

**Research Article Introductions and Disciplinary Influences based
on Interactive Metadiscourse Markers**

Reza Abdi*

*Associate Professor in ELT Department, Faculty of Humanities
University of Mohaghegh Ardabili*

Parisa Ahmadi

ELT Instructor Payam Noor University, Ardabil Branch

Abstract

Metadiscourse refers to the evolving text, to the writer, and to the imagined readers of that text. It is based on a view of writing as a social engagement. This study draws on an interpersonal model of metadiscourse to examine disciplinary influences on the use of interactive metadiscourse in research article introductions. The study examined the distributions of interactive metadiscourse markers in a corpus of 120 RAs representing four academic disciplines. Physics and medicine were selected from hard discipline, applied linguistics and Economics were selected from soft science to shed some light on the ways academic writers deploy these resources to persuade readers in their own discourse community. No statistically significant difference was found in the use of interactive metadiscourse markers across disciplines. The findings suggest how academic writers use language to offer an accurate representation of their work in different fields, and how metadiscourse can be seen as a means of uncovering something of the rhetorical and social distinctiveness of disciplinary communities. The findings are attributable to the knowledge-knower structures characteristic of the disciplines and the epistemologies underlying the research paradigms. These findings might have implications for the teaching of academic writing and for novice writers who would like to publish their research in academic journals.

Key words: interactive metadiscourse markers, disciplinary influences, research article, introduction section

* Associate Professor in ELT ,ELT Department, Faculty of Humanities University of Mohaghegh Ardabili

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Email: *reabdi@uma.ac.ir*

1. Introduction

In the literature related to academic discourse, there are two perspectives. The first, and the traditional one, perceives it as a mere account of scientific facts expressed through an impersonal and objective piece of writing. Discourse comprises facts that solely add up to the truth. The second perspective, which is the most fashionable and widespread, sees academic discourse as a form of social engagement, involving interaction between readers and writers. Crismore and Farnsworth (1990), Hyland (2000, 2005), and Widdowson (1984) represent the second perspective. Widdowson (1984), for example, claims that academic genre, on the one hand, is like any other form of writing in requesting writers to consider the expected audience and anticipate their background knowledge, processing problems, and reaction to the text. The readers of an academic text, on the other hand, try to predict lines of thought, interrogate authors on their positions, and evaluate work for its usefulness and importance of their own research (Hyland, 1994).

According to Farrokhi and Ashrafi (2009), traditional academic writing has considered that researchers should be objective and have an impersonal style when reporting their studies. This thought mainly shows preferences and general tendencies in academic writing. According to Hyland and Hamp-Lyons (2002), academic discourse is the object of an interesting number of studies. A great many of these are pedagogically oriented, focusing on student needs and competencies. The proliferation of courses on academic discourse in general and English for academic purposes in particular has entailed increased research activity into what language and communication tools the students must acquire to become fully socialized into their research community. Researchers (Hoey, 2001; Hyland, 2005; Thetela, 1997) argue that interaction in written texts can be conducted in the same way as it is done in the spoken texts, though with different effects as a result of a different medium. This view has gradually reflected a perception of academic writing as social engagement, involving interaction between writers and readers. In such contexts, the process of gaining entry into these communities is seen as being dependent on awareness of, and competence in, the writing practices of the relevant discourse community. Another strand of research on academic discourse forms the basis for the first, namely that related to studies on how expert writers within a discourse community communicate with their peers. In many studies, the two aspects, i.e., investigation of professional communication practices among experts and pedagogical issues relevant for novice communicators, go hand in hand (typical contributions may be found in Hyland, 1999; Ventola & Mauranen, 1991).

