Metadiscourse Markers in the Discussion/Conclusion Section of Persian and English Master's Theses

A. Mirshamsi [*]	**H. Allami**
M.A., TEFL	**Assistant Professor, TEFL**
Yazd University, Yazd	**Yazd University, Yazd**
email: a_mirshamsi2010@yahoo.com	**email: hamid_allami@yahoo.com**

Abstract

Metadiscourse markers help writers make coherent and reader- friendly texts, which is of considerable importance in academic writing. The main aim of this study was to investigate how interactive and interactional meta-discourse markers are used by Iranian EFL learners. An inquiry was carried out to investigate cross-cultural similarities and differences in the use of meta-discourse markers in the Discussion and Conclusion sections of the master theses of three categories: native English speakers, native Persian speakers, and non-native English speakers. Following Hyland's (2005) meta-discourse taxonomy, a corpus of sixty master theses was investigated to search for meta-discourse markers. The results showed that native English writers used more interactive and interactional meta-discourse markers than native Persian and EFL learners which might stem from the insufficient awareness of EFL learners of the role of the meta-discourse markers, intercultural differences, and the fact that they do not usually receive explicit instruction on these devices in Persian academic context.

Keywords: meta-discourse markers, interactive/interactional meta-discourse markers, cross-cultural, academic writing

1. Introduction

Meta-discourse is considered as a new concept in fields of discourse analysis and language education. It deals with the relationship between writers of the texts and their texts as well as texts' authors and their readers (Hyland, 2005). As Ädel (2006) states, "meta-discourse is discourse about the evolving discourse, or the writer's explicit commentary on her own ongoing

---

text" (p.2). Meta-discourse markers are linguistic elements which portrait the presence of the writer or reader in the text by either referring to the organization of the text or commenting on the text in other ways. Meta-discourse stresses that as we speak or write we negotiate with others, making decisions about the kind of effects we are having on our listeners or readers (Hyland, 2005). With the judicious addition of meta-discourse, a writer is able not only to transform what might otherwise be a dry or difficult text into coherent, reader-friendly prose, but also to relate it to a given context and convey his or her personality, credibility, audience-sensitivity and relationship to the message (Hyland, 2000).

A number of studies have established the use of meta-discourse as an essential element of writing, (e.g. Ädel 2006; Farrokhi & Ashrafi, 2009; Hyland, 2004). Meta-discourse is particularly significant for graduate and postgraduate students when writing research articles for publication or their theses. Although several studies have been conducted on the use of meta-discourse markers in research articles, few studies (e.g. Akbas, 2012; Burneikaitė, 2008; Hyland & Tse, 2004; Marandi, 2003)only scantly have concentrated on meta-discourse markers in the master's or doctoral theses. In addition, despite considerable interest in meta-discourse by teachers and applied linguists, it has failed to achieve its explanatory potential due to a lack of theoretical rigor and empirical confusion (Hyland & Tse, 2004). Gaining the ability to recognize the meta-discourse markers in different texts, particularly doctoral or master theses will certainly be very helpful for EFL learners.

Thus, in an attempt to contribute to existing literature on meta-discourse markers in master's theses, this study focuses on master's thesis and the way writers use meta-discourse markers in the Discussion and Conclusion section of these theses.

2. Conceptual Framework

The term metadiscourse was coined by Zellig Harris in 1959 to represent a writer's or speaker's attempt to guide a receiver's perception of a text (Hyland, 2005). The concept was later developed by Vande Kopple (1985), Crismore (1989) and lately by Hyland (2004, 2005). As Hyland (2005) mentioned: "metadiscourse stresses that as we speak or write we negotiate with others, making decisions about the kind of effects we are having on our listeners or readers" (p. 3). Metadiscourse is used greatly in the present realm of discourse analysis. Metadiscourse as a rather new approach helps the writers or speakers to have interaction with the receivers of their texts. According to Hyland (2005) and Dafouz-Milne (2008), metadiscourse is a concept based on a view of writing or speaking as a social engagement.

Hyland (2005) believes that metadiscourse shows how the writers project themselves in their discourses and demonstrate their attitudes about the content and the audience.

