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A Genre Analysis of Research Abstracts of Master of Arts Theses Written by TEFL Students from the University of Tehran and Islamic Azad University of Gorgan

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Abstract

Following Swales' (1981) definition of genre analysis many scholars have attempted to characterize good academic writing; however, this can be difficult and worrying for non-native writers. Since a well-written abstract encourages readers more effectively, the present study intended to find differences in the rhetorical structures of abstracts by TEFL students from the University of Tehran (UT) and Islamic Azad University of Gorgan (IAUG). To meet this end, 100 abstracts (50 abstracts by TEFL students from UT and 50 abstracts by TEFL students from IAUG) were randomly selected. Swales' (1981) IMRD (Introduction, Method, Results and Discussion) and Swales' (1990) CARS (Created A Research Space) models were employed to recognize the rhetorical structure of the abstracts. Then, the frequencies and sequences of moves and steps were calculated using chi-square to find the differences. The results revealed that there were significant differences between the abstracts by TEFL students from UT and IAUG. The findings indicated that TEFL students from IAUG followed the IMRD and CARS more than TEFL students from UT. The findings of this study have some pedagogical implications for both non-native writers and postgraduate students as well as English academic writing teachers and students.

Keywords: Genre Analysis, Move, Research Abstracts, Step

Introduction

In recent decades, genre analysis has become a major research subject in the academic world as a result of the explosion of information provided by technology. This interest is due to researchers' needs and concerns about conventions and explanations of academic and scientific contexts. The conceptions of genre are utilized in applied linguistics and ESP concentrating on communicative goals. Bearing this in mind, Swales (1990) has argued that genre can be regarded as a representative of a distinct form of writing with certain communicative goals. Genre can be explained as a group of texts characterized by a particular communicative purpose that has tendency to produce a specific structural method. Since scholars and scientists need to communicate their ideas and findings through their publications, they need to have a comprehensive grasp of the discourse community's conventions (Martin, 2003) which can be possible if they are familiar with specific conventions or generes. Genre supplies a main frame of reference which can help readers, learners, and scholars to recognize and interpret texts (Rezvani, Khalil Aghdam, Saeidi, 2013).

The conception of genre has also been explained by Dudley-Evans (1994) who posits that genre analysis is a significant topic because it supplies information for well-known majors and courses, especially for those who are required to take part in community discourse and academic writing. Additionally, Bhatia (2002) accentuates that genre analysis has two different aspects: A reflection of complicated actuality of the world of institutionalized communication, and an efficient and a useful tool to create language teaching plans. However, the most convincing explanation has been posited by Swales (1990) who described genre as "a class of communicative events, the member of which share the same sets of communicative purpose" (p. 58). In addition, Swales (2004) declares that genre can be explained as a class of texts identified by moves, and each move performs a general communicative goal in a distinctive structural pattern. A notable abstract would charm readers and increase the probability of the abstract to be published in a well-known journal (Marefat & Mohammadzade, 2013).

Moreover, Swales and Feak (2009) mention that genre is "a type of text or discourse designed to achieve a set of communicative purposes" (p. 1). In general, genre analysis is a helpful instrument unfolding and linking the linguistic aspect of genres to their function and communicative goal. It supplies an approach to recognize the communicative techniques and linguistics aspects established in different genres (Aslam & Asim, 2014). Genre analysis shares some similarities with schemata theory in psychology. Genre is a type of "mental template" which is related to natural life and activities" (Rezvani et al., 2013, p. 590). From the point of view of schemata theory, Gledhill (1995) declares genre can have functions to avoid a text from dissolving into "individualism and incomprehensibility" (p.15). In a nut shell, genre provides a certain way of shaping and classifying text which assists comprehension.

There is one academic genre, the research article (RA) abstract, which has aroused increasing interest because of the pivotal function it fulfils for the scientific community. Research Abstracts (RAs) have historically been considered a crucial factor in academic writing; however, researchers have shown an increased interest in them over the past thirty years. One of the reasons for this interest is that RAs have become a prominent and almost obligatory genre in studies published in academic journals. Academic journals require researchers to conduct a research abstract along with their original articles (Al-Khasawneh, 2017). Therefore, it is not surprising that RAs have attracted a great deal of attention from scholars. The majority of RAs include informative abstracts between 100 and 250 words which condense the pre-eminent features and findings of the attended article (Van Bonn & Swales, 2007).

