 25 | 100 | 25 | 100 | 25 | 100 | 75 | | |
| | Special Education | not existing | 25 | 100 | 23 | 92 | 23 | 92 | 71 | | |
| | | existing | 0 | 0 | 2 | 8 | 2 | 8 | 4 | | |
| | | Total | 25 | 100 | 25 | 100 | 25 | 100 | 75 | | |
| S5 | Preschool Education | not existing | 19 | 76 | 17 | 68 | 18 | 72 | 54 | 0,294 | |
| | | existing | 6 | 24 | 8 | 32 | 7 | 28 | 21 | | |
| | | Total | 25 | 100 | 25 | 100 | 25 | 100 | 75 | | |
| | Special Education | not existing | 14 | 56 | 13 | 52 | 21 | 84 | 48 | | |
| | | existing | 11 | 44 | 12 | 48 | 4 | 16 | 27 | | |
| | | Total | 25 | 100 | 25 | 100 | 25 | 100 | 75 | | |

| M3 | DISCIPLINE | LANGUAGE: | | TrL1 | | EngL2 | | EngL1 | | TOTAL | DISCIPLINE- STEPS |
|----|---------------------|--------------|-----------|------------|-----------|------------|-----------|------------|-----------|---------|-------------------|
| | | N | % | N | % | N | % | N | % | N | P |
| S6 | Preschool Education | not existing | 2 | 8 | 4 | 16 | 4 | 16 | 10 | 0,817 | |
| | | existing | 23 | 92 | 21 | 84 | 21 | 84 | 65 | | |
| | | Total | 25 | 100 | 25 | 100 | 25 | 100 | 75 | | |
| | Special Education | not existing | 2 | 8 | 9 | 36 | 1 | 4 | 12 | | |
| | | existing | 23 | 92 | 16 | 64 | 24 | 96 | 63 | | |
| | | Total | 25 | 100 | 25 | 100 | 25 | 100 | 75 | | |
| S7 | Preschool Education | not existing | 20 | 80 | 24 | 96 | 24 | 96 | 68 | 1 | |
| | | existing | 5 | 20 | 1 | 4 | 1 | 4 | 7 | | |
| | | Total | 25 | 100 | 25 | 100 | 25 | 100 | 75 | | |
| | Special Education | not existing | 23 | 92 | 20 | 80 | 24 | 96 | 67 | | |
| | | existing | 2 | 8 | 5 | 20 | 1 | 4 | 8 | | |
| | | Total | 25 | 100 | 25 | 100 | 25 | 100 | 75 | | |
| S8 | Preschool Education | not existing | 21 | 84 | 22 | 88 | 22 | 88 | 65 | 0,018 * | |
| | | existing | 4 | 16 | 3 | 12 | 3 | 12 | 10 | | |
| | | Total | 25 | 100 | 25 | 100 | 25 | 100 | 75 | | |
| | Special Education | not existing | 14 | 56 | 17 | 68 | 21 | 84 | 52 | | |
| | | existing | 11 | 44 | 8 | 32 | 4 | 16 | 23 | | |
| | | Total | 25 | 100 | 25 | 100 | 25 | 100 | 75 | | |

* significant

Table 14 presents that similar to Preschool Education in Special Education both for Turkish scholars writing in TrL1 and English scholars writing in EngL1, presenting positive justification is the most commonly used step with the percentages of 92 and 96, respectively. On the other hand, Turkish scholars writing in EngL2 prefer announcing the purpose more than the others with the percentage of 88.

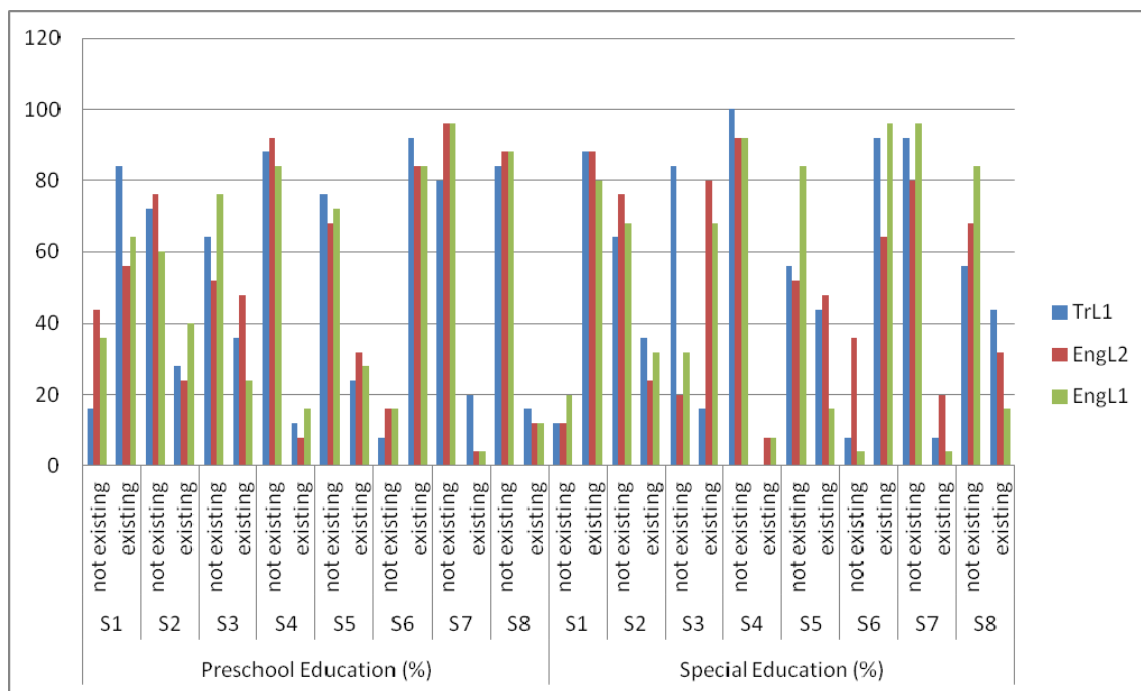


Figure 9. Distribution of M3 and its steps across different disciplines

The comparison of M3 and its constituent steps across different disciplines shows that regardless of the discipline, although announcing the purpose and presenting positive justification are the most commonly used steps, there is a variation between the disciplines because announcing the purpose is less frequently used in Preschool Education. On the other hand, introducing the research hypothesis is the less preferred one in both of the disciplines.

4.2.1.4. The Overall Distribution of Moves across Disciplines and Languages

Table 15 and Figure 10 present the overall number and percentages of Moves across different disciplines. As shown in Table 15 and Figure 10, when the overall distribution of Moves is taken into account, in Preschool Education specifying the topic (M1) is more frequent than the other moves by Turkish scholars both writing in TrL1 and

EngL2 with the percentages of 100 and 96, respectively. Similarly, English scholars writing in EngL1 also prefer specifying the topic (M1) more than the others (92%). These findings are in parallel with the discipline of Special Education because all of the scholars writing in TrL1, EngL2 and EngL1 in Special Education use specifying the topic as the most frequent move with the percentages of 100,100 and 96, respectively.

Table 15. The overall distribution of Moves across different disciplines

| M | DISCIPLINE | | LANGUAGE | | | | | | DISCIPLINE-M | P | |
|----|---------------------|--------------|-----------|------------|-----------|------------|-----------|------------|--------------|---------|-------|
| | | | TrL1 | | EngL2 | | EngL1 | | | | TOTAL |
| | | | N | % | N | % | N | % | | | N |
| M1 | Preschool Education | Not Existing | 0 | 0 | 1 | 4 | 2 | 8 | 3 | 0,62 | |
| | | Existing | 25 | 100 | 24 | 96 | 23 | 92 | 72 | | |
| | | Total | 25 | 100 | 25 | 100 | 25 | 100 | 75 | | |
| | Special Education | Not Existing | 0 | 0 | 0 | 0 | 1 | 4 | 1 | | |
| | | Existing | 25 | 100 | 25 | 100 | 24 | 96 | 74 | | |
| | | Total | 25 | 100 | 25 | 100 | 25 | 100 | 75 | | |
| M2 | Preschool Education | Not Existing | 24 | 96 | 25 | 100 | 21 | 84 | 70 | 0,019 * | |
| | | Existing | 1 | 4 | 0 | 0 | 4 | 16 | 5 | | |
| | | Total | 25 | 100 | 25 | 100 | 25 | 100 | 75 | | |
| | Special Education | Not Existing | 22 | 88 | 19 | 76 | 18 | 72 | 59 | | |
| | | Existing | 3 | 12 | 6 | 24 | 7 | 28 | 16 | | |
| | | Total | 25 | 100 | 25 | 100 | 25 | 100 | 75 | | |
| M3 | Preschool Education | Not Existing | 17 | 68 | 18 | 72 | 17 | 68 | 52 | 0,044 * | |
| | | Existing | 8 | 32 | 7 | 28 | 8 | 32 | 23 | | |
| | | Total | 25 | 100 | 25 | 100 | 25 | 100 | 75 | | |
| | Special Education | Not Existing | 13 | 52 | 12 | 48 | 15 | 60 | 40 | | |
| | | Existing | 12 | 48 | 13 | 52 | 10 | 40 | 35 | | |
| | | Total | 25 | 100 | 25 | 100 | 25 | 100 | 75 | | |