Due to diverse meanings of metadiscourse markers, there are several taxonomies for these markers in the literature. Using Lautamatti's (1978) taxonomy and Williams' (1981) work, Vande Kopple (1985) identified two main types of metadiscourse markers: textual and interpersonal. He divided them into seven subcategories: text connectives, code glosses, illocution markers, validity markers, narrators, attitude markers, commentaries. This taxonomy was found to be vague in that it was very difficult for the researchers to put it into practice (Hyland, 2005).

Crismore, Markkanen, and Steffensen (1993) tried to improve Vande Kopple's (1985) metadiscourse taxonomy. Despite some changes that Crismore and his associates (1993) had done in the previous classification system; some problems of vagueness were still present.

To remove the existing problems, Hyland and Tse (2004), proposed a new and more robust model for classification of metadiscourse markers. This model assumes two main categories for metadiscourse: interactive and interactional. The interactive part includes the strategies of transitions, frame markers, endophoric markers, evidentials and code glosses and the interactional part consists of hedges, boosters, attitude markers, self-mentions and engagement markers strategies. According to Hyland (2005), the interactive dimension concerns the writer's awareness of a participating audience and the ways he or she seeks to accommodate its probable knowledge, interests, rhetorical expectations and processing abilities. The interactional dimension concerns the ways writers conduct interaction by intruding and commenting on their message. This intended model is specifically named as "a model of metadiscourse in academic texts" (Zarei & Mansoori, 2011, p. 45). The present study has used this metadiscourse taxonomy.

3. Background

At the advanced levels of academic writing, metadiscourse has a significant role because it illuminates how the writer tries to "present and negotiate propositional information in ways that are meaningful and appropriate to a particular disciplinary community" (Hyland, 2004, p. 136). Most of the contrastive rhetoric studies of metadiscourse in academic writing favor research articles while other genres are to some extent under-investigated (Burneikaitė, 2008). In recent years, however, some scholars have focused on both PhD and master theses. The knowledge of metadiscourse is essential for graduate and postgraduate students. Swales (1990) also suggests that

"the key differentiating aspect of dissertation writing is a much greater use of *metadiscourse* [emphasis original]" (p. 188). With regard to the importance of PhD and master theses/dissertations Hyland (2004) states:

> The dissertation is a high stake genre at the summit of a student's academic accomplishment. It is perhaps the most significant piece of writing that any student will ever do, a formidable task of intimidating length and exacting expectations which represents what is potentially achievable by individuals writing in a language that is not their own. (p. 134)

Therefore, the PhD and master dissertations are considered to be very important for the advanced university students. Despite the great importance of metadiscourse in dissertations, few researchers have explored master theses in search of metadiscourse markers. One such research is done by Marandi (2003). In her study, she presented a new metadiscourse typology which is a revised version of Crismore et al. (1993) classification. In her study, she compared the use of metadiscourse markers across three groups and also two chapters of master theses, i.e. introduction and discussion. She found that different groups use metadiscourse markers differently in their theses. In addition, her results showed that metadiscourse markers as a whole were used differently across chapters (Marandi, 2003).

Hyland (2004) examined doctoral and master theses written by Hong Kong students. In contributing a theoretically more robust model of metadiscourse rhetorical features were suggested for teachers of second language writing to incorporate into their classes. He suggested how academic writers use language to offer a credible representation of themselves and their work in different fields, and thus how metadiscourse can be seen as a means of uncovering something of the rhetorical and social distinctiveness of disciplinary communities. The results of his study indicated "the importance of metadiscourse to students writing in this genre…" (Hyland, 2004, p. 140).

Burneikaitė in a series of studies (2008, 2009a, 2009b) described patterns of different metadiscourse markers in the linguistics M.A. thesis genre. In her 2008 study she compared metadiscourse strategies in English texts by L1 and L2 writers as well as considering the role of institutional practices and individual writer style in the way writers manage their discourse. She defines metadiscourse as the language used to express the author's explicit awareness and management of the discourse as process. Her model includes three major categories: Text-organizing metadiscourse, Participant-oriented metadiscourse, and Evaluative metadiscourse. The aims

of her study are manifold: 1) to develop a methodological framework for analyzing metadiscourse in the master's thesis genre; 2) to describe patterns of metadiscourse in the M.A. thesis genre in the discipline of Linguistics; 3) to compare the use of metadiscourse in native and non-native/interlanguage English M.A. thesis from British and Lithuanian universities. Burneikaitė found the following pattern of distribution: extensive use of text-organizing markers; limited use of participant-oriented markers; and sparse use of evaluative markers.