2. Literature Review

In recent years, there has been a growing interest in the interactive and rhetorical character of academic writing, expanding the focus of study beyond the ideational dimension of texts, or how they characterise the world, to the ways they function interpersonally. Such a view argues that academic writers do not simply produce texts that plausibly represent an external reality, but use language to offer a credible representation of themselves and their work, and to acknowledge and negotiate social relations with readers. The ability of writers to evaluate their material, and acknowledge alternative views, is now recognized as a key feature of successful academic writing. This perspective, however, has been slow to enter studies of the research writing of advanced second language students, and this remains something of a neglected genre.

The research article (RA) is a genre where an orientation to readers is crucial in securing rhetorical objectives (Hyland, 2005). While it is often considered a predominantly propositional and impersonal genre, the act of accrediting knowledge is a social process and involves making linguistic choices which an audience will recognize as persuasive. If we view knowledge as “the social justification of belief” (Rorty, 1979), then it is clear that writers must consider the reactions of their expected audience, anticipating its background knowledge, processing problems, interests and interpersonal expectations. Simultaneously, readers are trying to predict lines of thought and interrogate authors from the perspective of their personal research goals (Bazerman, 1988). Thus, academic writers seek to produce texts that evoke specific responses in an active audience, both informing and persuading readers of the truth of their statements by seeking to “weave discourse into fabrics that others perceive as true” (Harris, 1991).

As mentioned in (Hyland, 2005), metadiscourse facilitates the social interactions which contribute to knowledge production within disciplines and, because disciplines are different, its use and meaning vary between disciplines.

According to Abdi (2011), persuasion, as part of the rhetorical structure of RAs, is partly achieved by employing metadiscourse. Metadiscourse is defined as self-reflective linguistic expressions referring to communication triangle; the evolving text, the writer(s), and the imagined readers of that text (Crismore, 1989; Hyland, 2004). It is based on a view of writing as a social engagement that reveals the ways the writers project themselves into their discourse to engage readers, signal their guiding and organizing attempts, commitments, and attitudes (Hyland & Tse, 2004).

According to Hyland (2005), the term metadiscourse goes back to the work of linguist Zellig Harris. Hyland describes metadiscourse as “the

linguistic resources used to organize a discourse or the writer's stance towards either its content or the reader" (Hyland & Tse, 2004). Crismore (1984) believes that the aim of metadiscourse is to "direct rather than inform the readers."

On the whole, metadiscourse is recognition of a belief that the use of language for communication is not just an attempt to transfer information and knowledge; rather, it is normally accompanied by organizational efforts, evaluations, feelings, reference to participants, etc. (Abdi, 2009).

In the metadiscourse literature, a number of taxonomies can be seen (Abdi *et al.*, 2010; Ädel, 2006; Crismore, 1989; Dafouz-Milne, 2008; Dahl, 2004; Hyland, 2005; Rahman, 2004; Vande Kopple, 1985, 2002). The taxonomies demonstrate theoretical fine-tuning as time goes on.

Hyland (2005) developed a new taxonomy which is summarized in Table 1. His model is based on a functional approach which regards metadiscourse as the ways writers refer to the text, the writer, or the reader. It acknowledges the contextual specificity of metadiscourse and, at a finer degree of delicacy, employs Thompson and Thetela's (1995) distinction between *interactive* and *interactional* resources to acknowledge the organizational and evaluative features of interaction (Hyland, 2005). The model proposed by Hyland (2005) assumes the two main categories of *interactive* and *interpersonal* for metadiscourse.

Table 1
An Interpersonal Model of Metadiscourse (Hyland, 2005)

<i>Category</i>	<i>Function</i>	<i>Examples</i>
<i>Interactive</i>	Help to guide the reader through the text	<i>Resources</i>
Transitions	express relations between main clauses	in addition; but; thus; and
Frame markers	refer to discourse acts, sequences or stages	finally; to conclude; my purpose is
Endophoric markers	refer to information in other parts of the text	noted above; see figure; in section 2
Evidentials	refer to information from other texts	according to X; Z states
Code glosses	elaborate propositional meaning	namely; e.g.; such as; in other words
<i>Interactional</i>	<i>Involve the reader in the text</i>	<i>Resources</i>
Hedges	withhold commitment and open dialogue	might; perhaps; possible; about
Boosters	emphasize certainty and close dialogue	in fact; definitely; it is clear that
Attitude markers	expresses writers' attitude to proposition	unfortunately; I agree; surprisingly
Self mentions	explicit reference to author(s)	I; we; my; me; our
Engagement markers	explicitly build relationship with reader	consider; note; you can see that