The function of a RA has been extensively studied by many researchers. According to Lores (2004), the function of an abstract is to "constitute the gateway that leads readers to take up an article, journals to select contributions, or organizers of conferences to accept or reject papers" (p. 281). An abstract should pursue specific conventions of compositions; therefore, it should supply different information about evaluating or recognizing the significant issues of the document (Cross & Oppenhiem,

2006). An abstract is an instrument that acts as a "gate keeping function" to help readers to decide to read the rest of the paper or not (Loers, 2004, p. 74). There are different types of abstracts which enable different users to successfully perform differing functions. Nonetheless, the most pervasive types which are employed by abstracting and indexing services and in scholarly journals include indicative, informative and indicative-informative abstracts (ANSI, 1997; Cross & Oppenhiem, 2006). Informative abstracts, used for highly structured experiments, investigations or surveys, usually include the background, aims, methods, results, and conclusions. Indicative abstracts, used for less-structured essays, editorials, or books, encompass the background and the aims of a study, but they do not necessarily include the methods and or the results. Indicative abstracts are more appropriate for review articles or books, and are perhaps more common in the arts, while informative-indicative abstracts are an amalgamation of the informative and indicative types, and they might add a conclusion to an indicative abstract. In other words, indicative-informative abstracts contain general information as found in indicative abstracts along with succinct conclusion-like statements (Cremmins, 1996).

Move-step analysis is currently regarded as a significant development in genre analysis. Several studies have conducted genre analysis on the discourse of RAs using move-step analysis based on rhetorical structure. Recognition of moves is an essential aspect in a rhetorical structure analysis. As Swales (2004) mentions, diagnosing moves and arranging the move boundaries are established by "a mixed bag of criteria" (p. 229). Other researchers have pointed out that linguistic characteristics can help to identify moves and their boundaries (Biook & Zamanian, 2015). What's more, several researchers have already paid attention to the features of RAs in genre studies (Lim, 2006; Rezvani et al., 2013; Pho, 2008).

In genre analysis, a move is defined as "a discoursal or rhetorical unit that performs a coherent communicative function in a written or spoken discourse" (Swales, 2004, p. 228 9). According to Pho (2008), a text's overall communicative purpose is achieved through the combination of many separate moves each with its own communicative purpose. Samraj (2009) accentuates that while it generally takes only one to two step to identify a rhetorical structure, moves are not all constructed of a set of basic

steps. While moves and steps both perform a function in the text; they can be either obligatory or optional. Obligatory moves occur regularly in a genre while optional moves occur less frequently, and it should be noted that the criteria for explaining obligatory moves or steps are not consistent. Generally, genre analysis depends on its constituent moves (Ghasempour & Farnia, 2017), and the recognition of moves is an important factor in a rhetorical characteristic analysis (Biook & Zamanian, 2015).

Recent developments in the field of genre analysis have refreshed the use of two main types of rhetorical organization: Swales' (1981) IMRD (Introduction, Method, Results and Discussion) and Swales' (1990) CARS (Created A Research Space) models. According to Lores (2004), the former is appropriate for informative abstracts and the latter is appropriate for the introduction section of indicative abstracts. Swales (1990) described the four-move structure he designed in his prior study as: 1. Establishing a field, 2. Reporting previous research, 3. Preparing for the present research, and 4. Introducing present research. He has since then revised his framework into three move patterns: Move1 Establishing a Territory, Move2 Establishing a Niche, and Move3 Occupying a Niche.

Swales (1990) subsequently adapted his rhetorical structure to be in better agreement with the social sciences. This was necessary because social sciences focus on literature reviews, unlike experimental research which concentrates on research methods. Swales' (1981, 1990) IMRD and CARS models mark the latest era in genre analysis in terms of setting the rhetorical framework. The CARS model has been utilized to examine specific kinds of research articles (Bhatia, 1993) and particular conventions that students are required to read for their courses (Hyland, 2003, 2008; Swales, 1993, 2004). Even though the CARS and IMRD model were created to examine the introduction section, adaptations of the models have been used to examine other parts of the academic article such as the abstract section, result section, and discourse section.

Several studies have been carried out on the introduction section (Amirian & Tavakoli, 2010; Marefat & Mohammadzade, 2013; Samraj, 2002, 2005; Swales, 1990, 2004), the result section (Atai, 2005; Hopkins & Dudley-Evans, 1988; Taylor & Chen, 1991; Yang & Allison, 2003), the method and