In a very recent study, Akbas (2012) investigated metadiscourse in the abstract section of master theses across three groups: native speakers of Turkish, native speakers of English, and Turkish speakers of English in social sciences. Akbas (2012) tried to find out how the writers of these theses use metadiscourse markers and "whether student writers from a shared cultural background tend to use similar rhetorical features to those of their mother tongue or harmonize themselves with the language in which they are writing" (p. 12).Based on the metadiscourse taxonomy of Hyland and Tse (2004), he examined ninety randomly selected and comparable master dissertations in the social sciences (30 per group). The results of Akbas's study revealed a significant difference between the three groups of theses with regard to the number of occurrences of interactional metadiscourse markers in those theses. But in case of interactive markers the difference was not significant.

In spite of considerable importance of dissertations for the advanced university students, this genre is mostly ignored in the literature. Moreover, one of the most crucial aspects of every piece of writing, especially master's thesis genre is the use of metadiscourse markers as they help writers show themselves, talk to their audiences, persuade them, and in sum have negotiation with the readers of their texts. Analyzing the occurrences of metadiscourse markers in the three groups of theses in social sciences, this study tries to answer the following questions:

1- Are there any differences between native and Persian non-native speakers of English in the use of interactive/interactional metadiscourse markers in Discussion and Conclusion sections of master theses?

2- Are there any differences between native Persian speakers and native English speakers in the use of interactive/interactional metadiscourse markers in Discussion and Conclusion sections of master theses?

3- Are there any differences between native Persian speakers and Persian speakers writing in English in the use of interactive/interactional metadiscourse markers in Discussion and Conclusion sections of master theses?

4. Method

4.1 Materials

The corpora of the present study consist of Discussion and Conclusion section of 60 master's theses written by three groups of native English, native Persian, and nonnative English postgraduate students in the fields of TESOL, Sociology, and TEFL, respectively. TESOL and TEFL are subcategories of Applied Linguistics. According to Jalilifar (2011), sociology and Applied Linguistics are subcategories of humanities in soft sciences. So these three fields of study were selected because they were all in the same category of soft sciences. Besides, these theses had a similar format, i.e. they had a chapter named 'Discussion and Conclusion'. The native Persian and non-native English theses were selected from among the theses of one Iranian University, and the native English TESOL theses were chosen from the theses uploaded in Asian EFL Journal. An attempt was made to choose those theses whose authors were native speakers of English judged by the author's name and affiliation. Also, through email the researchers tried to contact them and ask about their mother tongues. And in this way, some more information about the writers of the native English theses was gathered. All the downloaded theses and sociology theses were also scanned to have the same format as the nonnative English theses i.e. they all had a chapter named 'Discussion and Conclusion". The dates of writing the master theses were limited to those inscribed during 2003-2011 with the assumption that in this period, all writers would have followed the latest norms of academic writing.

Therefore, this comparative study involved three corpora with the same number of theses. Corpus 1 consisted of Discussion and Conclusion sections of 20 native English theses in the field of TESOL. Corpus 2 consisted of Discussion and Conclusion sections of 20 native Persian master theses in the field of sociology and the third corpus consisted of Discussion and Conclusion sections of 20 nonnative English theses written in the field of TEFL.

4.2 Procedures

The Discussion and Conclusion sections of the texts were carefully read word by word in order to identify and locate the meta-discourse markers. In the stage of analysis, concerning the frequency and types of meta-discourse markers (MDs), the manual frequency count as opposed to the machine-supported strategies was used to have a record of the number of words and the specified MDs through the examined theses.

Since the size of the Discussion and Conclusion section in each group and across individual theses is inevitably unequal, following Crismore *et al.,*

(1993), to make the length of the texts consistent, it was decided to calculate the frequency of meta-discourse markers per 4,000 words of each text to ensure comparability of the results across the three groups. Following Crismore *et al*. (1993) and Hyland (1998a, 1998b, 1999, 2005), the present study considered the approximate number of words in each sample in order to reach an idea about how frequently meta-discourse markers were used in the texts.

The Discussion and Conclusion section of the texts were carefully read word by word with specific attention to the functions and meanings of the words in order to identify and locate the meta-discourse markers through the adopted model of Hyland and Tse (2004), which easily lent itself to the research purposes. All the data was analyzed twice by the researchers to avoid any mistakes in detecting and calculating the number of meta-discourse markers in the whole corpus. Therefore, this study used intra-rater reliability.

