

Metadiscourse in Research Article Abstracts: A Cross Lingual and Disciplinary Investigation

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Abstract

The present study is intended to investigate metadiscourse, as a way of talking about a specialized topic common to a specific discourse community, in 20 abstracts of Persian and English research articles in two disciplines, applied linguistics and Computer Engineering, based on Hyland (2005) taxonomy. The interlingual analysis revealed Persian's greater writer responsibility and its priority over guiding the reader through the text rather than involving him/her in the arguments. The interdisciplinary study of research articles abstracts showed generally the preference of this genre and specifically humanities trends towards providing the readers with convincing and comprehensive materials rather than engaging with them or expressing the writers' personality.

Keywords: metadiscourse, Persian, English, applied linguistics, computer engineering

INTRODUCTION

Metadiscourse is the linguistic references used to organize a discourse or the writers' stand towards either its content or the reader. With the judicious addition of metadiscourse, a writer is able to transform a dry and difficult text into a coherent and reader friendly prose and relate it to the given context and convey his or her personality, credibility, audience sensitivity and relationship to the message. Therefore, metadiscourse as a functional category can be understood in different ways ranging from punctuation such as scare quotes and exclamations, to whole clauses, and even sequences of several sentences (Hyland, 2000). If we suppose writing as a social and communicative engagement between writer and reader, metadiscourse focuses attention on the way writers venture themselves into their work to show their communicative intentions. As a central pragmatic construct, it allows us to see how writers seek to influence readers' understandings of both the text and their attitudes toward its content. It is likewise an open class to which new things can be added to fit the authors' needs (Hyland and Tse, 2004). Metadiscourse, as a vital rhetorical aspect of

scholarly class, has gotten huge consideration amid late years and is examined from various viewpoints, e.g., interlingually, intralingually, interdisciplinary and intradisciplinary (Zarei and Mansouri, 2011, 2012) and in various writings, e.g., thesis (Bunton, 1999), research articles (Hyland, 1999); (Koutsantoni, 2006); (Zarei and Mansouri, 2007) and book reviews (Tse and Hyland, 2009) as reaction to a superior comprehension of metadiscourse in scholastic writing.

As a recent illustration, Hyland (2004) inspected the purposes and dispersions of metadiscourse in a corpus of 240 doctoral dissertations and master's theses of six academic disciplines. His examination proposed how scholarly essayists use language to offer a tenable representation of themselves and their works in various fields, and in this way how metadiscourse can be seen as a method for revealing something of the logical and social uniqueness of disciplinary groups. He demonstrated that scholars utilized somewhat more interactive than interactional structures and that the hedges and transitions were by far the most regular gadgets generally, trailed by evidentials and engagement markers.

Additionally, Perez-Llantada (2003) made it clear that Hyland's (1998) scientific categorization of textual and interpersonal sorts of written metadiscourse systems in the scholastic discourse can be drawn closer from two concurrent viewpoints: cognitive theory and pragmatics. That is, textual metadiscourse concentrates on the handling of generation and procedures of discourse and interpersonal metadiscourse permits the audience to comprehend speakers' implications and presuppositions and also speaker's position while considering the social structure of the discourse demonstration. Different studies have concentrated on the interlingual examination of metadiscourse components.

Blagojevic (2004) did a contrastive investigation of scholarly articles written in English by English and Norwegian local speakers. The outcomes demonstrated that however there were a few contrasts in the way English and Norwegian scholars utilized metadiscourse, and sometimes showed certain inclinations, Norwegian metadiscoursal model did not vary significantly from that of English local speakers.

In another study, Dahl (2004) took a comparative approach and explored authors' appearance in three languages including English, French and Norwegian and in three disciplines. He inferred that the language variable was the most imperative one inside economics and linguistics where English and Norwegian indicated fundamentally the same patterns, utilizing a great deal more metatext than French, however inside medicine, every one of the three languages showed a uniform pattern of little metadiscourse.