discussion section (Fallahi & Erzi, 2003; Habibi, 2008; Holmes, 1997; Loi & Evans, 2010; Salmani Nodushan & Montazeran, 2012; Yang & Allison, 2003) and the acknowledgement section (Giannoni, 2006; Kuhi & Rezaei, 2014; Rezvani & Khalil Aghdam & Saeidi, 2013); as well as book blurbs (Basturkmen, 2009; Önder, 2013; Valor, 2005), conference proposals (Halleck & Connor, 2006; Rowley-Jolivet, 2002), personal statements (Chiu, 2015; Chiu, 2016; Samraj & Monks, 2008), book reviews (Jalilifar & Ahmadi, 2011; Moreno & Suarez, 2008; Nicolaisen, 2002), and syllabuses (Afros & Schryer, 2009; Parson, 2016). However, although several researchers have focused on the abstract section (Amnuai & Wannaruk, 2013; Biook & Zamanian, 2015; Chalak & Norouzi, 2013; Cross & Oppenheim, 2006; Ghasempour & Farnia, 2017; Jalilifar & Vahid Dsatjerdi, 2010; Khalili Sabet & Kazempouri, 2015; Lores, 2004), However, far too little attention has been paid to the abstracts, and there is a need for more comparative studies that compare the significant differences between the frequencies and the sequences of the rhetorical structures written by non native students in the field of applied linguistics. Moreover, the previous studies have not taken into account both IMRD and CARS models simulatnously to explore the frequiencies nd sequences of moves and steps. Therefore, the purpose of the present study was to discover the move structure of abstract sections written by TEFL (Teaching English as a Foreign Language) students from the University of Tehran (UT) and TEFL students from the Islamic Azad University of Gorgan (IAUG) based on Swales (1981, 1990) IMRD and CARS models and to then identify the similarities and differences between the students of these institutions.

A strong student need for academic writing models has rapidly propelled the field of genre analysis during the past thirty years. Genre analysis assists learners in acquiring the appropriate skills to be able to write well and identify suitable techniques necessary to make sense of their field's literature. By utilizing a genre-based approach, students can find differences between different kinds of texts and acquire helpful information about the nature of texts such as a Master's theses or Doctoral dissertation (Ghasemi & Alavi, 2014). It supplies a framework to aid learners to transition from spoken to written language usage (Hyland, 2003). Utilizing genre analysis can also help learners to bridge cross-cultural differences in terms of

rhetorical goals, forms, audience and textual characteristics (Ghasempour & Farnia, 2017). According to Lio and Evans (2010), genre analysis allows a person to "gain insights into generic practices and disciplinary cultures embodied in the formal properties" (p. 2815). Swales (1990) posits that genre analysis is a communicative event. In any communicative event language has a vital role. However, a communicative event is not just the language; it also includes the participants, discourse, and culture (Tiainen, 2012). Therefore, if writers want to produce a competent research article they must follow certain common rules and conventions, which can be identified by genre analysis.

One subcategory of genre analysis, writing abstracts, has attracted a great deal of attention. The abstract, an extreme kind of condensed document representation (Cross & Oppenheim, 2006), contains fixed rules of construction to supply opportunity for readers to make a decision about evaluating and diagnosing the important part of documents. Bhatia (as cited in Alhuqbani, 2013, p. 371) explained the goal of abstracts as "a well-defined and mutually understood communicative purpose that most abstracts fulfill, irrespective of the subject discipline they serve".

Numerous studies have been done fairly recently on the rhetorical structure of abstracts. For example, van Bonn and Swales (2007) investigated language science article abstracts written in both French and English to find out how and why selection might have an effect on writer's linguistics and rhetorical perceptions. In their study, two corporas were utilized: Corpus A including abstracts from French Linguistic journals with English correspondence and corpus B consisting of French and English abstracts from a bilingual EAP journal. The results showed that firstly, particular characteristics, such as choice of voices, are ascribable to general variations between French and English. Secondly, personal pronoun, sentence length, and transition word choice make appropriate academic writing. Thirdly, differences are most likely attributed to variations in discourse community size.

Alternatively, Li (2011) conducted a study on genre analysis of abstracts written in Chinese and English from the two disciplines of Linguistics and Chemistry. He found that linguistics abstracts accompany a conventional

scheme, but chemistry abstracts follow normal norms. Abstracts from different fields typically display differences in grammatical structures, for example: Using first person pronouns and passive voices. As a result, research article abstracts exhibit differences in structure because of the writers' culture and discipline. Li concludes that graduate students, novice writers, and especially non-English students could improve their writing through involvement in disciplinary communities.

The main concern of Marefat and Mohammadzade's (2013) study was the appropriateness of research article abstracts. To do so, Marefat and Mohammadzade (2013) used IMRD and CARS models to study 90 English and Persian abstracts written by English and Persian native speakers. The results showed that firstly, the research article abstracts writers usually concentrated on the Introduction and Result sections while ignoring the Method and Discussion sections. Secondly, despite the fact that no model was completely effective, the abstracts were written based on the commonly used CARS model more than the IMRD model.