In order to find how the frequency of occurrence of the types of met-discourse markers is significantly relevant in the three samples, the one-way analysis of variance (ANOVA) statistical test for which the alpha value was set at 0.05 was employed. The significant rate of difference ($p<0.05$) would be indicative of the high intensity of variations across groups and hence, demanding more conscious attention in the scope of thesis writing. The assumptions of ANOVA, i.e. normal distribution and homogeneity of variance were also tested in this study, to check whether they are met or not. The result of test of normality shows that the value is not significant ($p > 0.05$) which emphasizes normality. Regarding the homogeneity of variances, the p value is significant but analysis of variance is reasonably robust to the violation of this assumption (Pallant, 2010). The dependent variable is the different kinds of meta-discourse markers and the independent variable is the native language of the writers in each of the three groups. In the process of data analysis in this study, the extent and quality of the use of meta-discourse markers (MDs) in Persian theses, English theses written by English natives and English theses by Persian writers/speakers have been examined separately.

5. Results

The results of the tagging and quantifying meta-discourse markers in the whole corpora which was done manually included three groups of theses: native English, native Persian, and nonnative English. It allowed us to investigate variations in meta-discourse practices across native/non-native written master theses. With regard to the research questions, the frequency of each group of meta-discourse markers appearing in the records of Persian

master theses as well as their English equivalents and nonnative English ones are represented in Tables 1 to 6, respectively. The appearance of MDs is examined through a focus on macro (interactive and interactional MDs) and micro (transitions, frame markers, endophoric markers, evidentials, code glosses, hedges, boosters, attitude markers, self mentions, and engagement markers) levels of analysis.

5.1 Met_adiscourse markers in English M.A. theses

Concerning the use of individual groups of metadiscourse markers, just four specific metadiscourse markers including *transitions*(30.8%), *hedges* (25.4%), *endophoric markers*(10.8%), and *self mentions* (5.8%) favored high frequencies among the others. In addition, as it is clear in Table 1, transitions are the most frequently used markers in Native English theses.

Table 1. Micro-level distribution of MDs across native english theses

MDs	Frequency	Percent
Transitions	2724	30.8
Code glosses	446	5.0
Endophoric Markers	953	10.8
Evidentials	476	5.3
Hedges	2250	25.4
Frame markers	408	4.7
Boosters	489	5.5
Engagement Markers	407	4.5
Self mentions	506	5.8
Attitude Markers	202	2.2
Total	8861	100.0

Boosters (5.5%), *evidentials* (5.3%), *code glosses* (5.0%), *frame markers* (4.7%), *engagement markers* (4.5%), and *attitude markers* (2.2%) are the other used markers from the high to the lowest frequencies.

Besides, as shown in Table 2, from a macro level point of view, interactive metadiscourse markers have the bigger figure of occurrences (56.5%) in the theses written by natives of English.

Table2. Macro-level distribution of MDs across native english theses

Macro level	Frequency	Percent
Interactive MDs	5007	56.5
Interactional MDs	3854	43.5
Total	8861	100.0

The higher frequency of interactive markers is due to the high frequency for its composing subfield of *transitions* (30.8%) at the micro-level of analysis.

5.2 Meta-discourse markers in Persian M.A. theses

As shown in Table 3, at the micro level in Persian master theses, distribution of MDs shows that *transitions* (42.5%)*, code glosses* (12.3%)*, and endophoric markers* (10.1%)have recorded the highest frequencies.

Meanwhile, *evidentials* (9.6%), *hedges* (8.7%), *frame markers* (5.0%), and both *boosters* and *engagement markers* with the same percent (4.1%) are among the other frequent MDs in the theses written by the Persian native writers.

Table 3. Micro-level distribution of MDs across native persian theses

MDs	Frequency	Percent
Transitions	2321	42.5
Code glosses	675	12.3
Endophoric Markers	553	10.1
Evidentials	528	9.6
Hedges	479	8.7
Frame markers	268	5.0
Boosters	223	4.1
Engagement Markers	223	4.1
Self mentions	146	2.6
Attitude Markers	47	1.0
Total	5463	100.0

At the same time, the above frequent records of micro-level MDs lead to the following macro categories of metadiscourse markers

Table 4. Macro-level distribution of MDs across native Persian theses

Macro level	Frequency	Percent
Interactive MDs	4345	79.5
Interactional MDs	1118	20.5
Total	5463	100.0

Not surprisingly, in the domain of Persian master's theses, interactive metadiscourse markers are found to occur most frequently (79.5%). This high record lies in the high frequency of its underlying MDs that is *transitions* (42.5%) and *code glosses* (12.3%).