A more recent model was introduced by Abdi, Tavangar Rizi, and Tavakoli (2010). In this model, two maxims are added to complement the Gricean maxims (Table 2). Table 2 includes the two newly introduced MSs of collapsers and disclaimers and their maxims. Moreover, the interaction category is added to the already-existing categories of quantity, quality and manner to make the model appropriate to metadiscourse marking. The Overall orientation column acts as the supermaxims of the relevant categories. All in all, Table 2 represents the CP model hypothesized to be at work in the employment of metadiscourse.

Providing a framework for the use of MMs, this model shows a different theoretical conceptualization of metadiscourse. We include the model here to remind that notable different approaches are gradually gaining ground.

Although notable differences can be seen among the models, the significance of metadiscourse in written communication, as well as variations in different contexts, is demonstrated by several studies no matter what theoretical standpoint is supported (Ädel, 2006; Crismore, 1990; Hyland, 2004; Thompson, 2001). Nonetheless, the difference in the theoretical approaches could give rise to various pedagogical orientations.

Despite the fact that the study of the structure of RAs has developed into a significant field of research, however, until recently, little attention has been paid to the analysis of the most probably unique characteristic features of RAs of specific disciplines in academic discourse. Therefore, through analyzing metadiscourse strategies in English RAs, this study made an attempt to find the possible differences in the use of different metadiscourse strategies across disciplines, and the possible differences between subsections of RAs in the use of metadiscourse markers.

To refer to some related empirical studies, we would like to begin with Crismore, Markkanen, and Steffensen (1993), who investigated cultural and gender variations in the use of metadiscourse in the United States and Finland by asking whether U.S. and Finnish writers use the same number and types and whether gender makes any difference. The analyses revealed that students in both countries used all categories and subcategories, but that there were some cultural and gender differences in the frequencies and types. . Students in both countries used much more interpersonal than textual metadiscourse with Finnish males using the most and U.S. males the least. The study provided partial evidence for the universality of metadiscourse and suggested the need for more cross-cultural studies of its use and/or more attention to it in teaching composition.

Table 2
Abdi et al.'s CP-Based Metadiscourse Model (2010)

<i>Metadiscourse strategy</i>	<i>Maxims</i>	<i>Cooperation category</i>	<i>Overall orientation</i>
Endophoric markers	<ol style="list-style-type: none"> 1. Make your contribution as informative as is required. 2. Refer the audience to other parts of the text to avoid repetition. 3. When repetition is inevitable, acknowledge it to avoid inconvenience. 	Quantity	Avoiding prolixity to make the text manageable and friendly
Collapsers	Avoid undue repetition by using proper referents.		
Transitions	<ol style="list-style-type: none"> 1. Properly signpost the move through arguments. 2. Be perspicuous. 		
Frame markers	<ol style="list-style-type: none"> 1. Be orderly. 2. State your act explicitly. 	Manner	Clarifying steps and concepts to make the text comprehensible
Code glosses	<ol style="list-style-type: none"> 1. Avoid ambiguity. 2. Avoid obscurity of expression. 		
Evidentials	<ol style="list-style-type: none"> 1. Do not say that for which you lack adequate evidence. 2. Cite other members of the community to qualify your propositions. 		
Hedges	<ol style="list-style-type: none"> 1. Do not say what you believe to be false. 2. Do not say that for which you lack adequate evidence. 3. Mark if evidence is not enough. 4. Do not use hedges in widely accepted or supported propositions. 	Quality	Building on evidence to make the propositions tenable
Boosters	<ol style="list-style-type: none"> 1. Do not say what you believe to be false. 2. Do not say that for which you lack adequate evidence. 3. Mark if evidence is notable. 4. Do not use emphatics if evidence is not enough. 		