* significant

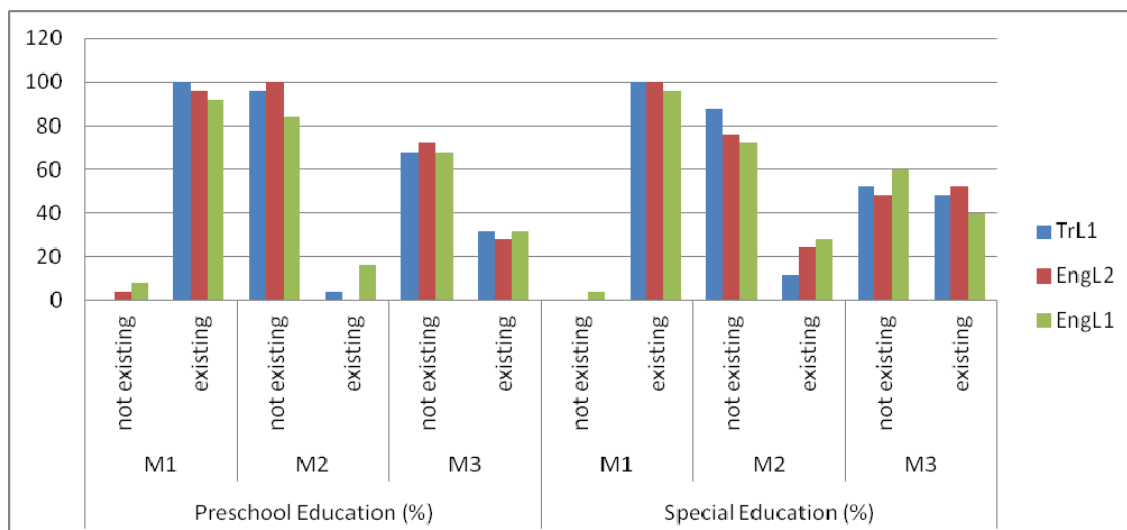


Figure 10. The overall distribution of Moves across different disciplines

Table 15 shows that discipline type has a significant effect on M2 and M3 ($p < 0,05$). Therefore, scholars writing in Preschool Education and Special Education have a significant effect on M2 and M3. On the other hand, discipline type doesn't have a significant effect on M1.

4.2.2. Discussion

The findings of the study reveal that when the disciplines are compared, indicating a gap in the previous research (M2/S1) is one of the strategies which has a considerable variation. For instance, in Preschool Education, while Turkish scholars are writing in TrL1 and EngL2 they use this step 36% and 28%, respectively. On the other hand, while the same scholars are writing in Special Education, they prefer using it 80% and 84%, respectively. However, English scholars do not reflect such kind of a variation while writing in the corresponding disciplines. While writing in the former discipline, they prefer indicating a gap 64% and 72% in the latter discipline. The reason could be attributed to the newly emerging programs and concepts of the discipline- Special Education such as toilet training protocols, early intervention programs and discrete trial teaching. In Special Education, the history of research on such programs and concepts in Turkish academic discourse is not very old and because of that Turkish scholars can attribute the need of their study to the gap in the field.

Similarly, due to the current centrality of both disciplines, Turkish scholars prefer claiming centrality (M1/S1) very frequently. In Special Education, they prefer using the step commonly while writing both in TrL1 (92%) and EngL2 (84%). It is also similar in Preschool Education with the percentages of 84 and 80, respectively. English scholars also put similar emphasis on both of the disciplines with the percentages of 96 and 92, respectively.

It is also clear that both Turkish scholars and English scholars writing in the two disciplines review literature (M1/S4) with challenges directed toward other scholars. These findings can be attributed to the nature of the disciplines examined, which requires theoretical argumentation.

One of the other common characteristics of Turkish scholars is that regardless of the discipline, they all avoid explicitly giving the structure of the article with a clear indication of the number of sections and their purpose (M3/S3) to a certain extent. The significance of the relative paucity of explicit statements concerning the organization of the Turkish RAIs can be determined by resorting to insights from two converging fields of inquiry: cross-cultural communication (Gudykunst and Ting-Toomey, 1988; Gudykunst et al., 1996) and contrastive rhetoric (Connor and Kaplan, 1987; Purves, 1988; Connor, 1996). Studies in these areas show that communicative styles in different cultures vary in terms of directness, that is, the degree to which speakers and writers reveal their intentions. It is claimed, for instance, that Western cultures prefer direct, explicit communication styles whereas the Japanese, Iranian, and Arab cultures value indirectness (Nishida, 1996; Zandpoor and Sadri, 1996; Gudykunst and Ting-Toomey, 1988). Regarding writing in particular, Hinds' influential work on Japanese–English contrastive rhetoric (Hinds, 1983, 1987) proposes a distinction between reader-responsible rhetoric and writer-responsible rhetoric. A writer-responsible rhetoric, which is preferred in English, places the burden of communication mostly on the writer, who must be aware of readers' needs and communicate the message as directly, clearly, and unambiguously as possible. The findings of the present study, however, contradicts these claims because English scholars use of this strategy is still very low with 24% in Preschool Education and 68% in Special Education. On the other hand, in Japanese

writing, which is reader-responsible according to Hinds, it is the reader's responsibility to figure out the writer's intended message (Hinds, 1987). While Turkish introductions do not explicitly state the structure of the article (36% in Preschool Education and 16% in Special Education) to a high degree, English introductions written by Turkish scholars exhibit a higher degree of directness and explicitness with 48% in Preschool Education and 80% in Special Education. Therefore, it would be inaccurate to classify Turkish writing, at least on the basis of the present data, as reader-responsible or writer-responsible. A possible interpretation of this result is that these dichotomies of direct-indirect styles and reader-responsible versus writer-responsible rhetoric are too general and probably too simplistic. Another interpretation which would be less dismissive of these dichotomies is that Turkish rhetoric is in a hybrid state: It prefers a reader-responsible type of text organization, but it is being "contaminated", as it were, by other rhetorical traditions, writer-responsible ones in this case, because of the educational background of Turkish scholars who have had extended experiences with other languages and their rhetoric.

When the occurrence of moves 1, 2 and 3 is taken into account, the results showed that the sample research article introductions fit well in the main framework. The majority of research article introductions had all three moves identified in the CARS model. Differences were the preferences of some particular move-step preferences as discussed in the previous research questions. The preferences that were considerably different from the description of the model included an extensive review of background literature (M1/S4) and the inclusion of many definitions and examples (M1/S2). Among Turkish scholars from Preschool Education, 84% of RAIs written in TrL1 and 88% of them written in EngL2 included M1/S2. Similarly, in Special Education 76% and 96% of them use M1/S2, respectively. With respect to the use of M1/S4, the percentages are 100% and 88% in Preschool Education; and 100% and 100% in Special Education, respectively. These findings are in line with the study of Anthony (1999). By using the CARS model as a standard model to analyze the structure of twelve research article introductions in the field of software engineering, the researcher found that English research article introductions employ the model as proposed by Swales (2004) as all three moves were identified in the corpus; however, he noted some

differences; there was a large review of background literature, the inclusion of many definitions and examples and the inclusion of evaluation of research article introductions in terms of application or novelty of the results. Thus, it can be concluded that both Turkish and English research article introductions share common features about the use of literature and definitions.

Significantly, Najjar (1990) also found that 4 introductions out of 27 did not have Move 3 and added that from the findings of the previous studies the absence of Move 3 was not a common phenomenon. In line with those previous studies, in this sample, almost all RAIs included Move 3. Thus, majority of Turkish scholars introduce their present research in their introductions regardless of the discipline. To achieve this purpose, mostly applied strategies among Turkish scholars are presenting positive justification (M3/S6) and announcing the purpose (M3/S1). These findings are parallel with the study of Bisenbach-Lucas (1994). The author also suggested that Move 3 Step1B (Announcing present research) occurred with the greatest frequency. Also suggested by the author, such a tendency is inevitable in that the purpose of the introductions in research is to convince readers about how the work presented fits in with current literature on the same topic and to present the writers own research.