5.3 Meta-discourse markers in non-native English theses

At the micro level, distribution of MDs in non-native master's theses reveals that *transitions* (27.1%) and *hedges* (21.8%) have the highest percentages. Besides, *code glosses* (13.9%), *endophoric markers* (9.7%), *evidential* (6.9%), *engagement markers* (6.8%), and *frame markers* (5.8%) are the other frequent markers in the non-native English writers' theses, respectively.

Table 5. Micro-level distribution of MDs across Non-native English theses

MDs	Frequency	Percent
Transitions	1509	27.1
Code glosses	771	13.9
Endophoric markers	538	9.7
Evidentials	383	6.9
Hedges	1212	21.8
Frame markers	321	5.8
Boosters	235	4.2
Engagement markers	381	6.8
Self mentions	136	2.4
Attitude markers	71	1.3
Total	5557	100.0

Following this micro-level account of the applied MDs, Table 6represents a record of the major categories.

Table 6. Macro-level distribution of MDs across Non-native English theses

Macro level	Frequency	Percent
Interactive MDs	3522	63.4
Interactional MDs	2035	36.6
Total	5557	100.0

Accordingly, in the case of master theses written by non-native English writers, similar records were found in that the same interactive MDs occurred more frequently (63.4%). Therefore, at the micro level, it is not surprising to see *transitions* (27.1%) as the most frequent MDs.

5.4 The extent of difference among Persian, English, and Non-native English master theses

Concerning the extent of difference in the use of metadiscourse markers, a series of one-way analysis of variance (ANOVA) were run to assess the significance of such differences among the three groups. The observed differences in each subcategory of metadiscourse markers are reported below.

5.4.1 Meta-discourse markers

To find out the differences in the distribution of the whole metadiscourse markers in the Discussion and Conclusion section of native English, native Persian and nonnative English theses, a test of one-way ANOVA was run. The significant effect of this ANOVA was $F (2, 19878) = 7709.9$; $p < 0.05$. Therefore, there is a significant difference between all these three groups. This shows that each group used different amounts of MDs in their texts. The actual difference in mean scores between the groups is quite large. The effect size, calculated using eta squared, is 0.4, which indicates a large effect size.

Post-hoc comparisons using the Tamhane test indicates a significant difference between native English and native Persian theses. Also, the difference between native English and non-native English theses is significant. In addition, the number of occurrences of metadiscourse markers in native Persian and non-native English theses is revealed to be significantly different.

5.4.2 Macro-level analysis (Interactional and Interactive MDs)

Another ANOVA was run to investigate the difference between the three groups in the use of interactional metadiscourse markers. The significant result of this ANOVA was $F (2, 19878) = 9750.2$; $p < 0.005$. The comparison between the three groups of master theses reveals that there is a statistically significant difference between native English, native Persian, and non-native English theses in the use of MDs.   The effect size, calculated using eta squared, is 0.4, showing that the mean scores of the three groups are largely different from each other. Post-hoc comparisons using the Tamhane test reveals a significant difference between all the three groups.

A separate test of ANOVA was run to assess whether these three groups of theses are different in the amount of occurrences of interactive metadiscourse markers. The significant effect of this ANOVA was $F (2, 19878) = 1616.9$; $p < 0.005$. The results indicate that there was a significant difference between these three groups. These results show that interactive metadiscourse markers were used differently by different groups of writers of master theses. The actual difference in mean scores between the groups is quite large. The effect size, calculated using eta squared, is 0.2. The Tamhane test in post-hoc comparisons revealed that native English category was different from native Persian and non-native English groups. Moreover, native Persian group acted differently from native English and non-native English groups. In addition, non-native group was significantly different from native English and native Persian groups of theses.