<i>Metadiscourse strategy</i>	<i>Maxims</i>	<i>Cooperation category</i>	<i>Overall orientation</i>
Disclaimers	<ol style="list-style-type: none"> Do not say that for which you lack adequate evidence. Outline the framework within which you would like your propositions to be interpreted. Explicitly distance yourself from untenable interpretations. 		
Attitude markers	Express your feelings or avoid them, according to norms and conventions.		
Self-mentions	Enter your text or sidewalk it, according to norms and conventions.	Interaction	Making people and feelings visible to promote rapport
Engagement markers	<ol style="list-style-type: none"> Draw the audience in or ignore them, according to norms and conventions. Give directions to your readers to follow when appropriate. 		

A corpus of 162 medical research articles published in different British and American journals between 1810 and 1995 were analyzed by Salager-Meyer (1999). The purpose of this study was to examine qualitatively and quantitatively the diachronic evolution of referential behavior in medical English written discourse. The diachronic evolution observed in the use and frequency of reference patterns over the 185 years reflected the conceptual shift from non-professionalized, privately and individually-based medicine to professionalized and specialized medicine, technology oriented medical research and a highly structured scientific community.

Abdi (2002) investigated a corpus of 55 academic RAs from social sciences and natural sciences. A comparison of the two disciplines was made, based on the use of interactional metadiscourse through "hedges", "emphatics" and "attitude markers". The analysis showed that the social science writers employed interpersonal metadiscourse more frequently than the natural sciences writers. One-to-one comparison further showed that they varied significantly in their use of hedges and attitude markers. However, the use of hedges and emphatics was significantly different within each discipline.

Hyland (2004) investigated the purposes and distributions of metadiscourse in a corpus of 240 doctoral and master's dissertations totaling

four million words written by Hong Kong students. The findings revealed how academic writers used language to offer an accurate representation of themselves and their work in different fields, and thus how metadiscourse could be seen as a means of uncovering something of the rhetorical and social distinctiveness of disciplinary communities.

Hyland and Tse (2004) investigated the frequencies, forms, and functions of evaluative in the two corpora of 465 abstracts from research articles, master, and doctoral dissertations written by L2 students. Comparing student and published use of the structure across six disciplines, they found that evaluative was widely employed in the abstracts and was an important means of providing author comment and evaluation. They also identified the similarities and differences in how these groups used the structure by exploring what the writers chose to evaluate, the stances they took, the sources they attributed the stance to, and how they expressed their evaluations.

Harwood (2005) analyzed a corpus of 40 articles from four disciplines: Physics, Economics, Computing Science, Business, and Management. He tried to investigate how academic writers used the personal pronouns *I* and *we* to help create a self-promotional tenor in their prose. The findings of the study indicated that even supposedly “author-evacuated” articles in the hard sciences can be seen to carry a self-promotional flavor with the help of personal pronouns.

Hyland (2005) investigated the strategies which writers use to represent their readers rather than themselves, using language to structure and negotiate relationship with their addressees. He analyzed a corpus of 64 project reports written by final year Hong Kong undergraduates together with transcripts of interviews with students. He explored how writers seek to explicitly establish the presence of their readers in this genre and to compare these with the practices of professional academics in research papers. He claimed that different purposes of the writers influence the construction of the reader in the text.

Since this study specifically intends to study interactive metadiscourse, across disciplines, we hope that it provides more insight into the nature of probably unique employment of such rhetorical devices, the results of which can be used in academic writing classes.

3. Method

3.1. Corpus

The three criteria of genre, ESP and text type were utilized for the selection of the corpus required for this study according to Paltridge (1994).