The research article introductions analyzed in this study come from the disciplines of Preschool Education and Special Education. As Duszak (1997, p. 11) suggests, contrary to writing in the hard sciences, writing in the humanities and the social sciences is likely to be permeated by “language- and culture bound discursal preferences”. In line with this explanation, findings of the present Turkish and English discourse consistently note the prevalence of repetition at different move-step sequences. In his study Anthony (1999) found that the introductions he examined were long and showed a large amount of cycling. There was extensive use of Move 1 and Move 2 cycling, which were also commonly found in long introductions observed by Swales. In the present study Special Education can be claimed to be parallel with these previous studies because certain amount of Move 1 and Move 2 cycling is noted (56% in TrL1, 76% in EngL2 and 56% in EngL1); however, such cycling is found to be very low in Preschool Education (24% in TrL1, 20% in EngL2 and 56% in EngL1). Therefore, it is clear that while

Turkish scholars use Move 1 and Move 2 cycling more frequently in Special Education, they don't prefer using them so much in Preschool Education. As discussed earlier the reason could be attributed to the newly emerging concepts and programs in the discipline- Special Education. The degree of maturity of Special Education research on concepts like toilet training protocols, early intervention programs and discrete trial teaching in the Turkish world is not enough, and so, Turkish scholars can need turning back to move 1 to define new terms or concepts in Special Education and then continue with move 2 again.

CHAPTER 5

CONCLUSION AND IMPLICATIONS

The present study sought to examine functional moves in the introduction sections of research articles written by Turkish and English scholars by analyzing data from 150 RAIs. The conclusion drawn from the findings of the study, and implications are discussed in this chapter. Finally, some suggestions for further research are offered.

5.1. Conclusion

The conclusions drawn from the present study are threefold: the compatibility of the CARS Model in Turkish academic discourse, differences between the disciplines, and differences among languages.

The first point pertains to the contributions and applicability of the study to the CARS Model. The contrastive analysis of rhetorical features of the RA introductions in the study showed considerable variation. Initially, while Turkish research article introductions had similar features described in the CARS Model, there were differences in move-sequence. In both of the disciplines less than half of the RAIs followed the move sequence of 1-2-3; however, regardless of the sequence, all of the moves were existent to a high degree in the RAIs. Thus, although the CARS Model does not completely account for the sequence of the move-step structure of the RA introductions, it seems that it is compatible with the introductions examined when certain conditions are considered.

Our analysis of the steps has provided deeper insights into how scholars claim knowledge and establish links with their disciplinary community. Depending on the results it can be concluded that rhetorical moves do not occur only in canonical order but in repeated cycles of internal moves.

Considering the findings of this study, the following two broad conclusions can be drawn on the rhetorical patterns used by L1 groups (both Tr L1 and Eng L1) and the extent of applicability of the CARS Model; as well as the similarities and differences of rhetorical patterns used by English L2 and L1 scholars.

The investigation of rhetorical patterns has revealed how the Introduction sections of RAs in the two disciplines move through a) Moves 1, 2 and 3, b) steps and c) cycle patterns to allow scholars to make knowledge claims. Move 1, defined as “Establishing a territory”, which includes Step 1 “Topic generalizations of increasing specificity”, does not show any other steps in Swales’ 2004 model. The present study confirms, as already noted by Lewin, B. A., Fine, J. & Young, L. (2001), that the description of Step 1 remains too broad to reveal the “significance”, “related past studies” or “necessary terms and concepts” of the research. Following the suggestions of Loi and Evans (2010), owing to the fact that the three groups of scholars examined in the present study displayed a wide range of choices to position their research in Move 1 / Step 1, the researcher also supports the revised version of the CARS Model (Swales, 2004) for Turkish and English with the revised Move 1, now incorporating its four constituent steps applied in the present study.

By making use of the revised version to analyze Move 1, it can be seen that the frequency of the concerning steps used by the English L1 group is greater than that of the Turkish L1 group. The consistent use of these rhetorical features helped the English L1 scholars to ground the significance of their studies, and thereby attain research validation. The Turkish L1 group used some steps more frequently but others less than the English L1 group. On one hand, the Turkish L1 group established a territory by making use of the step of defining terminology and definitions and claiming centrality. On the other, this group used fewer steps of presenting the theoretical basis and less evaluation of previous studies. Therefore, it can be concluded that the Turkish L1 scholars emphasized the tradition of their field of study by centrality claims in order to highlight the limitations of the work of others.

As has been stated previously in many parts of this dissertation, according to Swales (2004), Move 2, “Establishing the niche”, validates a study through perceived limitations in the existent literature. In other words, the researcher may choose to validate the RAI by “indicating a gap” or “adding to what is known”. As such Move 2 was observed to occur almost in all RAIs in both the English L1 and Turkish L1 groups, showing that the Turkish L1 scholars encoded a “competitive” rhetorical organization

similar to that of the English L1 Introduction genre. This finding contrasts with the findings on RAIs found in Arabic (Najjar, 1990), Spanish (Martín & Martín, 2005) and Malaysian (Ahmad, 1997). In these languages, unlike Turkish, RAI included very limited use of Move 2; otherwise, it was totally omitted.

Move 3, defined as “Presenting the present work”, introduces the research in question after the niche has been established in Move 2. Compared to the Turkish L1 group, the English L1 group more consistently used all of the steps, allowing the English L1 group to effectively formulate the Introduction section as a piece of scientific discourse. The scholars in the Turkish L1 group centered their texts mostly on Steps 1 and 4 in the taxonomy of Swales (2004). Through Steps 1 and 4, Turkish L1 scholars systematically presented not only the purpose of the research but also the research methodology. By doing so, they intended to build up methodological thoroughness, emphasizing the efficiency and strength of the approach to their study. This pattern used in Move 3 by Turkish scholars differs from that of Spanish scholars, who mostly “occupied the niche” briefly according to Burgess (1997).

As far as the similarities and differences between English L2 and L1 scholars are concerned, the following findings were observed. The English L2 scholars preferred situating the previous literature in order to make their own claims in their RAI sections. In the construction of Move 1, “Establishing a territory”, Eng L2 and Eng L1 scholars tended to be more similar than Tr L1 in each step of Move 1. However, Eng L1 scholars tended to criticize the work of others more frequently in Move 2 than the Eng L2 and Tr L1 scholars. In this respect, Tr L1 scholars differ both Eng L1 and Spanish L1 scholars (for Spanish, Burgess, 1997, 2002 and Martín & Martín, 2005). In other words, Tr L1 scholars tend to criticize previous research less than Eng L1 and Spanish L1 scholars.

The comparisons of scholars writing in TR L1, Eng L2 and Eng L1 revealed that almost all scholars used the three moves proposed in the CARS Model. The Turkish L1 and L2 scholars might have been influenced to a certain extent by the global centrality

of English, as has been discussed by previous researchers in the literature (Curry & Lillis, 2004; Moreno, 2010).

This study also revealed the less frequent use of the third step of Move 2 in the RAIs by Turkish scholars both in their L1 and Eng L2. This may be because of the fact that Turkish culture values indirectness (Nishida, 1996; Zandpoor and Sadri, 1996) with the great effort to save face and to respect a relatively rigid system of seniority, Turkish scholars do not seem to find it appropriate to criticize the works of their colleagues. Thus, it can be concluded that the Turkish scholars preferred to elaborate the problem and leave what is lacking in the previous literature for their readers to evaluate and make their own decision.

It can also be concluded that the Turkish scholars do not commonly present the background to their study in RAIs, which concerns the third step of Move 3. This can be because of the relatively indirect style preferred by Turkish scholars. It appears that the scholars attempt to introduce the present research mainly by announcing the purpose of their research. Furthermore, regardless of the language and the discipline, almost all scholars have the tendency to use either research hypothesis or hypotheses –the fourth step of Move 3, or research questions – the fifth step of Move 3, in their RAIs.

Another conclusion that can be drawn from the study concerns the conventions of different disciplines in terms of move cycling in the RAIs. The extended cycling of moves is used more frequently in Special Education rather than Preschool Education. It appears that scholars in the former discipline create denser texts than the ones in the latter by using cycle patterns more often. The scholars in Special Education tend to turn back to Move 1 to define new terms or concepts about the newly emerging issues such as toilet training protocols, early intervention programs and discrete trial teaching, and then continue with the other moves again.