5.4.3 Micro-level analysis

Further ANOVAs were carried out, namely, one for each of the ten metadiscourse subtypes, investigating whether they were used differently by the three groups in their Discussion and Conclusion section. The results of these ANOVAs for the five subcategories of interactive MDs are presented below:

Transition*Group: $F (2, 19878) = 4521.8$; $p < 0.005$
Frame markers*Group: $F (2, 19878) = 471.6$; $p < 0.005$
Endophoric markers*Group: $F (2, 19878) = 2884.6$; $p < 0.005$
Evidentials*Group: $F (2. 19878) = 256.7$; $p < 0.005$
Code glosses*Group: $F (2, 19878) = 2659.4$; $p < 0.005$

As the above results clearly show, there was a statistically significant difference between the three groups of theses, respecting the use of *transition, frame markers, endophoric markers, evidentials,* and *code glosses.*

Since ANOVA is not itself enough to explain which group caused this significant difference, Tamhane, was separately run for each of the

interactive subtypes, to comprehend the stem of the significance. According to the results of the post-hoc comparisons, the mean scores of each of the three groups were significantly different from any other groups, showing a significant difference between native English and native Persian theses. Also, the difference between native English and non-native English theses was significant. The number of occurrences of each of the subgroup of interactive meta-discourse markers in native Persian and non-native English theses was significantly different. The effect sizes which were calculated by eta squared, revealed that the actual difference in mean scores for each of the subtypes of interactive markers between the groups was quite large.

An additional series of ANOVA tests were conducted to explore the difference in the use of subtypes of interactional MDs. The results of these tests appear below:

Hedges*Group: $F (2, 19878) = 12954.7$; $p < 0.005$

Boosters*Group: $F (2, 19878) = 2485.3$; $p < 0.005$

Attitude markers*Group: $F (2, 19878) = 2637.2$; $p < 0.005$

Engagement markers*Group: $F (2, 19878) = 751.1$; $p < 0.005$

Self mentions*Group: $F (2, 19878) = 1067.2$; $p < 0.005$

Similar to the subcategories of interactive meta-discourse markers, it is clearly seen from the ANOVA results that there was a statistically significant difference in the use of subtypes of interactional meta-discourse markers across groups. Here, also for each subtype of interactional markers Tamhane test was done. The result of these tests indicates a significant difference between all the three groups, i.e., native English category was different from native Persian and non-native English groups. Moreover, the native Persian group was different from native English and non-native English groups. In addition, the non-native group is significantly different from native English and native Persian groups of theses. The effect sizes, calculated using eta squared, for each of the subcategories of interactional markers showed a large difference in the mean scores among the groups.

The findings of the study are indicative of the fact that individual meta-discourse markers are employed by the writers with different degrees of occurrence. Results suggest a statistically significant difference between the use of major and individual MDs across native English, native Persian, and non-native theses.

6. Discussion

Responding to the first research question, the expectation was that the native writers would employ far more MDs than their non-native counterparts, because they are writing in their own language and might be more familiar with the norms and conventions of their rhetorical structure. The ANOVA tests' results ($p<0.05$) are indicative of the point that at both macro- and micro-levels there is a significant difference between these two groups of theses. This result confirms the findings of Marandi's (2003) study, in which she found that different groups (native Persian speakers, non-native English speakers, and native English speakers) use met-discourse markers differently in their theses. But the result rejects Burneikaitė's (2008) study. Her results showed that overall the difference between L1 and L2 M.A. theses in the frequency of meta-discourse use is insignificant. In comparing these findings to my own, however, we must bear in mind that none of the mentioned studies used the taxonomy of Hyland and Tse (2004); instead they developed their own frameworks. According to Tables 2 and 6, native English writers use much more meta-discourse markers in their theses than non-native English writers. This result might stem from the insufficient awareness of EFL learners of the role of the meta-discourse markers and the fact that they do not usually receive explicit instruction on these devices in Persian academic context. Another reason may be the differing tendencies in Persian and English academic contexts.

At the macro-level analysis, with regard to the first question, the two groups were different in the use of both interactive and interactional meta-discourse markers. That is, native English writers used more interactive and interactional MDs. This result confirms the result obtained in Akbas (2012), where native speakers of English texts included more interactive and interactional MDs. But one point of similarity between these two groups is that interactive MDs were more frequently used by both native and non-native writers of English than interactional MDs. Besides, at the micro-level, there was a significant difference in the occurrence of each of the individual MDs. A kind of similarity also exists between the two groups of theses; among the metadiscourse markers, *Transitions* and *hedges* constituted the highest percentages of interactive MDs across both native and non-native English theses.