Many scholars such as Swales (1981, 1990), and Mauranen (1993), have argued that research articles can be taken as a genre. Therefore, research

articles were chosen to meet the first criterion. The research articles of this study were limited to the social sciences (SS) and the natural sciences (NS) to meet the second criterion: ESP. In order to select the disciplines, Becher's (1989) taxonomy of the disciplines was used to decide on the corpus content. Becher divides the academic disciplines into soft and hard fields. Becher (1989) uses soft science to refer to the humanities and social hard science to refer to natural sciences. The soft and hard fields then were further divided into pure and applied categories. Very broadly, the pure fields can be more reflective and theoretical, while the applied fields are objective and practical (Becher, 1989). It was decided that the corpus would consist of four different disciplines, one from each of Becher's categories. Therefore, the following disciplines represented the corpus. Chemistry and medicine were selected from hard science. Psychology and applied linguistics were the representative of soft science.

The Introductions can be considered as integral parts of research articles. On the other hand, Introductions are known to be problematic for most academic writers since getting started on a piece of academic writing is often regarded difficult. Swales (1990) in his CARS model for research article Introductions states that the main concerns of the Introduction section of a research article are to contextualize a research study being presented in the relevant literature, claim its novelty, and present main features of the study. In order to meet this end, the writers try to show the problem or gap by reviewing the previous works and emphasize the significance of their own work. According to Harwood (2005), the Introduction part constitutes "a vital part of packaging, designed to alert potential users, to persuade them that this is a valuable product, one that they cannot do without" (p. 14). Therefore, the study was further confined to Introduction (Int) section as a persuasive text type to meet the third criterion.

In the definitions of genre by Bazerman (1988) and Widdowson (1998), the time factor is also very important because, as mentioned in Abdi (2002), genres change, evolve and decay. To take care of the time factor, all texts for this purpose were chosen from among articles published in 2012 and 2013.

A total of 120 articles were randomly selected from among several hundred journals, 30 from each discipline. The selected RAs were obtained directly from the electronic versions of the relevant journals. Totally the corpus included 333,165 words.

3.2. Data Collection Procedure

After building the corpus, five subcategories of code glosses, endophorics, evidentials, frame markers and transition markers as classified by Hyland (2005) were selected, and their possible ambiguities and various functions

were taken into account. Linguistic realizations of metadiscourse strategies were recognized according to the criteria of the model before and while analyzing. The propositions containing interactive metadiscourse markers were identified functionally and manually throughout the corpus since there is a common belief among scholars that metadiscourse is inherently a fuzzy and a functional category and that the metadiscursive expressions can be multifunctional and context dependent (Ädel, 2006; Crismore, 1990; Crismore *et al.* 1993; Salager-Meyer, 1994, 1998). The number of IMMs in each category and in each part of the RAs was then counted and the relative frequency of them was calculated per 1,000 words.

Meanwhile, since single judgment was deemed to be inadequate for identifying IMMs, three colleagues reviewed the data and the results were averaged out to yield one more reliable set of data. It should be mentioned that in this study the disciplines were not investigated separately, rather groups of disciplines that are labeled as soft (social) and hard (natural) were compared.

4. Results and Discussion

Table 3 shows the distribution of IMMs in the Introduction section of RAs in both disciplines.

Table 3

The Distribution of IMMs in the Introduction Section of RA

<i>Discipline</i>		<i>Applied Linguistics</i>	<i>Economics</i>	<i>Total</i>
		<i>Int</i>	<i>Int</i>	<i>Int</i>
Soft	Total words	27860	31462	29661
	Total IMMs	2841	3315	3078
	Relative frequency	101.974	105.365	103.669
		<i>Physics</i>	<i>Medicine</i>	<i>Total</i>
Hard	Total words	16164	13351	14757
	Total IMMs	1999	1654	1826
	Relative frequency	123.669	123.885	123.777

The relative frequency of IMMs was calculated in the Introduction section of research articles in soft and hard disciplines.