On the other hand, comparisons of RAIs in the two disciplines of Preschool Education and Special Education lead us to conclude that the scholars in both disciplines also make use of similar strategies in introducing their articles, mainly claiming cen-

trality in the opening. The reason for the wide preference of centrality claims may be due to the nature of the disciplines examined as an attempt to make their claims more salient to readers who have been trained in various sub-disciplines in education. The findings of this study might have implications for Turkish scholars, which will be discussed in the following section.

5.2. Implications

The results from this study may have both theoretical implications and implications for Turkish scholars who want to be published internationally, and hence familiarize themselves with the conventions of RAIs in their disciplines.

5.2.1. Theoretical Implications

As discussed earlier in the methodology section, in the adapted form of Swales' CARS Model, Loi and Evans (2010) placed the function of literature review on the fourth step of the first move. However, as found in the present study, it can serve for various functions. For example, reviewing literature can function as a gap indication strategy in which scholars draw on previous research to justify the gap in the existing literature. Besides, depending on the results of the study it was concluded that Turkish culture favors indirectness to a certain extent. It is because of this fact that instead of making centrality claims directly, Turkish scholars also cite other studies again and again to indicate that their study is central indirectly. Therefore, reviewing literature can be employed in the realization of different functions in the introduction sections.

5.2.2. Implications for scholars in Turkey

The analysis of rhetorical characteristics of Turkish RAIs in this study has revealed some variations when the CARS Model was taken into consideration. These differences may be useful in assisting Turkish scholars who will be involved in academic writing in their careers because they might need their research published in English journals. As Sheldon (2011) suggested, when writing a research article, academicians need to contextualize their studies to wider audiences and cultural contexts. Therefore, understanding the rhetorical move structure of research articles, particularly the introduction section which functions mainly to introduce the whole research article to the other scholars,

will enable Turkish scholars to organize their work in a form which leads to increased chances of being accepted. This study may also contribute to a future manual on writing research articles in the relevant disciplines.

5.3. Suggestions for Further Research

In this dissertation, the characteristics of RAIs written in Turkish and English by Turkish scholars have been explored. Further study could be conducted to explore styles of writing in other sections of research articles (method, results, discussion and conclusion) and other types of academic genre (e.g. critical book reviews, research reports, dissertations and dissertation abstracts, research paper abstracts and abstracts for conference). Further studies might also include the analysis of other requirements of written communication and other equally important genres in the academy such as students' report, laboratory report, resume, grant proposal, summaries and poster presentation. Most importantly, the differences between the novice and expert authors' use of moves and steps can be examined to empower the novice authors to become members of their academic discourse community.

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APPENDICES

APPENDIX A
JOURNALS IN THE DATA

Preschool Education (RAIs written by Turkish Scholars in EngL2)

Eğitim ve Bilim

Balıkesir Üniversitesi Sosyal Bilimler Enstitüsü Dergisi

Procedia - Social and Behavioral Sciences

International Journal of Early Years Education

Preschool Education (RAIs written by Turkish Scholars in TrL1)

Pamukkale Üniversitesi Eğitim Fakültesi Dergisi

Abant İzzet Baysal Üniversitesi Eğitim Fakültesi Dergisi

Eğitim ve Bilim

Türk Eğitim Bilimleri Dergisi

Marmara Üniversitesi Atatürk Eğitim Fakültesi Eğitim Bilimleri Dergisi

Preschool Education (RAIs written by English Scholars in EngL1)

e- international journal of educational research

Early Childhood Education Journal

Early Childhood Research Quarterly

Educational Psychology: An International Journal of Experimental Educational Psychology

Special Education (RAIs written by Turkish Scholars in EngL2)

International Journal of Early Childhood Special Education

Buca Eğitim Fakültesi Dergisi

Educational Sciences: Theory & Practice

Turkish International Journal of Special Education and Guidance & Counseling

Research in Developmental Disabilities

Special Education (RAIs written by Turkish Scholars in TrL1)

International Journal of Early Childhood Special Education

Ankara Üniversitesi Eğitim Bilimleri Fakültesi Özel Eğitim Dergisi

Abant İzzet Baysal Üniversitesi Dergisi

Abant İzzet Baysal Üniversitesi Eğitim Fakültesi Dergisi

Special Education (RAIs written by English Scholars in EngL1)

e- international journal of educational research

Early Childhood Education Journal

Educational Psychology: An International Journal of Experimental Educational Psychology

Educational Researcher

Journal of Behavioral Education

APPENDIX B
ARTICLES IN THE DATA

Preschool Education-TrL1

1. Balat, G. U. (2009). Anasımına devam eden çocukların cinsiyetlerine göre temel ilişkisel kavram bilgilerinin incelenmesi. *Eğitim ve Bilim*, 153:54.
2. Turan, F. & Akoğlu, G. (2011). Okul öncesi dönemde sesbilgisel farkındalık eğitimi. *Eğitim ve Bilim*, 36:161.
3. Güler, T. & Yaltırık, İ. (2011). Erken çocukluk eğitiminde ilk yıllar programının öğretmnen görüşleri ile incelenmesi. *Eğitim ve Bilim*, 36:160.
4. Veziroğlu, M. & Gönen, M. (2010). An analysis of knowledge level of prospective teachers who have taken drama classes. *Procedia-Social and Behavioral Sciences*, 2:2.
5. Zembat, R. (2006). Okul öncesi öğretmenlerinin sohbet ve hikaye etkinliklerinde kullandıkları öğretim yöntemlerinin incelenmesi. *Kuram ve Uygulamada Eğitim Bilimleri*, 6:1.
6. Büyüктаşkapu, S., Çeliköz, N. & Akman, B. (2012). Yapılandırmacı bilim öğretim programının 6 yaş çocuklarının bilimsel süreç becerilerine etkisi. *Eğitim ve Bilim*, 37:165.
7. Aslanargun, E. & Tapan, F. (2012). Preschool Education and Its Effects on Children. *Abant İzzet Baysal Üniversitesi Dergisi*, 13:1.
8. Önder, A. & Gülay, H. (2007). Mother's Acceptance and Rejected Level of Their Children and Emphatic Skills of Children. *Pamukkale Üniversitesi Eğitim Fakültesi Dergisi*, 22:2.
9. Güven, E. D. & Cevher, F. N. (2005). The Level of Preschool Teachers' Classroom Management Skills and Its Relations with Different Variables. *Pamukkale Üniversitesi Eğitim Fakültesi Dergisi*, 18:2.
10. Ünüvar, P. & Senemoğlu, N. (2010). Developing Quality of The Time Period Fathers Spare for Their Children at 3-6 Years Old. *Pamukkale Üniversitesi Eğitim Fakültesi Dergisi*, 27.
11. Ceylan, Ş. & Ömeroğlu, E. (2011). Developing the scale about drama education for attitudes evaluation of Pre-school teacher candidate. *Pamukkale Üniversitesi Eğitim Fakültesi Dergisi*, 29:1.

12. Erkan, S. (2010). A comparative study on the behavioral/emotional problems of preschool children with and without experience of earthquakes. *Pamukkale Üniversitesi Eğitim Fakültesi Dergisi*, 28:2.
13. Evaluation of the ministry of national education pre-school education programme through neurodevelopmental perspective.
14. Views of mothers about cartoons' impact on children's behaviour.
15. Micozkadıoğlu, İ. İ. & Berument, S. K. (2011). The effects of day care quality on first grade children's social competence and academic achievement. *M.Ü. Atatürk Eğitim Fakültesi Eğitim Bilimleri Dergisi*, 33.
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APPENDIX C
DATA OF INVENTORY