Behnam and Golpour (2014) examined differences in the rhetorical structure of abstracts written by English and Persian students in the two disciplines of Mathematics and Applied Linguistics. To this end, they selected 40 abstracts, 20 from English students and 20 from Persian students. They utilized Hylands' (2000) five moves model to recognize rhetorical structures. They analyzed the text by extracting the frequency of pre-eminent verbs. They concluded that Linguistic abstracts follow the model but Mathematics abstracts do not follow the norms in terms of moves.

Nasseri and Nematollahi (2014) postulated that due to the great amount of attention paid to different genres after Swales' theory, many studies have been conducted. They investigated abstracts from Iranian and Native speakers' (American students) Master of Arts (MA) theses by evaluating the use of Hylands' (2000) five-moves structure model made up of: Situating the research, Presenting the research, Describing the methodology, Summarizing the result, and Discussing the research. They found some deviations between the two groups. The second phase of this study was identifying the lexico-grammatictal styles. They tried to examine the writer's identity in the theses, but found the thesis did not contain the

writer's identity. They stated that their findings could be useful in designing ESP materials and classroom discussions. They concluded that 50 percent of Iranian students used optional moves, while American students used more obligatory moves.

In another study, Biook and Zamanian (2015) investigated Applied Linguistic research article abstracts published at the Oxford University and Islamic Azad University of Tabriz based on Swales' (1981, 1990) IMRD model and Halliday's (1994) explanation of transitivity processes. They analyzed 148 English research article abstracts at a macro and micro level based on these two models. They found that although the four rhetorical structures of Swales' IMRD model and Halliday transitivity processes were obvious in both abstract sets, they were distributed differently. For instance, the background information in the abstarcts published by Islamic Azad University of Tabriz tended to be longer than that of Oxford University. Furthermore, some linguistic differences were found that may be related to cultural reasons.

Ghasempour and Farnia (2017) postulated that it is important to write effective abstracts to create admissible research articles in the international discourse community. They examined English and Persian research article abstracts in the law discipline. In order to identify the move structure of the abstracts, they analyzed 90 research article abstracts in English and Persian based on Hyland's (2000) five-move structure model. In addition, they utilized Tseng's (2011) model to analyze verb tenses. They demonstrated that all moves were used in the English abstracts, whereas M1 and M2 were utilized more in the Persian abstracts. Additionally, they showed that "present tense" was used most in English abstracts, but "past tense" was used most in Persian abstracts.

Having reviewed the literature on genre analysis, it was found that relatively few studies have been conducted on the abstract sections of theses, so the impetus for conducting the present study was based on this gap in the literature. Therefore, the present study set out to determine the rhetorical features or move structures of RAs written by TEFL students from UT and IAUG based on Swales'(1981, 1990) CARS and IMRD models.

Research Questions

1. Is there any significant difference between the *frequency* of moves structure in the abstracts of TEFL students from UT and TEFL students from IAUG based on Swales' (1981) IMRD (Introduction, Method, Results and Discussion) model and Swales' (1990) CARS (Created A Research Space) model?
2. Is there any significant difference between the *sequences* of moves utilized in the abstracts of TEFL students from UT and TEFL students from IAUG based on Swales' (1981) IMRD (Introduction, Method, Results and Discussion) model and Swales' (1990) CARS (Created A Research Space) model?
3. To what extent are the abstracts of TEFL students from UT and TEFL students from IAUG in accordance with Swales' (1981) IMRD model?
4. To what extent are the abstracts of TEFL students from UT and TEFL students from IAUG in accordance with Swales' (1990) CARS model?

Method

Corpus

In this paper, we compared 100 abstract sections of MA theses written by TEFL students from UT and TEFL students from IAUG in various topics from the Applied Linguistics field. The corpus consisted of 50 abstracts written by TEFL students from UT and 50 abstracts written by TEFL students from IAUG.

As this was an exploratory investigation, it was decided to examine a number of randomly selected abstracts written by TEFL students between 2013 and 2016. Abstracts in general show a wide range of variation in length; unfortunately, widely different abstract lengths could potentially affect our findings. Therefore, the present study kept the abstracts length approximately consistent, between 150–393 words for UT and 153-402 words for IZUG. The summary of corpus features is shown in Table 1.

Table 1
Summary of Corpus Features

	Date Range	Word Range	No. of abstracts

University of Tehran	2013-2016	150-393	50
Islamic Azad University of Gorgan	2013-2016	153-402	50

The analysis of data was performed utilizing Swales' (1981, 1990) IMRD and CARS models to examine the rhetorical characteristics of the selected corpus. In the first step, Swales' (1981) IMRD model, as expanded for use on informative abstracts by Lores (2004), was employed as the basis of analysis. The abstracts were inspected for the presence of Introduction, Method, Result, and Discussion moves. Table 2 explains Swales' (1981) IMRD model based on Lores's (2004) elaboration.