To better illustrate these findings, the results of the total distribution of IMMs in the Introduction section of RA in soft and hard disciplines are shown in Figure 1.

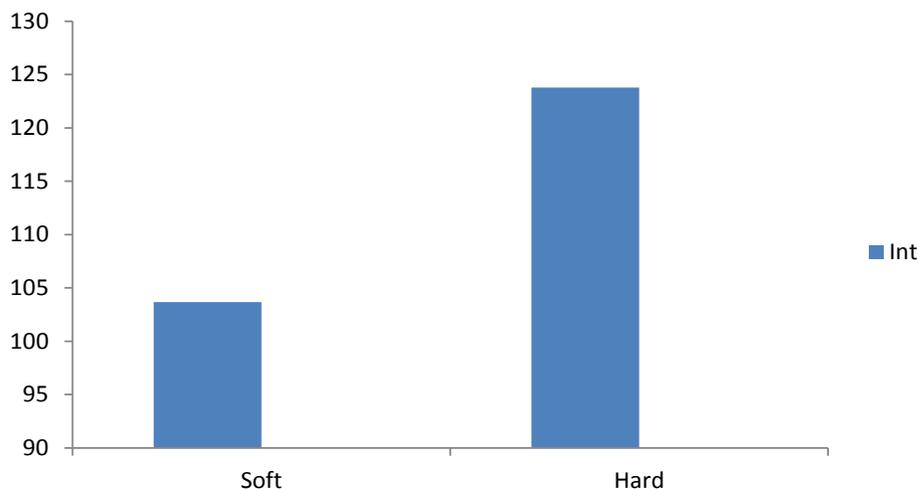


Figure 1. The total distribution of IMM markers in the Introduction section in soft and hard disciplines

As evident from the analysis of data, the Int section of RAs in hard science had a significantly high number of IMM markers. The identical and notable use of signposting markers among other discursive options suggested that writers in both disciplines consider Int as a major site for convincing the readership about the gap. As claimed by Thompson (2001) and Swales (2001), academic language across the genres and disciplines is heavily signaled and signposted to live up to convincing quality.

The frequency of markers in the Int section in the hard disciplines was apparently higher (123.777) compared to the soft ones (103.669). The results of analysis indicated that there are no significant differences in the distribution of IMM markers in the introduction section of RA in the two sciences.

In both disciplines, the Int section of RAs generally had a large number of IMM markers. This similarity suggested that writers in both disciplines consider Int as a major section for establishing the purpose of articles.

As a result, we can say that IMM markers are vital rhetorical devices (Abdi, *et al.*, 2010) with a variety of functions central to coherence and organization of the RAs. The results also reveal that writers of RAs in both disciplines are apparently equally aware of the importance and contribution of such markers in RAs. As it is evident in Jalilifar and Shooshtari (2011), we can say that while it was true that rhetorical decisions may sometimes reflect either conscious choices or unreflective practices, the analysis of metadiscourse patterns indicated that effective argument involves a community-oriented deployment of appropriate linguistic resources to represent signposting, organization, and the expectancy rhetoric.

Guba and Lincoln (1994) believe that the property of being *academic* entails a multitude of generally respected rhetorical conventions among all academia which happens to obscure the so called positivist distinction between soft and hard sciences. According to (Dörnyei, 2007) the recent pragmatic research paradigm could be conceived as playing a role in ironing out the already staunch and opposing positions.

5. Conclusion and Implications

Lack of familiarity with these resources (IMMs) of academic discourse may cause difficulties for those students, teachers, and researchers who want to be considered as a member of disciplinary community. According to (Dafouz-Milne, 2008), the awareness of IMMs provides this opportunity for learners to meet the needs of the audience. Therefore, it seems necessary to devote special attention to the foreign language learners of English in the research or ESP course. Our understanding of IMMs also needs to be sharpened by doing further research in this area of rhetorical competence.