Move structures of English research article introductions written by English speakers. (Special Education)

| RAIs code | Move structure | Length of moves as number of sentences | | | |
|--------------|-------------------------------|--|--------|-------|-------|
| | | Move 1 | Move 2 | Move3 | Total |
| 1.1 | 1-3-1-2-3-2-1-2-3 | 18 | 3 | 8 | 29 |
| 1.2 | 1-3-2-1-3-1-3-2-1-3-2-3 | 42 | 3 | 19 | 11 |
| 1.3 | 1-3-1-2-1-3-1-2-3 | 36 | 2 | 7 | 23 |
| 1.4 | 1-3-2-1-3 | 9 | 3 | 8 | 21 |
| 1.5 | 1-3-1-3-2-3 | 13 | 1 | 16 | 26 |
| 1.6 | 1-3-1-3-1-3-1-3-1-3 | 26 | - | 18 | 26 |
| 1.7 | 1-3-1-3 -1-2-3 | 20 | 2 | 12 | 58 |
| 1.8 | 1-3-1-3 | 4 | - | 5 | 32 |
| 1.9 | 1-3-1-3-1-3-1-2-1-3 | 18 | 1 | 9 | 67 |
| 1.10 | 1-3-1-3-2-1-3-2-3 | 39 | 3 | 7 | 24 |
| 1.11 | 1-3-1-3 | 18 | - | 7 | 22 |
| 1.12 | 1-3-1-3-1-3 | 16 | - | 3 | 37 |
| 1.13 | 1-3-1-3-2-3-2-1-2-1-3 | 29 | 3 | 15 | 17 |
| 1.14 | 1-2-1-3-1-2-3 | 13 | 2 | 10 | 44 |
| 1.15 | 1-2-1-2-3 | 12 | 2 | 8 | 29 |
| 1.16 | 1-3-2-3-2-1-2-1-2-1-2-3 | 25 | 12 | 11 | 70 |
| 1.17 | 1-2-3 | 17 | 6 | 12 | 18 |
| 1.18 | 1-3-1-3-1-3-1-3 | 17 | - | 14 | 21 |
| 1.19 | 1-3-2-1-2-1-2-3-1-3-1-3-2-1-3 | 52 | 5 | 11 | 23 |
| 1.20 | 1-3-2-1-2-1-2-3 | 18 | 8 | 4 | 17 |
| 1.21 | 1-3-1- 3-1-3 | 19 | - | 10 | 53 |
| 1.22 | 1-3-1-3-1-2-3-1-3 | 33 | 1 | 7 | 11 |
| 1.23 | 3-1-3 | 28 | - | 4 | 27 |
| 1.24 | 1-3-1-3-1-2-3 | 26 | 1 | 11 | 80 |
| 1.25 | 1-3-1-2-3-1-3-2-3 | 40 | 3 | 20 | 27 |
| Total: | 25 research articles | 588 | 61 | 256 | 905 |

Note: The numbers in the second column represent the moves in the CARS model.

Step occurrences of English research article introductions written by English speakers. (Special Education)

| RAIs code | Move – step classification | | | | | | | | | | | | | | |
|--------------|----------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | 1.1 | 1.2 | 1.3 | 1.4 | 2.1 | 2.2 | 2.3 | 3.1 | 3.2 | 3.3 | 3.4 | 3.5 | 3.6 | 3.7 | 3.8 |
| 1.1 | + | + | + | + | + | - | - | + | - | + | - | - | + | - | - |
| 1.2 | + | + | - | + | + | - | - | + | + | + | - | + | + | - | - |
| 1.3 | + | + | + | + | + | - | - | + | - | - | - | - | + | - | - |
| 1.4 | + | + | - | + | + | - | - | + | - | + | - | - | + | - | - |
| 1.5 | + | + | + | - | + | - | - | + | - | + | - | - | + | - | + |
| 1.6 | - | + | + | + | - | - | - | + | - | + | - | + | + | - | - |
| 1.7 | + | + | + | + | + | - | - | + | - | - | - | - | + | - | + |
| 1.8 | + | - | - | - | - | - | - | + | - | - | - | - | + | + | - |
| 1.9 | + | + | + | + | + | - | - | + | + | - | - | - | + | - | - |
| 1.10 | + | - | + | + | + | - | + | + | + | + | - | - | + | - | - |
| 1.11 | + | - | + | + | - | - | - | + | - | + | - | - | + | - | - |
| 1.12 | + | - | + | + | - | - | - | + | - | - | - | - | + | - | - |
| 1.13 | + | + | + | + | + | + | - | + | - | - | + | - | + | - | - |
| 1.14 | + | - | - | + | + | - | - | + | - | + | - | - | + | - | + |
| 1.15 | + | + | - | + | + | - | - | - | + | + | - | - | - | - | - |
| 1.16 | + | - | + | + | + | - | + | - | + | + | - | + | + | - | - |
| 1.17 | + | - | - | + | + | + | - | + | + | + | - | - | + | - | - |
| 1.18 | + | + | + | - | - | - | - | + | - | + | - | - | + | - | - |
| 1.19 | + | + | + | + | + | - | + | + | + | + | - | - | + | - | - |
| 1.20 | + | + | + | + | + | - | + | + | - | - | - | - | + | - | - |
| 1.21 | + | - | + | + | - | - | - | + | - | + | + | - | + | - | - |
| 1.22 | + | + | + | + | + | - | - | - | + | + | - | - | + | - | - |
| 1.23 | + | - | - | + | - | - | - | - | - | - | - | - | + | - | - |
| 1.24 | + | + | - | + | + | - | - | + | - | + | - | - | + | - | - |
| 1.25 | + | - | + | + | + | + | - | - | - | + | - | + | + | - | + |
| Total: | 24 | 15 | 17 | 22 | 18 | 3 | 4 | 20 | 8 | 17 | 2 | 4 | 24 | 1 | 4 |

Note: The symbol (+) and (-) indicate that the step either occurs or does not occur respectively in each introduction.

Move structures of English research article introductions written by Turkish speakers. (Special Education)

| RAIs code | Move structure | Length of moves as number of sentences | | | |
|-----------|---|--|--------|-------|-------|
| | | Move 1 | Move 2 | Move3 | Total |
| 1.1 | 1-3-1-2-1-2-1-3 | 9 | 2 | 5 | 16 |
| 1.2 | 1-3-1-3-1-2-3 | 25 | 1 | 10 | 36 |
| 1.3 | 1-2-3 | 20 | 2 | 4 | 26 |
| 1.4 | 1-3-1-3-1-2-3 | 11 | 1 | 14 | 26 |
| 1.5 | 1-2-3-2-3 | 19 | 2 | 6 | 27 |
| 1.6 | 1-3 | 7 | - | 5 | 12 |
| 1.7 | 1-3-2-1-3 | 28 | 1 | 9 | 38 |
| 1.8 | 3-1-3-1-3-1-3-1-2-1-3-1-3 | 29 | 8 | 15 | 52 |
| 1.9 | 1-3-1-3-2-1-2-1-3-2-1-2-1-3-1-3-2-3 | 19 | 14 | 12 | 45 |
| 1.10 | 1-3-2-1-2-3 | 14 | 2 | 3 | 19 |
| 1.11 | 1-3-2-3-1-2-3-1-3 | 6 | 3 | 14 | 23 |
| 1.12 | 1-3-1-3-1-3-2-1-2-3-1-3-1-3-2-1-3-1-3-2-3 | 47 | 9 | 30 | 85 |
| 1.13 | 1-3-1-3-1-2-3-1-3-1-3-2-3 | 17 | 2 | 28 | 47 |
| 1.14 | 1-3-1-2-3 | 9 | 1 | 7 | 17 |
| 1.15 | 1-3-1-3-1-3-2-3 | 24 | 1 | 18 | 43 |
| 1.16 | 1-3-2-3-1-3-2-3 | 6 | 2 | 19 | 27 |
| 1.17 | 1-2-3 | 6 | 1 | 8 | 15 |
| 1.18 | 1-2-1-3-1-2-1-3 | 16 | 2 | 5 | 23 |
| 1.19 | 1-3-1-2-3-2-3-2-1-3-1-2-3 | 19 | 6 | 8 | 33 |
| 1.20 | 3-1-2-3-1-3-1-2-1-3 | 22 | 4 | 19 | 45 |
| 1.21 | 1-3-1-3-1-3-1-3-1-3-1-2-1-3 | 15 | 1 | 13 | 29 |
| 1.22 | 1-3-1-3-1-3-2-1-3 | 26 | 2 | 7 | 35 |
| 1.23 | 1-2-3 | 8 | 2 | 3 | 16 |
| 1.24 | 1-3-1-3 | 13 | - | 5 | 18 |
| 1.25 | 1-2-1-3 | 21 | 1 | 5 | 27 |
| Total: | 25 research articles | 436 | 70 | 272 | 780 |

Note: The numbers in the second column represent the moves in the CARS model.