In Iran, Marandi (2003) played out a contrastive investigation of the utilization of metadiscourse in Persian/English master theses over three gatherings: local (Iranian) speakers of Persian, non-local (Iranian) speakers of English, and local (English) speakers of English. Introductions and discussions of master theses were looked at for the sum and sorts of metadiscourse utilized taking into account a marginally reformed

scientific categorization of metadiscourse recommended by Crismore, et. al. (1993). She demonstrated that diverse gatherings utilized metadiscourse sorts in an unexpected way. more particularly, they utilized connectives, hedges, attributors, and persona markers uniquely in contrast to each other. Additionally, she inferred that local speakers of Persian utilized connectives the most, though local speakers of English utilized them the minimum. While local speakers of both Persian and English utilized more connectives as a part of their introductions than in their discussions, non-local speakers of English utilized less connectives as a part of their introductions than in their discussions.

Hu and Cao (2011) contemplated the utilization of hedges and boosters which are interactional metadiscourse components in the abstracts of applied linguistic research articles of Chinese-and English-medium diaries and uncovered that abstracts published distributed in English-medium diaries utilized a greater number of hedges than those distributed in Chinese-medium diaries and that abstracts of empirical research articles utilized essentially a bigger number of boosters than those of non-empirical scholarly articles. Textual investigations further uncovered that the different patterning of hedges and boosters in Chinese and English abstracts had a joint, intelligent impact on the authorial assurance and certainty passed on in them.

Ozdemir and Longo (2014) explored social varieties in the utilization of metadiscourse amongst Turkish and USA postgraduate students' abstracts in M.A thesis written in English. They uncovered that there were some social contrasts in the sums and kind of metadiscourse. The occurrence of evidential, endophoric, code glosses, boosters, attitude markers, self-mentions were less in Turkish students master thesis abstracts. However, Turkish students utilized metadiscourse transitions, frame markers and hedges more than USA students.

Lee and Casal (2014) concentrated on metadiscourse in results and discussion parts of English and Spanish thesis writers in engineering and demonstrated that there were critical cross-linguistic contrasts for general recurrence of metadiscourse and for most (sub-) classes. The investigation recommended that interpersonal components of writing were definitely connected to the particular lingua-social settings in which writings are created and devoured, even inside the same discipline and (part) genre. Ostensibly, scholarly written work is not a local language to anybody (Hyland, 2011); in any case, culturally diverse examinations of English and Spanish RAs, for example, have uncovered that L2 essayists' authorization of metadiscoursal components is strikingly not the same as first language(L1) writers of either language. (Lafuente, 2014; Perez-Llantada, 2010).

Andrusenko (2015) examined the utilization of hedges as a metadiscourse component in linguistics research articles of Spanish and Arabic and recommended that Spanish utilized hedges more than Arabic. Lee and Subtirelu (2015) explored the instructors' utilization of metadiscourse in EAP lessons and scholastic addresses and analyzed the impact of pedagogical substance and setting on educators' order of metadiscourse in the classroom. Discoveries of the comparative examination proposed that these parts of

instructing and learning impacted instructors' utilization of metadiscourse in critical ways. EAP educators appeared to be more worried with unequivocally framing the discourse basically to set up classroom errands and inciting more noteworthy student association and interest. Then again, college teachers' need lies in building up connections between thoughts in the unfurling contentions of lectures. However, for some metadiscoursal highlights, the constant spoken environment of the classroom seems to abrogate pedagogical concentration and approach. Here, we are going to break down the metadiscourse components use in edited compositions of exploration articles in two disciplines over the two languages.

THE STUDY

Promoted by the fact that metadiscourse is a specific means of facilitating communication and making relationship between the members of a particular discourse community, the present study was carried out to investigate the use of metadiscourse resources in Persian and English research articles abstracts. More specifically, the study tried to perform an interdisciplinary analysis between Applied linguistics and Computer engineering as two volunteers of humanities and non-humanities to reveal their differences in making use of rhetoric features.

Corpus

The corpus consisted of two disciplines (Applied Linguistics and Computer Engineering) and two languages (English and Persian). English was selected because it is used as an academic lingua franca for the international relationships nowadays, and academics are required to develop a good command of that language to function properly in the required contexts. Persian was selected because it is most probable that Iranians are subject to their first language interference, which may lead to the breakdown or misinterpretation of communication. The comparison and contrast of the two languages can help discover the problems with which Persian writers have to grapple to make themselves understandable to an international readership.