This study has pedagogical implications for teachers, writers, students, syllabus designers, teacher educators and researchers. The findings of this study provide writers with knowledge of appropriate language forms and shift writing instruction from the implicit and exploratory to a conscious manipulation of language and choice.

With extensive support for consciousness raising activities in adults' language learning (Myles, 2002; Svalberg, 2007), this study could also motivate the tendency to change the implicit instruction to a conscious manipulation of rhetorical structure.

This study attempted to shed light on the complex process of academic research articles format and, although it investigated academic English in research articles, similar research could be carried out in any genre. Given the wide variety of language groups in many nations around the world, it is my hope that the findings will inspire further research and discussion on the most effective ways to educate all students in diverse settings.

References

- Abdi, R. (2002). Interpersonal metadiscourse: An indicator of interaction and identity. *Discourse Studies*, 4(2), 139-145.
- Abdi, R. (2009). Projecting cultural identity through metadiscourse marking: A comparison of Persian and English research articles. *Journal of English Language Teaching and Learning*, 52(212), 1-15.

- Abdi, R. (2011). Metadiscourse strategies in research articles; A study of the differences across subsections. *Journal of Teaching Language Skills*, 3(1), 1-16.
- Abdi, R., Tavangar Rizi, M., & Tavakoli, M. (2010). The cooperative principle in discourse communities and genres: A framework for the use of metadiscourse. *Journal of Pragmatics*, 42, 1669-1679.
- Ädel, A. (2006). *Metadiscourse in L1 and L2 English*. Philadelphia: John Benjamins.
- Bazerman, C. (1988). *Shaping written knowledge: The genre and activity of the experimental article in science*. Madison: University of Wisconsin Press.
- Becher, T. (1989). *Academic tribes and territories: Intellectual enquiry and the cultures of disciplines*. Milton Keynes: The Society for Research into Higher Education and Open University Press.
- Crismore, A. (1984). The rhetoric of textbooks: Metadiscourse. *Journal of Curriculum Studies*, 16(3), 279-296.
- Crismore, A. (1989). *Talking with readers: Metadiscourse as rhetorical act*. New York: Peter Lang Publishers.
- Crismore, A., & Farnsworth, R. (1990). Metadiscourse in popular and professional science discourse. In W. Nash (Ed.), *The Writing scholar: Studies in academic discourse* (pp. 36-118). Newbury Park, CA: Sage.
- Crismore, A., Markkanen, R., & Steffensen, M. (1993). Metadiscourse in persuasive writing: A study of texts written by American and Finnish university students. *Written Communication*, 10, 39-71.
- Dafouz-Milne, E. (2008). The pragmatic role of textual and interpersonal metadiscourse markers in the construction and attainment of persuasion: A cross-linguistic study of newspaper discourse. *Journal of Pragmatics*, 40(1), 95-113.
- Dörnyei, Z. (2007). *Research methods in applied linguistics: Quantitative, qualitative and mixed methodologies*. Oxford: Oxford University Press.
- Farrokhi, F., & Ashrafi, S. (2009). Textual metadiscourse resources in research articles. *Journal of English Language Teaching and Learning*, 52, 39-75.
- Guba, E. G., & Lincoln, Y. S. (1994). Competing paradigms in qualitative research. In N. K. Denzin, & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (pp. 105-117). Thousand Oaks, CA: Sage Publications.
- Harris, R. A. (1991). Rhetoric of science. *College English*, 53(3), 282-307.
- Harwood, N. (2005). Nowhere has anyone attempted... In this article I aim to do just that: A corpus based study of self-promotional *I* and *we* in