Table 2
Lores's (2004) Elaboration on IMRD

Section 1 (Introduction)	This may outline the authors purpose or objective, the goals of the research or the problem the authors wish to tackle.
Section 2 (Method)	Here the authors indicate the way the problem has been studied or the goal set out: this might include the data used and the methodology followed.
Section 3 (Result)	A summary of the general findings appears in this section.
Section 4 (Discussion)	This move might include an interpretation of the results, some implications for further research or applications of the findings.

In the second step, the abstracts were examined to find their moves and steps. As mentioned before, Swales' (1990) CARS model, as expanded by Lores (2004) to apply to indicative abstracts, was adopted as the framework for analysis of the abstracts. As part of their identification, moves and steps were understood as components of the communicative purpose. Swales' (1990) CARS model includes: M1 Establishing a Territory, M2 Establishing a Niche, and M3 Occupying a niche. Based on the first move, the significance of the topic within the field should be clarified. In the second move, the author creates a niche to specify a gap in the literature, thereby suppling a justification for the investigation to be reported. Eventually, in

the third move the writers signify how their study fills the niche in addition to presenting their key results. This three-move pattern is illustrated in Table 3.

Table 3
Swales' (1990) Create a Research Space (CARS) Model

Moves 1 Establishing a territory
Step 1 Claiming centrality
Step 2 Making topic generalization(s)
Step 3 Reviewing items of previous research
Move 2 Establishing a niche
Step 1A Counter-claiming
Step 1B Indicating a gap
Step 1C Question-raising
Step 1D Continuing a tradition
Move 3 Occupying the niche
Step 1A Outlining purposes
Step 1B Announcing present research
Step 2 Announcing principal findings
Step 3 Indicating research article structure

Procedure

A total of 100 abstracts were chosen from two universities, namely UT and IAUG. The corpus of abstracts written by TEFL students from UT involved 50 abstracts randomly selected from the UT library, which are available on the Internet from the http://alborz.ut.ac.ir/ website. The corpus of abstracts written by TEFL students from IAUG consisted of 50 abstracts randomly selected from the IAUG library. Abstracts were selected from recent issues of theses. The corpus was subjected to a genre analysis based on Swales' (1981, 1990) CARS and IMRD models to analyze the text in the hierarchical schematic structure of the move-step model. Moves and steps are used as the significant units of analysis for these two models.

In the first phase, the moves were recognized, categorized, and coded according to their communicative purposes, frequencies, variations, and also missing and repetitive moves. The frequency of sequences of moves was tallied and summed. The validity of the moves and sequences, based on both models, were cross-checked by two PhD holders of Applied Linguistics. It was considered that quantitative measures would usefully supplement and extended the qualitative analysis. The inter-rater reliability indices of the

moves for IMRD and CARS were .83 and .87, respectively. The frequencies of sequences of particular moves were also reported and calculated based on the percentage of the total frequencies used in moves. Accordingly, structural organization of abstracts was analyzed based on the frequencies of the moves. Moreover, a move was considered obligatory if repeated sequences or more of the move occurred, a lower frequency of the moves was considered as an optional move (Li, 2011). In the second phase, chi-square was utilized to explore the significant similarities and differences between the two groups of TEFL students from UT and IAUG. This technique was used in this descriptive study to investigate the association between two categorical groups.

Results

The following analysis presents the results of move analysis of 100 abstracts written by TEFL students from UT and IAUG based on Swales' (1981, 1990) CARS and IMRD. First, the frequency of moves between the two groups was acertained,; second, the sequence of moves was identified; and third, the percentage of utilizing the two models were analyzed in this study.

Question Number One

Analysis Based on IMRD Moves

The abstracts were subjected to an analysis of the Introduction (I), Method (M), Result (R), and Discussion (D) moves to find if there was any significant difference between the frequencies of moves utilized by the two different groups. In other words, the abstracts were compared to the IMRD model to see how well they matched. As can be seen from the data in Table 4, the two groups did follow the IMRD model for I, M, R, and D moves. Our results show that the four structural units were all used to some degree by both groups, and although some similarities in the frequency of occurrence and arrangement of these components in both groups were observed there were also some differences. As Table 4 shows, the observed $\chi 2$ for I, M, R, and D is .89, .86, .84, and .52, respectively, which are all greater than 0.00 for df = 1. This means that the two groups have significant differences with regard to the frequencies of moves.