The disciplines, Applied Linguistics and Computer Engineering, were selected to represent two streams of the humanities and non-humanities, respectively. These two widely apart fields were supposed to represent the distinct trends of academic studies (humanities vs. non-humanities) so that we could possibly generalize the results to the two disciplines across the two languages on a broader level.

The abstracts were selected from well-known, refereed and recently published journals. In order to investigate different writings, hence balancing out the problem of idiosyncrasy and particularity of writers' styles, the abstracts were chosen randomly. Articles whose authors were a native speaker of English and Persian were selected for our study. In case of multiple authorship, at least one author was a native speaker or one of the members of academic staff in U.S or U.K for English articles and a native speaker of Persian for the Persian research articles. A great effort was made to select

the articles as diverse in subjects as possible to be able to increase the power of generalizability of the results.

RESULTS

To carry out the analysis, the words of 20 Persian and English abstract in the two disciplines were counted manually. It was interesting to find that the number of the words of Persian and English abstracts was accidentally quite equal (1600 words in each language) which makes their comparison easy. But the number of the words in each discipline, Applied Linguistics (1400 words) and Computer Engineering (1800) words, was not equal, therefore, the frequency of each metadiscourse element was calculated per 1000 words. Then, the metadiscourse elements were carefully separated and categorized based on Hyland (2005) taxonomy. There are some suggested models for metadiscourse analysis, Williams (1981); Vande Kopple (1985); Crismore, et. al. (1993); Hyland (1998); Marandi (2003); Hyland and Tse (2004), but the following (Table. 1) as the most recent one was selected.

Table 1. Hyland (2005) taxonomy of metadiscourse

1) <i>Interactive Resources</i> : They help to guide reader through the text:
a) Transitions (T) : They express semantic relation between main clauses. Examples: in addition, thus, but, and
b) Frame Markers (Fm) : They refer to discourse acts, sequences, or text stages. Examples: finally, to conclude, my purpose here is to
c) Endophoric Markers (En) : They refer to information in other parts of the text. Examples: noted above, see figure, in section
d) Evidential Markers (Ev) : They refer to sources of information from other texts. Examples: according to X/ (Y, 1990)/Z states
e) Code glosses (Co) : They help readers grasp functions of ideational material. Examples: namely, e.g., such as, in other words
2) <i>Interactional Resources</i> : They involve the reader in the argument:
a) Hedges (H) : They withhold writer's full commitment to proposition. Examples: might, perhaps, possible, about
b) Boosters (Bo) : They emphasize force or writer's certainty in proposition. Examples: in fact, definitely, it is clear that
c) Attitude Markers (Am) : They express writer's attitude to proposition. Examples: unfortunately, I agree, surprisingly
d) Engagement Markers (En) : They explicitly refer to or build relationship with reader. Examples: consider, note that, you can see that
e) Self-mentions (Sm) : They explicitly refer to authors. Examples: I, we, my, your

Table 2 depicts the results of metadiscourse components categorization according to the taxonomy adapted in two languages. We would be enabled by the table to compare two languages in terms of metadiscourse components application.

Table 2. Metadiscourse components in research article abstracts in each Language

L.g	No.wor	Metadiscourse												
		Interactive						Interactional						
		T	Fm	En	Ev	Co	Total	H	Bo	Am	Eng	Sm	Total	All
Persian	1600	80	20	2	--	15	117	2	10	2	----	2	16	133
English	1600	58	3	--	3	13	77	16	10	3	----	8	37	114
All	3200						194						53	247

The categorization of metadiscourse components in the branches is illustrated in Table 3. We can utilize the table to help us compare the disciplines in regard with metadiscourse components usage. For both disciplines, each element's occurrence, owing to unequal number of words, was computed per 1000 words.