To answer the second research question, the obtained results of the post-hoc comparison revealed that there was a statistically significant difference ($p<0.05$) among the two categories of native Persian and native English theses regarding the overall frequency of meta-discourse markers. Furthermore, respecting the macro-level, the two groups of native Persian and native English are significantly different in the use of interactive and

interactional MDs. The figures in Tables 2 and 4 are indicative of the point that native English writers use interactive and interactional MDs much more than native Persian writers. The reason lies in the differences that exist between the nature of Persian and English languages. Despite the existing differences, both groups of writers used interactive markers more than interactional ones, which is in contrast to the findings of Akbas (2012). This may be due to the nature of the L1. In Akbas' study L1 was Turkish but in the present study, L1 is Persian.

At the micro-level, the post-hoc comparison revealed that there was a significant difference between the two groups in the use of each of the individual meta-discourse markers. This is not in line with the result of the study done by Marandi (2003) as in that study, some and not all of the meta-discourse markers were used significantly differently by the groups. Although in the case of native English theses, *transitions* and *hedges* were the most frequently used markers, in the native Persian theses, *transitions* and *code glosses* were used most frequently among the other MDs. Akbas (2012) also found that *transitions* were the most common MDs across the groups.

Responding to the third research question, the results of the ANOVA test indicate a statistically significant difference (p<0.05) in the application of meta-discourse markers across the two groups of theses written by native Persian and non-native English writers. At the macro-level, the two groups are s- markers. The figures in Tables 4 and 6 show that non-native English writers used more interactive and interactional MDs than the native Persian writers. There is also a case of similarity in that both groups used interactive MDs more frequently than the interactional MDs.

At the micro-level, there was a significant difference in the occurrence of individual MDs. Although *transitions* and *code glosses* were the two most frequent MDs in the native Persian theses, non-native English writers used *transitions* and *hedges* more than the other MDs. Although the L1 of the two groups is the same, non-native English writers have utilized more MDs than native Persian writers. This indicates that non-native writers have been influenced by the style of the native English writers and maybe during their education they have learnt some of the techniques of writing in English.

7. Conclusion

In line with findings of Akbas (2012), the results of the three-way comparisons show that native English writers use more interaction as well as guidance through their texts compared with Persian writers. That is they use more interactive and interactional meta-discourse markers in their texts. The results of this study reveal that non-native English theses lie in between

native English and native Persian theses in the use of metadiscourse markers, which is consistent with the results of Marandi (2003) and Akbas (2012).Non-native English writers' use of MDs is not as high as native English writers or as low as native Persian writers. It can be argued that Persian writers of English theses produce their Discussion and Conclusion section "using a mixture of their cultural tendencies and an adaptation of themselves to the target language conventions" (Akbas, 2012, p.20). These findings confirm that Discussion and Conclusion section of master's theses in both L1 and L2 contexts include a relatively large number of MDs which can clearly promote the quality, credibility and legitimacy of the academic texts. Interestingly, the results reject the idea that meta-discourse devices are just marginal to the texts (Crismore & Farnsworth, 1990). Similar to native writers, EFL writers also try to establish their membership in academic discourse community by giving more importance to MDs.

The results of this study point to the culturally based distinct conventions. Regarding the two languages concerned, the selected English master theses outweighed their English counterparts, by capitalizing more on meta-discourse markers. Overalls, the findings support the idea that languages rely on specific use of MDs, making themselves understandable to their readership differently. Therefore, as Hyland and Tse (2004) mentioned:

> Meta-discourse is thus an aspect of language which provides a link between texts and disciplinary culture, helping to define the rhetorical context by revealing some of the expectations and understandings of the audience for whom a text was written. (p. 175)

The results prove to be helpful for teaching English writing to the foreign language learners. The use of meta-discourse markers as a determining indicator in the quality of the writers' theses remains deserving a special and long-term attention on the part of the researchers. A focus on such issues would doubtlessly motivate the use of MDs to improve the quality of the writing attempts. In the meantime, a closer look at the less frequently used MDs like self mentions, engagement markers, and attitude markers as well as paying attention to the cases of misuse of these markers can be helpful in maximizing their variety of use, and thus developing better English theses. Although teachers do not need to spend significant parts of their class time teaching the met-discourse markers, there is a need to make learners aware of these markers and their functions in the text. Language samples from prominent writing pieces uploaded in different websites can be used to highlight their appropriate use.