Table 4
Frequency (Percentage) and Chi-Square Results for the Significant Differences between the Groups Based on IMRD Moves

	I	M	R	D
UT	43	34	34	20
	86%	68%	68%	40%
IAUG	47	50	50	30
	94%	100%	100%	60%
$\chi 2$	0.89	0.86	0.84	0.52

Critical $\chi 2$ for df = 1 is 0.00 [a]
Note: Introduction (I), Method (M), Result (R), and Discussion (D)

Analysis Based on CARS Moves

Question one also aimed to determine the existence of any significant differences between the frequencies of moves utilized by the two groups based on the CARS model. It is apparent from Table 5 that M1 and M3 are the most frequent and obligatory moves in both groups. In contrast, M2 was used less than any other move. Specifically, M1 was included in 76 % of the abstracts by students from UT and 100% of the abstracts from IAUG, M2 was included in 28% and 52% of the abstracts, and M3 was included in 100% of all abstracts written by both groups of students. These results illustrate the awareness of TEFL students from both universities of the necessity to pave the ground for readers by presenting a suitable grasp of background information about the research subject and more specifically the area of their research. In addition, they inform the reader about the objectives of their research. The chi-square value, $\chi 2$, observed for M1, M2, and M3 were .88, .40, and .100, respectively. As all the values were greater than 0.00 for df = 1, both groups have significant differences with regard to frequencies of moves based on the CARS model.

Table 5
Frequency (Percentage) and Chi-Square Results for the Significant Differences between the Groups Based on CARS Moves

	M1	M2	M3
UT	38	14	50
	76%	28%	100%
IAUG	50	26	50
	100%	52%	100%
$\chi 2$	0.88	0.40	0.100

Critical $\chi 2$ for df = 1 is 0.00 [a]

Analysis Based on the CARS Steps

Additionally, question one attempted to discover if there was any difference in the frequency of steps between the two student groups. Our results showed that M1s1, M2s1b, M3s1a, and M3s2 were the most widely employed steps in both sets of abstracts. Table 6 illustrates that there is a significant difference between the frequencies of steps, with the exception of M2sla, as the chi-square values were greater than the critical value 0.00.

Table 6
Frequency (Percentage) and Chi-Square Results for the Significant Differences between the Groups Based on CARS Steps

	M1s1	M1s2	M1s3	M2s1a	M2s1b	M2s1c	M2s1d	M3s1a	M3s1b	M3s2	M3s3
UT	24	9	5	1	12	1	0	44	2	34	0
	48%	18%	10%	02%	24%	02%	0%	88%	04%	68%	0%
IAUG	34	19	6	1	22	0	3	48	3	48	1
	68%	38%	12%	02%	44%	0%	06%	96%	06%	96%	02%

χ2	0.58	0.27	0.1	0.2	0.33	0.1	0.3	0.53	0.5	0.82	0.1

Critical χ2 for df = 1 is 0.00 [a]

Question Number Two

The Most Frequent Sequences Based on IMRD Between the Two Groups

To resolve the second research question, the frequency of the dominant sequences in the IMRD model were calculated to determine whether or not the two groups utilized moves in the same order as the model pattern. From the data in Table 7, it is apparent that TEFL students from IAUG followed the IMRD pattern more advantageously than TEFL students from UT. The results show that the χ2 for IMRD is .61, IM .03, IMR .29, and IR 0.01, all are greater than the critical value. Therefore, there are significant differences between the sequences of moves used by the two groups and the model pattern. Table 7 clearly shows that IMRD is the most dominant sequence in both student groups; however, both groups utilized the IM and IR sections significantly less than the model predicted. Nevertheless, the utilization of IMRD by both groups closely agrees with the predictions made by the model.

Table 7

Frequency of Occurrence of the Dominant Sequences of IMRD Moves between Two Groups

	IMRD	IM	IMR	IR
UT	17	13	12	1
	34%	6%	24%	2%
IAUG	28	0	17	0
	56%	0%	34%	0%
χ2	0.61	0.03	0.29	0.01

Critical χ2 for df = 1 is 0.00 [a]

The bar chart in Fig. 4.1 gives a better presentation of the frequency of the sequence of the moves between the two groups.