- academic writing across four disciplines. *Journal of Pragmatics*, 37, 1207-1231.
- Hoey, M. (2001). *Textual interaction: An introduction to written discourse analysis*. London: Routledge.
- Hyland, K., (1994). Hedging in academic writing and EAP textbooks. *English for Specific Purposes*, 13(3), 124-157
- Hyland, K., (1999). Talking to students: Metadiscourse in introductory coursebooks. *English for Specific Purposes*, 18(1), 3-26.
- Hyland, K. (2000). *Disciplinary discourses: Social interactions in academic writing*. London: Pearson.
- Hyland, K. (2004). Disciplinary interactions: Metadiscourse in L2 postgraduate writing. *Journal of Second Language Writing*, 13(2), 133-151.
- Hyland, K. (2005). *Metadiscourse: Exploring interaction in writing*. London: Continuum.
- Hyland, K., & Hamp-Lyons, L. (2002). EAP: Issues and directions. *Journal of English for Academic Purposes* 1, 1-12.
- Hyland, K., & Tse, P. (2004). Metadiscourse in academic writing: A reappraisal. *Applied Linguistics*, 25(2), 156-177.
- Jalilifar, A. R., & Shooshtari, Z. G. (2011). Metadiscourse awareness and ESAP comprehension. *Journal of College Reading and Learning*, 41(2), xx-xx.
- Mauranen, A. (1993). Contrastive ESP rhetoric: Metatext in Finnish-English Economics texts. *English for Specific Purposes*, 12, 3-22.
- Myles, J. (2002) Second language writing and research: The writing process and error analysis in student texts. *TESL-EJ: Teaching English as a Second or Foreign Language* 6(2), 1-20.
- Paltridge, B. (1994). Genre analysis and the identification of textual boundaries. *Applied Linguistics*, 15(3), 288-299.
- Rahman, M. (2004). Aiding the reader: The use of metalinguistic devices in scientific discourse. *Nottingham Linguistic Circular*, 18, 30-48.
- Rorty, R. (1979). *Philosophy and the mirror of nature*. Princeton: Princeton University Press.
- Salager-Meyer, F. (1994). Hedges and textual communicative function in medical English written discourse. *Journal of English for Specific Purposes*, 13, 149-179.
- Salager-Meyer, F. (1998). Language is not a physical object. *Journal of English for Specific Purposes*, 17(3), 295-302.
- Salager-Meyer, F. (1999). Referential behavior in scientific writing: A diachronic study. *English for Specific Purposes*, 18(2), 279-305.
- Svalberg, A. M-L. (2007). Language awareness and language learning. *Language Teaching*, 40(4), 287-308.

- Swales, J. (1990). *Genre analysis: English for specific purpose in academic and research setting*. New York: Cambridge University Press.
- Swales, J. (2001). Metatalk in American Academic Talk. *Journal of English Linguistics* 29, 34-54.
- Thetela, P. (1997). Evaluated entities and parameters of value in academic research articles. *English for Specific Purposes*, 16(2), 101-118.
- Thompson, G. (2001). Interaction in academic writing: Learning to argue with the reader. *Applied Linguistics*, 22(1), 58-78.
- Thompson, G., & Thetela, P. (1995). The sound of one hand clapping: The management of Interaction in written discourse. *TEXT*, 15(1), 103-127.
- Vande Kopple, W. J. (1985). Some explanatory discourse on metadiscourse. *College Composition and Communication*, 36, 82-93.
- Vande Kopple, W. J. (2002). Metadiscourse, discourse, and issues in composition and rhetoric. In F. Barton, & C. Stygall (Eds.), *Discourse studies in composition*, (pp. 91-113). Cresskill, NJ: Hampton Press.
- Ventola, E., & Mauranen, A. (1991). 'Non-native writing and native revisiting of scientific articles'. In E. Ventola (Ed.), *Functional and systemic linguistics* (pp. 475-492). Berlin: Mouton de Gruyter
- Widdowson, H. G. (1984). *Explorations in applied linguistics*. Oxford: Oxford University Press.
- Widdowson, H. G. (1998). Communication and community: the pragmatics of ESP. *Journal of English for Specific Purposes*, 17(1), 3-11.