Application of meta-discourse markers in writing master theses is suggestive of their prominent role in the whole structure of such theses in both languages. Thus, teaching MDs in any writing areas, especially master's theses is quite useful. The findings of this research would help in keeping the practitioners aware of the rhetorical comparisons in the use of Persian and English MDs.

References

Ädel, A. (2006). *Metadsicourse in L1 and L2 English*. Amsterdam: John Benjamins.

Akbas, E. (2012). Exploring metadiscourse in master dissertation abstracts: Cultural and linguistic variations across postgraduate writers. *International Journal of Applied Linguistics & English Literature*,1(1), 12-26.

Burneikaité, N. (2008). Metadiscourse in linguistics master theses in English L1 and L2. *Kalbotrya*, 59(3), 38-47.

Burneikaité, N. (2009a). Endophoric marker in Linguistics master theses in English L1 & L2. *Man and the World*, 11(3), 11-16.

Burneikaité, N. (2009b). Metadiscourse connectors in linguistics MA theses in English L1 & L2. *Kalbotrya*, 61(3), 36-50.

Crismore, A. (1989). *Talking with readers: Metadiscourse as rhetorical act.* New York: Peter Lang.

Crismore, A. & Fransworth, R. (1990). Metadiscourse in popular and professional science discourse. In W. Nash (Ed.). *The writing scholar: Studies in academic   discourse* (pp. 118-136). Newbury   Park, CA: Sage.

Crismore, A., Markkanen, R. & Steffensen, M. S. (1993). Metadiscourse in persuasive writing: A study of texts written by American and Finnish university students. *Written Communication*, 10(1), 39-71.

Dafouz-Milne, E. (2008). The pragmatic role of textual and interpersonal metadiscourse markers in the construction and attainment of persuasion: Across-linguistic study of newspaper discourse. *Journal of Pragmatics*, 40, 95-113.

Farrokhi, F. & Ashrafi, S. (2009). Textual metadiscourse resources in research articles. *Journal of English Language Teaching and Learning*, 212, 39-75.

Hyland, K. (1998a). Exploring corporate rhetoric: Metadiscourse in the CEO's letter. *Journal of Business Communication*, 35(2), 224-245.

Hyland, K. (1998b). Persuasion and context: The pragmatics of academic metadiscourse. *Journal of Pragmatic*, 30, 437-455.

Hyland, K. (1999). Disciplinary discourses: Writer stance in research articles. In C. Candlin & K. Hyland (Eds.). *Writing: Texts, processes and   practice* (pp. 99-121). London: Longman.

Hyland, K. (2000). *Disciplinary discourse: Social interactions in academic writing.* Harlow UK: Longman.

Hyland, K. (2004). Disciplinary interactions: Metadiscourse in L2 postgraduate writing. *Journal Second Language Writing*, 13,   133-151.

Hyland, K. (2005). *Metadiscourse: exploring interaction in writing* (1ˢᵗEd.). New York: Continuum.

Hyland, K. & Tse, P. (2004). Metadiscourse in academic writing: A reappraisal. *Applied Linguistics*, 25(2), 156-177.

Jalilifar, A. R. (2011). World of attitudes in research article   discussion sections: A cross-linguistic perspective. *Journal of   Technology   of Education*, 5(3), 177-186.

Lautamatti, L. (1978). Observations on the development of the topic insimplified discourse. In V. Kohonen & N. Enkvist (Ed.). *Text Linguistics, Cognitive Learning and Language Teaching* (pp. 71-104). University of Turku, Finland: Turku, Finland.

Marandi, S. (2003). Metadiscourse in Persian/English master theses: A contrastive study. *Iranian Journal of Applied Linguistics*, 6(2), 23 42.

Pallant, J. (2010). *SPSS survival manual: A step by step guide to data analysis using SPSS.* Open University Press.

Swales, J. (1990). *Genre Analysis: English in Academic and Research Settings.* Cambridge: CUP.

VandeKopple, W. J. (1985). Some exploratory discourse on meta-discourse. *College Composition and Communication*, 36(1), 82-93.

Williams, J. (1981). *Style: Ten Lessons in Clarity and Grace*. Boston: Scott Foresman.

Zarei, G. R. & Mansoori, S. (2011). A contrastive study on meta-discourse elements used in humanities vs. non humanities across Persian and English. *English Language Teaching*, 4(1), 42-50.