Step occurrences in English research article introductions written by Turkish speakers. (Special Education)

| RAIs code | Move – step classification | | | | | | | | | | | | | | |
|--------------|----------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | 1.1 | 1.2 | 1.3 | 1.4 | 2.1 | 2.2 | 2.3 | 3.1 | 3.2 | 3.3 | 3.4 | 3.5 | 3.6 | 3.7 | 3.8 |
| 1.1 | + | + | - | + | + | - | - | + | + | + | - | - | - | - | - |
| 1.2 | + | + | - | + | + | - | - | + | + | + | - | - | - | - | + |
| 1.3 | - | + | - | + | + | - | - | - | - | - | - | + | - | - | - |
| 1.4 | + | + | - | + | + | - | - | + | + | + | - | + | + | - | - |
| 1.5 | + | + | + | + | + | - | - | - | - | - | - | + | + | - | + |
| 1.6 | + | + | + | + | - | - | - | + | - | - | - | + | - | - | - |
| 1.7 | - | + | - | + | + | - | - | + | - | + | - | + | - | - | - |
| 1.8 | + | + | + | + | - | - | + | + | - | + | - | + | + | - | - |
| 1.9 | + | + | + | + | + | - | + | + | - | + | - | + | + | - | - |
| 1.10 | + | + | + | + | + | - | - | + | - | - | - | - | + | - | - |
| 1.11 | + | - | - | + | + | - | + | + | - | + | - | + | + | + | - |
| 1.12 | + | + | - | + | + | - | - | + | - | + | - | + | + | + | - |
| 1.13 | + | + | - | + | + | - | - | + | - | + | - | + | + | + | + |
| 1.14 | + | + | - | + | + | - | - | + | - | + | - | - | + | + | - |
| 1.15 | + | + | - | + | + | - | - | + | - | + | - | - | + | - | - |
| 1.16 | + | + | - | + | + | - | + | + | + | + | - | + | + | - | + |
| 1.17 | + | + | + | + | + | - | - | + | - | + | - | - | - | - | - |
| 1.18 | + | + | + | + | - | + | + | - | + | + | - | - | + | - | - |
| 1.19 | + | + | + | + | + | - | + | + | - | + | - | - | + | - | + |
| 1.20 | - | + | + | + | + | - | + | + | + | + | - | - | - | - | + |
| 1.21 | + | + | + | + | + | - | - | + | - | + | - | - | + | - | - |
| 1.22 | + | + | + | + | + | - | - | + | - | + | - | + | + | - | + |
| 1.23 | + | + | + | + | + | - | - | + | - | - | + | - | - | - | - |
| 1.24 | - | + | - | + | - | - | - | + | - | + | - | - | + | - | - |
| 1.25 | + | + | - | + | + | - | - | + | - | + | + | - | - | + | + |
| Total: | 21 | 24 | 12 | 25 | 21 | 1 | 7 | 22 | 6 | 20 | 2 | 12 | 16 | 5 | 8 |

Note: The symbol (+) and (-) indicate that the step either occurs or does not occur respectively in each introduction.

Move structures of Turkish research article introductions written by Turkish speakers. (Special Education)

| RAIs code | Move structure | Length of moves as number of sentences | | | |
|--------------|-------------------------------------|--|--------|-------|-------|
| | | Move 1 | Move 2 | Move3 | Total |
| 1.1 | 1-3-1-3-1-3-2-3-1-3-2-3-1-3 | 26 | 2 | 24 | 52 |
| 1.2 | 1-3-1-3-1-2-3 | 27 | 1 | 6 | 34 |
| 1.3 | 1-3-1-3-2-1-2-3 | 35 | 2 | 7 | 44 |
| 1.4 | 1-2-1-2-3-2-3 | 14 | 3 | 6 | 23 |
| 1.5 | 1-3-1-3-2-3-1-3-1-3 | 13 | 1 | 16 | 30 |
| 1.6 | 1-2-3-2-1-3-2-3 | 82 | 5 | 4 | 91 |
| 1.7 | 1-2-1-3-2-3 | 36 | 2 | 3 | 41 |
| 1.8 | 1-3-1-3-1-3-1-3-1-3-1-3-2-3 | 23 | 1 | 14 | 38 |
| 1.9 | 1-3 | 63 | - | 16 | 79 |
| 1.10 | 1-3-1-3-1-3-1-2-3 | 24 | 1 | 6 | 31 |
| 1.11 | 1-3-1-3-2-3 | 31 | 1 | 11 | 43 |
| 1.12 | 1-3-1-3-2-3-1-3 | 66 | 1 | 16 | 83 |
| 1.13 | 1-3-1-3-1-3-1-2-1-3-1-3-1-3-1-3-2-3 | 247 | 4 | 27 | 278 |
| 1.14 | 1-2-3 | 54 | 1 | 1 | 56 |
| 1.15 | 1-3-1-3-2-3 | 42 | 1 | 5 | 48 |
| 1.16 | 1-3-1-2-1-3 | 35 | 1 | 9 | 45 |
| 1.17 | 1-3-1-3 | 23 | - | 7 | 30 |
| 1.18 | 1-3-1-2-3 | 36 | 1 | 11 | 48 |
| 1.19 | 1-3-1-3-1-2-3-2-1-3-1-3 | 30 | 2 | 14 | 46 |
| 1.20 | 1-3-1-3-1-3-2-3 | 65 | 2 | 10 | 77 |
| 1.21 | 1-3-2-1-3-1-3-1-3-2-1-3 | 46 | 3 | 7 | 56 |
| 1.22 | 1-3-1-3-1-2-3 | 42 | 1 | 9 | 52 |
| 1.23 | 1-3-1-3-1-3-1-2-3 | 35 | 1 | 8 | 44 |
| 1.24 | 1-3-1-3-2-1-3 | 45 | 1 | 13 | 59 |
| 1.25 | 1-3-1-3-1-3-1-2-1-3 | 48 | 1 | 17 | 66 |
| Total: | 25 research articles | 1188 | 39 | 267 | 1494 |

Note: The numbers in the second column represent the moves in the CARS model.

Step occurrences in Turkish research article introductions written by Turkish speakers. (Special Education)

| RAIs code | Move – step classification | | | | | | | | | | | | | | |
|--------------|----------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | 1.1 | 1.2 | 1.3 | 1.4 | 2.1 | 2.2 | 2.3 | 3.1 | 3.2 | 3.3 | 3.4 | 3.5 | 3.6 | 3.7 | 3.8 |
| 1.1 | - | + | + | + | - | - | - | - | + | - | - | - | + | - | - |
| 1.2 | + | + | + | + | + | - | - | + | + | + | - | - | - | - | + |
| 1.3 | + | + | - | + | + | - | - | + | - | + | - | - | + | - | - |
| 1.4 | + | + | - | + | + | - | + | - | + | - | - | - | + | - | + |
| 1.5 | + | + | - | + | + | - | - | + | - | + | - | - | + | + | + |
| 1.6 | + | + | + | + | + | - | + | - | + | - | - | - | + | - | - |
| 1.7 | + | + | + | + | + | - | - | + | + | - | - | - | + | - | + |
| 1.8 | + | + | + | + | + | - | - | + | - | - | - | + | + | - | + |
| 1.9 | + | + | + | + | - | - | - | + | + | - | - | + | + | - | + |
| 1.10 | + | - | - | + | + | - | - | + | - | - | - | - | + | - | - |
| 1.11 | + | + | + | + | + | - | - | + | - | - | - | + | + | - | + |
| 1.12 | + | + | + | + | + | - | - | + | - | - | - | + | + | - | + |
| 1.13 | + | + | + | + | + | - | + | + | + | - | - | + | + | - | - |
| 1.14 | + | + | + | + | + | - | - | + | - | - | - | - | - | - | - |
| 1.15 | + | + | + | + | + | - | - | + | - | - | - | - | + | - | - |
| 1.16 | + | - | + | + | + | - | - | + | - | - | - | - | + | - | - |
| 1.17 | + | - | + | + | - | - | - | + | - | - | - | + | + | - | - |
| 1.18 | + | + | + | + | + | - | - | + | - | - | - | + | + | - | - |
| 1.19 | + | - | + | + | + | - | - | + | - | + | - | + | + | - | - |
| 1.20 | + | + | + | + | + | - | - | + | + | - | - | + | + | - | - |
| 1.21 | - | - | + | + | + | - | - | + | - | - | - | - | + | - | + |
| 1.22 | + | + | + | + | - | - | + | + | + | - | - | - | + | - | + |
| 1.23 | + | + | + | + | + | - | - | + | - | - | - | + | + | + | + |
| 1.24 | + | - | + | + | - | - | + | + | - | - | - | + | + | - | - |
| 1.25 | + | + | + | + | + | - | - | + | - | - | - | - | + | - | - |
| Total: | 23 | 19 | 21 | 25 | 20 | 0 | 5 | 22 | 9 | 4 | 0 | 11 | 23 | 23 | 11 |

Note: The symbol (+) and (-) indicate that the step either occurs or does not occur respectively in each introduction.