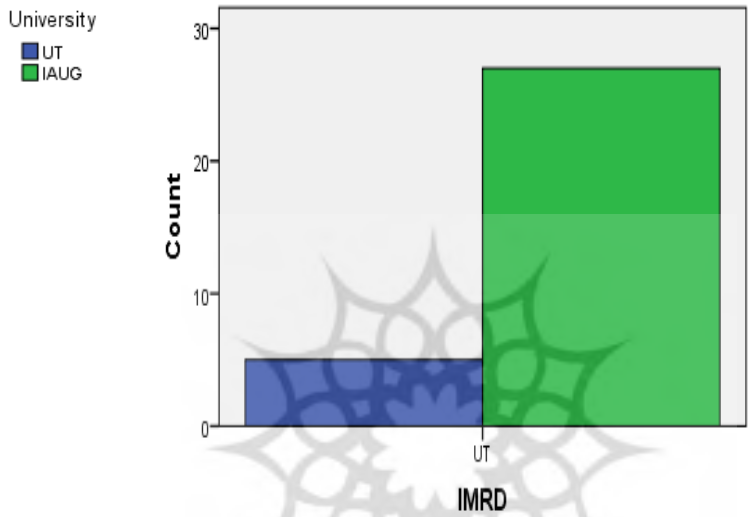

Figure 1. The frequency of the sequence of the moves in the two groups based on IMRD.

The Most Frequent Sequence Based on CARS in the Two Groups

Question two also aimed to determine the most frequent sequence of moves based on the CARS model. The results obtained from the preliminary analysis of Table 8 show that TEFL students from IAUG used M1-M2-M3 more than TEFL students from UT. Nevertheless, the two groups incorporated M1-M3 into their abstracts as frequently as the model predicted. M1-M2-M3, M1-M2 and M2-M3 were used less than the model predicted, and their critical values are all less than the chi-square value.

Table 8
Frequency of Occurrence of the Dominant Sequences of CARS Moves between Groups

	M1-M2-M3	M1-M2	M2-M3	M1-M3
UT	7	2	2	16

	14%	04%	04%	32%
IAUG	16	1	2	15
	32%	2%	4%	30%
$\chi 2$	0.07	0.03	0.04	0.30

Critical $\chi 2$ for df = 1 is 0.00 [a]

Question Number Three

The third question deals with the extent to which the abstracts are in accordance with the IMRD model. As shown in Table 9, only 34% of TEFL students from UT utilized the IMRD pattern, whereas only 56% of TEFL students from IAUG used the IMRD pattern. This finding could be explained by the fact that TEFL students of IAUG followed the IMRD model more effectively than TEFL students of UT.

Table 9
Frequency of Moves Based on each Moves of IMRD

	IMRD
UT	17
	34%
IAUG	28
	56%

Question Number Four

The last major research question of this study aimed to find out the extent to which the abstracts of TEFL students from UT and IAUG were in accordance with the CARS model. As shown in Table 10, the variations of the moves between the two groups are different. The results demonstrate that 32% of TEFL students from IAUG made use of the the CARS model as opposed to only 14% of TEFL students from UT. However, neither group followed the CARS model very well.

Table 10
Frequency of Moves Based on CARS

	CARS
UT	7
	14%
IAUG	16

	32%

Discussion

The present study was designed to discover similarities and differences between the rhetorical structures of abstracts in the RA section of theses written by TEFL students from UT and IAUG by examining the frequency of the rhetorical structure based on Swales' (1981, 1990) IMRD and CARS models. The finding of the first research question showed that, with regard to the move structure, the abstracts tended to follow the introduction, methodology, and result pattern, but the discussion move was used less than the other moves. Additionally, M1 (Establishing a territory) and M3 (Occupying the niche) had the highest frequency in the CARS model and the most frequent steps in this model were M1s1, M2s1b, M3s1a, and M3s2. The most obvious finding to emerge from this study was that TEFL students are likely to focus more on introduction, methodology, and the actual findings of their research. The TEFL students of both universities displayed a clear priority for the use of M3, which might be considered as an obligatory rhetorical structure in all abstracts. In other words, TEFL students are eager to specify the important purpose of their research. These findings are both in line and in contrast with Marefat and Mohammadzade's (2013) results. They are in line with that study because M1 and M3 were utilized as the most frequent moves in the CARS model; however. in contrast they showed that I and R were frequently utilized in the IMRD model. Furthermore, this study produced results which do not corroborate the findings of Ismail and Ahmadshah's (2014) study which indicated that M1s2, M2s1b, and M3s1b are the most frequent steps. The findings of this study are in harmony with Samraj's (2005) study. She concluded that M2 (Establishing a niche) has the lowest frequency in the both groups of her abstracts from the journal of Wildlife Behavior and Conservative Biology.