Table 3: Metadiscourse in abstracts in each disciplines per 1000 words

Discipline	No.of words	Metadiscourse												
		Interactive						Interactional						
		T	Fm	En	Ev	Co	Total	H	Bo	Am	Eng	Sm	Total	All
Applied	1400	47	12	0.7	1	11	71	7.8	7.8	2	---	3	20	91
Computer	1800	39	2	0.5	0.5	6	52.5	3	5	1	---	2	11	63.5
All	3200						123.5						31	154

DISCUSSION

Metadiscourse studies can demonstrate the author's use of certain rhetorical constructions to engage and influence the readers in ways that confirm to discipline and language norms. The analysis of the total corpus shows that there are 247 metadiscourse elements in 3200 words in 20 research articles. That is, there was one metadiscourse element in each 12 words. This was almost one per 14 words for English corpus and one in almost 12 words for the Persian corpus. This finding revealed that academic texts are made up of a proportionally large number of metadiscourse elements. So, metadiscourse needs to be taken into account more seriously when an academic text aims at high standards of intelligibility and communication.

Further analysis of the two dimensions of metadiscourse as shown in Table 2 indicates that both languages used interactive resources more than the interactional ones. This proves the significance of both textual congruity over explicit interpersonal relation with audience and the importance of presentation of materials coherent and convincing over reader involvement in the argument in the research article genre. This table shows the writer responsibility feature of Persian with greater use of metadiscourse resources than English. While Persian and English both relied more on interactive resources than interactional one, Persian manages to overtake English in interactive part (117 vs. 77 respectively), but remains lower in the interactional elements (16 vs. 37 respectively). It demonstrates that Persian tends to go to greater lengths establishing coherence in the text. However, English remains slightly more faithful to the involvement of the reader in the text (more use of interactional resources), that is, the English writers are inclined to

have a closer association with the reader. Our results agree with Mauranen (2001: 53) who states that “texts are one of the main keys to understanding a culture. Texts as cultural products act out relevant social relationships within the culture”. Therefore, English is a representative of so-called writer-oriented or reader responsible in comparison with Persian. It is very important to notice that the reader or writer responsibility is a relative feature. In other words, a language may be writer responsible in comparison with one language and reader responsible with another one. For example, English is writer responsible in comparison with Japanese, Korean and Chinese. So, the Persian writers should take care in using less interactive metadiscourse features in writing English abstracts and more interactional ones to get the readers more involved and express more commitment to the propositions.

The cross lingual comparison of interactive elements also reveals greater following differences between the languages in research article abstracts according to Table 2.

1. English uses fewer transitions, frame markers and code glosses but more evidentials than Persian which reveals the following results:

- a) It can be postulated that English puts the responsibility of interpreting pragmatic connections between steps in an argument on the readers' shoulders because of the fewer use of transitions.
- b) English readers should also try more to get topic shifts and order and stages of the text more than Persian readers (because of the fewer use of frame markers).
- c) The Persian writers undertake to supply additional information by rephrasing, explaining or elaborating what has been said to ensure the reader is able to recognize the writers intended meaning more than the English ones by making more use of code glosses.
- d) English abstracts consist of more evidentials which shows English preference for documentation, reference to community based literature and presentation of important support for arguments.
- e) Persian uses slightly more endophoric markers, making reference to information in other parts of the texts easier for the readers.

According to this table, we can find more interesting cultural differences between these languages by comparing their use of interactional elements:

2. It is evident that English uses more hedges, attitude markers and self-mentions. The languages are equal in making use of boosters and none used engagement markers. The use of hedges helps the writers withhold complete commitment to a proposition and bring plausible reasoning to the certain knowledge, which is a noticeable feature of English in comparison with Persian. On the contrary, Persian takes the risk of closing down alternatives, heading off conflicting views and expressing certainty in what is said by greater use of boosters. It causes Persian's confronting alternatives with a single and confident voice, constructing rapport by making involvement with the topic and solidarity with the audience and taking a joint position against other voices much more than English. All of these are the result of Persian's not using any evidentials, few use of

hedges and frequent use of boosters. Greater use of attitude markers shows that English writers indicate affective attitudes more than the Persian. Their greater use of self-mentions also demonstrates that the English writers are more present in the text, they project an impression of themselves and how they stand in relation to their arguments, community and readers. The absence of Engagement markers suggests that there is no place for addressing the readers or engaging them as discourse participant in the abstracts on research articles.