Move structures of English research article introductions written by Turkish speakers. (Pre-school Education)

| RAIs code | Move structure | Length of moves as number of sentences | | | |
|-----------|-----------------------|--|--------|-------|-------|
| | | Move 1 | Move 2 | Move3 | Total |
| 1.1 | 1-3-1-3-1-3-1-3-2-3 | 11 | 1 | 7 | 19 |
| 1.2 | 1-3 | 12 | - | 5 | 17 |
| 1.3 | 1-3-1-3-1-3 | 13 | - | 4 | 17 |
| 1.4 | 1-3-1-3-2-1-3 | 8 | 3 | 21 | 32 |
| 1.5 | 1-3-1-3 | 14 | - | 6 | 20 |
| 1.6 | 1-3 | 12 | 1 | 9 | 22 |
| 1.7 | 1-3-1-3 | 7 | - | 5 | 12 |
| 1.8 | 1-3-1-3-1-3 | 11 | - | 2 | 13 |
| 1.9 | 1-3-1-3-2-3 | 13 | 1 | 10 | 24 |
| 1.10 | 1-3-1-3-1-2-3 | 14 | 3 | 9 | 26 |
| 1.11 | 1-3-1-2-3-1-3-1-3-1-3 | 21 | 1 | 27 | 49 |
| 1.12 | 1-3 | 7 | - | 6 | 13 |
| 1.13 | 1-3-1-3 | 11 | - | 7 | 18 |
| 1.14 | 1-3-2-1 | 16 | 2 | 2 | 20 |
| 1.15 | 1-3-1-3-1-3 | 7 | - | 19 | 26 |
| 1.16 | 3-1-3 | 8 | - | 28 | 36 |
| 1.17 | 1-3-1-3-1-3-1-3-1 | 22 | - | 12 | 34 |
| 1.18 | 1-3-1-3 | 10 | - | 10 | 20 |
| 1.19 | 1-3-2-3-2 | 23 | 1 | 13 | 37 |
| 1.20 | 1-3 | 17 | - | 5 | 22 |
| 1.21 | 1-3-1-3-1-2-3 | 16 | 1 | 10 | 27 |
| 1.22 | 1-3-1-3-1-3 | 23 | - | 5 | 28 |
| 1.23 | 1-3-1-2-3 | 17 | 1 | 8 | 26 |
| 1.24 | 1 | 19 | - | - | 19 |
| 1.25 | 1-3-1-2-3-1-3 | 29 | 1 | 11 | 4 |
| Total: | 25 research articles | 361 | 16 | 241 | 618 |

Note: The numbers in the second column represent the moves in the CARS model.

Step occurrences in English research article introductions written by Turkish speakers. (Pre-school Education)

| RAIs | Move – step classification | | | | | | | | | | | | | | |
|--------|----------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| code | 1.1 | 1.2 | 1.3 | 1.4 | 2.1 | 2.2 | 2.3 | 3.1 | 3.2 | 3.3 | 3.4 | 3.5 | 3.6 | 3.7 | 3.8 |
| 1.1 | + | + | - | + | + | - | - | - | + | + | + | - | + | - | - |
| 1.2 | + | + | - | + | - | - | - | - | - | + | - | - | + | - | - |
| 1.3 | + | + | - | + | - | - | - | + | - | + | - | + | - | - | - |
| 1.4 | + | + | - | + | + | - | - | + | - | + | + | + | + | - | - |
| 1.5 | + | + | - | + | - | - | - | - | - | - | - | - | - | - | - |
| 1.6 | + | - | - | + | - | - | - | + | - | - | - | + | + | - | + |
| 1.7 | + | + | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 1.8 | + | + | - | + | - | - | - | + | - | - | - | - | + | - | - |
| 1.9 | + | + | + | - | + | - | - | + | - | + | - | - | + | - | - |
| 1.10 | + | + | - | + | + | - | - | + | + | - | - | - | + | - | + |
| 1.11 | + | + | - | + | - | - | + | + | - | + | - | - | + | - | - |
| 1.12 | + | - | - | + | - | - | - | + | - | + | - | - | + | - | - |
| 1.13 | - | + | - | + | - | - | - | - | + | - | - | + | + | - | - |
| 1.14 | - | - | - | + | + | - | - | - | - | - | - | - | + | - | - |
| 1.15 | + | + | - | + | - | - | - | + | + | - | - | - | + | + | - |
| 1.16 | + | + | - | - | - | - | - | + | - | + | - | + | + | - | - |
| 1.17 | + | + | - | + | - | - | - | - | - | - | - | - | + | - | - |
| 1.18 | + | + | - | + | - | - | - | - | + | + | - | - | + | - | - |
| 1.19 | + | + | + | + | + | - | - | - | - | + | - | + | + | - | + |
| 1.20 | - | + | + | + | - | - | - | + | - | - | - | + | + | - | - |
| 1.21 | - | + | + | + | + | - | - | - | + | + | - | - | + | - | - |
| 1.22 | + | + | + | + | - | - | - | + | - | - | - | - | + | - | - |
| 1.23 | + | + | - | + | - | + | - | + | - | - | - | + | + | - | - |
| 1.24 | - | + | + | + | - | - | - | - | - | - | - | - | - | - | - |
| 1.25 | + | + | + | + | - | - | + | + | - | + | - | - | + | - | - |
| Total: | 20 | 22 | 7 | 22 | 7 | 1 | 2 | 14 | 6 | 12 | 2 | 8 | 21 | 1 | 3 |

Note: The symbol (+) and (-) indicate that the step either occurs or does not occur respectively in each introduction.

Move structures of Turkish research article introductions written by Turkish speakers. (Pre-school Education)

| | | RAIs | | | | |
|----------------|-------------------------|--|--------|-------|-------|-----|
| Move structure | | Length of moves as number of sentences | | | code | |
| | | Move 1 | Move 2 | Move3 | Total | |
| 1.1 | 1-3-1-3 | 23 | - | 4 | 26 | |
| 1.2 | 1-3-1-3 | 9 | - | 2 | 11 | |
| 1.3 | 1-2-3 | 6 | 2 | 15 | 23 | |
| 1.4 | 1-3-1-3 | 13 | - | 8 | 21 | |
| 1.5 | 1-3-1-3-1-2-3 | 18 | 1 | 7 | 26 | |
| 1.6 | 1-3-1-2-3 | 23 | 1 | 2 | 26 | |
| 1.7 | 1-3-1-3 | 54 | - | 4 | 58 | |
| 1.8 | 1-3 | 30 | - | 2 | 32 | |
| 1.9 | 1-3-1-3-1-3-1-3-1-3-2-3 | 48 | 1 | 18 | 67 | |
| 1.10 | 1-3-1-2-3 | 14 | 1 | 9 | 24 | |
| 1.11 | 1-3-1-3 | 5 | - | 17 | 22 | |
| 1.12 | 1-3-1-2-3-2-3 | 23 | 4 | 10 | 37 | |
| 1.13 | 1-3-1-3 | 8 | - | 9 | 17 | |
| 1.14 | 1-3-1-3-1-3-1-3 | 28 | - | 16 | 44 | |
| 1.15 | 1-3-1-3-1-3-2-3 | 18 | 2 | 9 | 29 | |
| 1.16 | 1-3-1-3-1-3-1-3 | 42 | - | 28 | 70 | |
| 1.17 | 1-3-1-3 | 6 | - | 12 | 18 | |
| 1.18 | 1-3 | 19 | - | 2 | 21 | |
| 1.19 | 1-3-2-1-2-3 | 17 | 2 | 4 | 23 | |
| 1.20 | 1-3-1-3-2-3 | 12 | 1 | 4 | 17 | |
| 1.21 | 1-3-1-3-1-3-1-3-2-3 | 39 | 1 | 13 | 53 | |
| 1.22 | 1-3 | 5 | - | 6 | 11 | |
| 1.23 | 1-3 | 19 | - | 8 | 27 | |
| 1.24 | 1-3-1-3-1-3-1-3-1-3-1-3 | 51 | - | 29 | 80 | |
| 1.25 | 1-3-1-3-1-3 | 22 | - | 5 | 27 | |
| Total: | | 25 research articles | 552 | 16 | 243 | 811 |

Note: The numbers in the second column represent the moves in the CARS model.