The results of the second research question showed that IMRD was the most frequent sequence by both groups, and that the M1-M3 sequence was the most frequent sequence used in the CARS model by TEFL students. This is seen in the fact that the TEFL abstracts presented the four basic structural characteristics to establish the different parts of their underlying

research theses. Correspondingly, these rhetorical characteristics followed a similar linear sequence which manifests the rational sequence of the process of experimental research (I-M-R-D). Furthermore, analysis of the introduction section displayed an inevitable degree of homogeneity between TEFL students of both groups. The results of this research support the idea that that the high incidence of move 2 in the CARS model helps the readers to understand what has been done before, but can also be construed as an unconventional criticism of the previous writers. This may contribute to the fact that TEFL students tend to consider Move 2 (establish a niche) an unnecessary move. This finding supports Ismail and Ahmadshah's (2014) findings that the majority of abstracts follow the I-M-R-D sequence, and that M1-M3 from the CARS model are widely used. However, these findings do not support Marefat and Mohammadzade's (2013) idea that IM and IR are the most frequent sequences in abstracts, but they do agree with our results that M1-M3 were the sequences most used.

The results of question number three showed that IMRD model was used more by the TEFL students from IAUG and UT at (56%) and (34%), respectively than the CARS model at (32%) and (24%), respectively. The analysis accomplished in this study signified that the abstracts written by the TEFL students from IAUG more closely reflect Swales' (1981) IMRD model with regards to the use of the four moves; whereas, the abtracts by the TEFL students from UT were less rhetorically complex. This finding does not corroborate the ideas of Hasrati and Gheitury's (2010) studyon abstracts of English and Persian students. They demonstrate that 75% of English abstracts followed the IMRD model, as opposed to only 47.5% of the Persian abstracts. This indicates that Persian students do not follow the IMRD model. Furthermore, the result of this study is in contrast with the Hai-lin and Huan (2010) investigation that showed that non-native speakers of English do not use the IMRD pattern. Our results showed that 50% of the abstracts by TEFL students from both institutions utilized the IMR pattern.

Surprisingly, the last result of this study displayed that TEFL students from UT and IAUG did not follow the conventional scheme given by Swales' (1990) CARS model. Results indicate that the abstracts from both universities had variation in the distribution of the move patterns. In other words, it showed that while TEFL students recognized the moves and concentrated on genres, there were still significant differences in the manner of their use. These differences may be attributed to the size of abstracts studied or because these stepts were not brought to the students' attention. This finding is not in agreement with Keshavarz, Ataei, and Barzegar's (2007) results. They concluded that English and Persian writers follow the

M1-M2-M3 pattern in the proper sequence. Additionally, the findings of this study are not in harmony with Lores's (2004) claim that students are eager to follow the CARS model rather than the IMRD model.

In the light of the findings of studies, it was found out that abstracts have an important role in persuading the reader and discourse community that the present research has something worthy of their attention. Salager Meyer (1991) posits that a well-ordered abstract should contain all the moves in relation to the IMRD pattern and all of the moves should be in the right order. He accentuates that empirical abstracts should include all four moves. In his study, he instead found that both M1 (Introduction) and M3 (Results) were used to describe important features and explain the results of the study. Nevertheless, it is worth mentioning that this study provided a number of issues that have relevance to the abstract as well as writers, teachers, and advanced level students. First, it is vital that an abstract performs its purpose as a condensed document representation and logically and coherently indicates the important arguments found in the document. Thereby allowing readers to rapidly evaluate and obtain access to the important facts. Second, the abstract is a difficult and demanding assignment that needs knowledge of the rules of summarizing and explaining macrostructures; thus, it is imperative that students be taught the principle of creating well-formed and efficient abstracts which convey information and persuade their readers the significance of their study.

The present study provides some implications for genre theory and EAP pedagogy. The results of this study might be utilized to teach advanced level students and convince masters and doctoral students to use the appropriate structure for abstracts in their disciplines. Moreover, the result of this investigation might introduce the variations discovered in academic writing across genre analysis. Learning the structure of moves in writing narration and description will help students to develop their writing skill, resulting in higher scores in writing courses and on entrance tests. Knowledge of the linguistic base and its function is the foundation for acquiring certain goals in academic writing. This knowledge can help organize a text in accordance to the rules and norms of their academic disicpline. Examining the similarities and differences between different fields of study and different types of articles might help Iranian students to become more familiar with the construction of appropriate academic writing. It is necessary for those who want to take part in academic circles to know academic disciplines explicitly. Understanding the genre practices and specific texts of their field would help them to produce academic discourse following the required

norms. It would also increase the probability of publication and taking part in international academic discourse communities. This combination of findings provides some support for the conceptual premise that beginner writers can construct appropriate research abstracts in Applied Linguistics.

This study presented Swales' (1981, 1990) IMRD and CARS models and enhanced part of our knowledge of the applied linguistics abstract. Our results present a detailed explanation of the abstract's characteristics and move structure, and in the future further work needs to be done to establish disciplinary variations in writing handbooks, text books, learner's reports, resumes, presentations, and book blurbs. Further research should be done on an even larger corpus and also further work is required to use different models such as the Dudley-Evans's (1994) model or Hylands' (2000) model.

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