The analysis of Table 3 makes the disciplinary-specific use of metadiscourse elements explicit. That is, there are differences between humanities and non-humanities in presenting their academic abstracts, which are as follows:

3. Actually, Applied Linguistics used metadiscourse elements more than Computer engineering and it used interactive elements more than the interactional ones.

Transitions, frame markers and code glosses are respectively the most frequent elements in humanities. Therefore, providing an organized and interpretable text and expressing text stages are very important there. Besides that, this discipline's writers use hedges and boosters to the same degree. It helps them to express their assurance of the qualitative or statistical probabilities provided in the abstracts of humanities.

4. Computer engineering as a stream of non-humanities follows the same arrangement in use of metadiscourse element use except that it uses code glosses more than frame markers (showing that helping readers get functions of ideational material is more important than expressing text stages) and uses boosters more than hedges. This frequent use of boosters showing writers certainty is usual because of the firm and reliable statistical ground established by non-humanities.

5. Evidentials, Engagement markers and self-mentions are not so frequent in abstracts of academic genre.

6. Humanities generally use more metadiscourse elements than non-humanities. The humanities use more transitions to make their quantificational analysis provided by hedges more convincing. They use more code glosses to help readers interpret the text based on the writers' objectives.

7. It uses both hedges and boosters more than non-humanities because they are dealing with less quantificational data for which providing a solid ground is possible only with the use of emphatics or boosters.

8. As it can be predicted, self-mentions and attitude markers are more visible in humanities because writers try to announce their presence and personal voice more than non-humanities.

9. The more use of interactional markers by Applied linguistics reflects the greater role that explicit personal interpretations play in the humanities where interpretations are typically more explicit and the criteria for establishing proof less reliable.

CONCLUSION

Although the number of abstracts analyzed here are so limited and the results should be dealt with cautiously, we can conclude that there are visible differences between languages and disciplines in making use of metadiscourse markers. The results make the cultural differences between the languages quite explicit. That is, the Persian prefer indicating the logical and temporal relationships between the parts of the text, removing the reader's possible uncertainties about the writer's intentions and thus facilitating the text comprehension to directing readers in how to take the author understanding, the author's perspectives or stance toward the content or structure of the primary discourse and the readers and bridging the author's relationship with the reader.

English writers' more use of interpersonal metadiscourse suggests that they prefer to express a perspective towards their propositional information and their readers more than the Persian. It shows that English writers prefer an evaluative form of discourse and they prefer to be individually defined. English writers use metadiscourse markers more to express writer's intimacy, remoteness, attitude, commitment to the propositions and degree of reader involvement because they use interpersonal elements more than the Persian. The comparison between the disciplines indicates differences between disciplines in making use of interactive (textual) and interactional (interpersonal) metadiscourse. It shows the more use of both interactive and interactional metadiscourse by Applied Linguistics. Because the humanities describe changeable realities and a comprehensible text is very important for them, they use metadiscourse elements more than the non-humanities. The humanities try more than the non-humanities to go beyond the ideational dimension of texts or characterize the world to the way functioning interpersonally and they offer a credible representation of themselves and their work and they acknowledge and negotiate social relations with readers more than the non-humanities.

Despite of all of the above-mentioned differences between the languages and disciplines in the abstracts of research articles, we can conclude that:

1. It is important for the writers to organize propositional information in ways that a projected target audience is likely to find the presented materials coherent and convincing.
2. It is important for the authors to assist the reader in coming to terms with the organization and content of the text.
3. Organizing discourse by pointing out topic shifts, connecting ideas or signaling sequences is more important for the authors than positioning themselves in academic discourse genre.
4. Providing a coherent and understandable text is more important than involving the readers and opening opportunities for them to contribute to the discourse.

Contrary to some other genres, the abstracts of research article genre seem to prefer providing convincing and organized propositional information to controlling the level of personality in a text, as the writer acknowledge and connect to others, pull along with their argument, focus readers' attention, accept their uncertainty and guide them to interpretations.

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