Step occurrences in Turkish research article introductions written by Turkish speakers. (Pre-school Education)

| Move – step classification | | | | | | | | | | | | | | | RAIs | |
|----------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|--|
| | | | | | | | | | | | | | | | code | |
| 1.1 | 1.2 | 1.3 | 1.4 | 2.1 | 2.2 | 2.3 | 3.1 | 3.2 | 3.3 | 3.4 | 3.5 | 3.6 | 3.7 | 3.8 | | |
| 1.1 | - | + | + | + | - | - | - | - | + | - | - | - | + | - | - | |
| 1.2 | + | + | - | + | - | - | - | + | - | - | - | - | + | - | - | |
| 1.3 | + | - | + | + | - | - | + | + | - | + | - | - | - | - | - | |
| 1.4 | - | - | + | + | - | - | - | + | - | - | - | - | + | + | - | |
| 1.5 | + | + | + | + | + | - | - | + | - | - | - | - | + | - | - | |
| 1.6 | + | + | + | + | + | - | - | + | + | - | - | - | + | - | - | |
| 1.7 | + | + | - | + | - | - | - | + | + | - | - | - | + | - | - | |
| 1.8 | + | + | + | + | - | - | - | + | + | - | - | - | + | - | - | |
| 1.9 | - | + | - | + | + | - | - | + | - | - | - | + | + | + | - | |
| 1.10 | + | + | - | + | + | - | - | + | - | + | + | + | + | - | - | |
| 1.11 | - | + | - | + | - | - | - | + | - | + | - | - | + | + | + | |
| 1.12 | + | + | - | + | + | - | - | + | - | - | - | - | + | + | - | |
| 1.13 | + | + | - | + | - | - | - | + | - | + | - | - | + | + | - | |
| 1.14 | + | + | + | + | - | - | - | + | - | + | - | - | + | - | - | |
| 1.15 | + | + | - | + | + | - | - | - | + | - | + | - | + | - | + | |
| 1.16 | + | + | + | + | - | - | - | + | - | + | - | + | + | - | - | |
| 1.17 | + | - | - | + | - | - | - | + | + | - | + | + | + | - | - | |
| 1.18 | + | + | + | + | - | - | - | + | - | - | - | - | + | - | - | |
| 1.19 | + | + | + | + | + | - | + | + | - | - | - | - | + | - | + | |
| 1.20 | + | + | + | + | + | - | - | + | - | - | - | - | + | - | - | |
| 1.21 | + | + | - | + | + | - | - | - | - | + | - | - | + | - | - | |
| 1.22 | + | - | - | + | - | - | - | + | - | + | - | - | - | - | + | |
| 1.23 | + | + | + | + | - | - | - | - | + | - | - | + | + | - | - | |
| 1.24 | + | + | + | + | - | - | - | + | - | + | - | + | + | - | - | |
| 1.25 | + | + | + | + | - | - | - | + | - | - | - | - | + | - | - | |
| Total: | 21 | 21 | 14 | 25 | 9 | 0 | 2 | 21 | 7 | 9 | 3 | 6 | 23 | 5 | 4 | |

Note: The symbol (+) and (-) indicate that the step either occurs or does not occur respectively in each introduction.

Move structures of English research article introductions written by English speakers. (Pre-school Education)

| Move structure | Length of moves as number of sentences | | | RAIs | |
|--|--|--------|-------|------|-----|
| | Move 1 | Move 2 | Move3 | code | |
| 1.1 1-2-3 | 61 | 1 | 1 | 29 | |
| 1.2 1-3-1-3-1-3 | 8 | - | 11 | 11 | |
| 1.3 1-2-1-3 | 11 | 1 | 4 | 23 | |
| 1.4 1-3-2-1-3 | 16 | - | 4 | 21 | |
| 1.5 1-2-1-3 | 39 | 1 | 3 | 26 | |
| 1.6 1-3-1-2-1-3-1-3-1-3-2-1-2-1-2-3 | 47 | - | 14 | 26 | |
| 1.7 1-2-1-3 | 9 | 2 | 5 | 58 | |
| 1.8 1-2 | 9 | 2 | - | 32 | |
| 1.9 1-2-1-2-3 | 11 | 2 | 1 | 67 | |
| 1.10 1-3-1-3 | 6 | - | 3 | 24 | |
| 1.11 1-3 | 25 | - | 8 | 22 | |
| 1.12 1-2-1-3 | 4 | 2 | 4 | 37 | |
| 1.13 1-2-1-3 | 10 | 2 | 4 | 17 | |
| 1.14 1-3-2-1-2-3 | 4 | 2 | 2 | 44 | |
| 1.15 1-3-1-3-1-3 | 9 | - | 11 | 29 | |
| 1.16 1-2-1-3-1-3-1-3-1-3-2-1-3-1-3-1-2-3 | 36 | 3 | 18 | 70 | |
| 1.17 1-3-2-3 | 6 | 1 | 4 | 18 | |
| 1.18 1-3-2-1-3-2-1-2-3 | 38 | 8 | 13 | 21 | |
| 1.19 1-3-1-3-1-3-1-3 | 21 | - | 18 | 23 | |
| 1.20 1-3-1-3-1-2-1-2-3-1-2-1-3 | 37 | 4 | 13 | 17 | |
| 1.21 1-3-2-1- 2-1-2-3-1-3 | 18 | 8 | 2 | 53 | |
| 1.22 1-2-3-1-3 | 49 | 3 | 15 | 11 | |
| 1.23 1-2-3 | 42 | - | 6 | 27 | |
| 1.24 1-3-1-3 | 28 | - | 7 | 80 | |
| 1.25 1-3 | 29 | - | 25 | 27 | |
| Total: | 25 research articles | 573 | 42 | 196 | 811 |

Note: The numbers in the second column represent the moves in the CARS model.

Step occurrences of English research article introductions written by English speakers. (Pre-school Education) RAIs

| code | Move – step classification | | | | | | | | | | | | | | |
|--------|----------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | 1.1 | 1.2 | 1.3 | 1.4 | 2.1 | 2.2 | 2.3 | 3.1 | 3.2 | 3.3 | 3.4 | 3.5 | 3.6 | 3.7 | 3.8 |
| 1.1 | + | + | + | + | + | - | - | - | - | - | - | - | + | - | - |
| 1.2 | - | - | + | + | - | - | - | + | - | + | - | + | + | - | - |
| 1.3 | + | - | - | + | + | - | - | + | - | - | - | - | - | - | - |
| 1.4 | + | - | + | + | - | - | - | + | + | - | - | - | + | - | - |
| 1.5 | + | + | - | + | + | - | - | + | - | - | - | - | + | - | + |
| 1.6 | + | + | + | + | + | - | - | + | + | - | - | - | + | - | - |
| 1.7 | + | - | - | + | + | - | - | + | - | - | - | + | + | - | - |
| 1.8 | + | + | - | + | + | - | - | - | - | - | - | - | - | - | - |
| 1.9 | + | + | + | + | + | - | - | + | - | - | - | - | - | - | - |
| 1.10 | + | + | - | + | - | - | + | - | + | - | + | - | + | - | - |
| 1.11 | + | - | - | + | - | - | - | + | - | - | - | + | + | - | - |
| 1.12 | + | - | - | - | + | - | + | + | + | - | - | - | + | - | - |
| 1.13 | + | - | - | + | + | - | - | - | - | - | - | + | - | - | - |
| 1.14 | + | + | - | - | + | - | - | - | + | - | - | - | + | - | - |
| 1.15 | + | + | - | + | - | - | - | + | + | - | - | + | + | - | - |
| 1.16 | + | + | + | + | + | - | - | - | + | - | - | + | + | - | - |
| 1.17 | - | - | - | + | + | - | - | + | - | - | - | - | + | - | - |
| 1.18 | + | - | + | + | + | + | + | + | - | + | + | - | + | - | - |
| 1.19 | + | + | + | + | - | - | - | + | - | + | - | - | + | - | + |
| 1.20 | + | - | - | + | + | + | + | + | + | + | - | - | + | - | - |
| 1.21 | + | + | - | + | + | - | + | - | - | - | - | - | + | - | + |
| 1.22 | + | - | - | + | + | - | - | + | + | - | - | + | + | + | - |
| 1.23 | + | + | - | + | - | + | - | + | - | + | + | - | + | - | - |
| 1.24 | + | - | + | + | - | - | - | - | - | - | - | - | + | - | - |
| 1.25 | + | - | - | + | - | - | - | - | + | + | + | - | + | - | - |
| Total: | 23 | 12 | 9 | 23 | 16 | 3 | 5 | 16 | 10 | 6 | 4 | 7 | 21 | 1 | 3 |

Note: The symbol (+) and (-) indicate that the step either occurs or does not occur respectively in each introduction.