An analysis of interactive and interactional strategies in Conclusions and Discussion sections in Masters Theses

Eva M. Mestre-Mestre
Universitat Politècnica de València
Camino de Vera, s/n
46022 Valencia
E-mail: evamestre@upvnet.upv.es

AN ANALYSIS OF INTERACTIVE AND INTERACTIONAL STRATEGIES IN CONCLUSIONS AND DISCUSSION SECTIONS IN MASTERS THESES

ANÁLISIS DE LAS ESTRATEGIAS TEXTUALES E INTERPERSONALES EN LAS SECCIONES DE CONCLUSIONES Y DISCUSIÓN EN TESIS DE MÁSTER

ANALYSE DES STRATÉGIES INTERACTIVES ET INTERACTIONNELLES DANS LES SECTIONS DISCUSSION ET CONCLUSION DES MÉMOIRES DE MASTER

ABSTRACT: Significant amount of literature has been dedicated to study academic and scientific writing. Prolific work has studied specific sections of Research Articles (RA) (Dudley-Evans, 1994; Parkinson, 2011). Complementary to this, some studies look into variation between Native (NE) and Non-Native (NNE) English speaking writers. Of interest are also studies exploring academic writing other than RA, as postgraduate writings (Hyland 2004), or comparing RAs to students' writings. The present work analyses the strategies used in the Conclusions and Discussion sections of Masters Theses (MTs) written by students based on the Metadiscourse Markers (MDM) (Hyland, 2005) they use in them. For the study, a corpus of 30 dissertations written in English (15 by NNE and 15 by NE) is compared. Noticeable NE/NNE differences have been found in the use of MDM. Some conclusions are these differences must be addressed when teaching academic writing.

RESUMEN: El estudio de la escritura académica y científica ha suscitado un gran interés en los últimos años, como demuestra el prolífico trabajo dedicado a estudiar algunas secciones de los Artículos Científicos (AC) (Dudley-Evans, 1994; Parkinson, 2011). También se ha observado las diferencias entre autores nativos ingleses (NE) y aquellos no nativos (NNE). El interés se ha extendido a otros tipos de escritura académica, como los trabajos de postgrado (Hyland 2004). Este trabajo analiza las estrategias utilizadas en las secciones de Conclusión y Discusión de las Tesis de Máster (TM) escritas por estudiantes a partir de los marcadores metadiscursivos (MMD) (Hyland, 2005) que aparecen en ellas. Se comparan trabajos escritos por estudiantes en un corpus de 30 TM escritas en inglés (15 NNE y 15 NE). Se observan diferencias significativas en el uso de los MMD. Entre las conclusiones se menciona su interés para la enseñanza de la escritura académica.

RÉSUMÉ: Ces derniers temps, l'étude de l'écriture académique et scientifique a suscité un grand intérêt comme le montrent les multiples travaux consacrés à l'analyse de certaines sections d'articles scientifiques (Dudley-Evans, 1994; Parkinson, 2011). Des différences entre les auteurs natifs anglais (NA) et les non-natifs (NNA) y ont été également observées. L'intérêt dans ce domaine s'est étendu à d'autres types d'écriture académique comme les travaux de recherche des 2e et 3e cycles universitaires (Hyland, 2004). Ce travail analyse les stratégies utilisées par les étudiants dans les sections Discussion et Conclusion de leur mémoire de master (MM) à partir des marqueurs métadiscursifs (MMD) qu'ils emploient (Hyland, 2005). Il rassemble un corpus de 30 MM écrits en anglais (15 par des NA et 15 par des NNA) et les compare. Cette étude met en lumière des différences significatives dans l'utilisation des MMD et souligne, en conclusion, leur importance pour la didactique de l'écriture académique.

SUMMARY: 1. Introduction. 2. Methodology. 3. Results. 4. Conclusions and discussion.

SUMARIO: 1. Introducción. 2. Metodología. 3. Resultados. 4. Conclusiones y discusión.

SOMMAIRE: 1. Introduction. 2. Méthodologie. 3. Résultats. 4. Conclusions et discussion.

An analysis of interactive and interactional strategies in Conclusions and Discussion sections in Masters Theses

Eva M. Mestre-Mestre

1. INTRODUCTION

In recent years, a significant amount of literature has been dedicated to study academic and scientific writing. In particular, after Swales' 1990 CARS model, Research Articles (RA) viewed as a genre have been studied as a paradigm of academic production (Hyland, 2001; Loi & Sweetnam Evans, 2010; Parkinson, 2011; Del Saz-Rubio, 2011). Taking the structure as a starting point, prolific work has been dedicated to study some particular sections of those writings, as for instance introductions (Swales, 1990, 2004; Dudley-Evans, 1986; Del Saz-Rubio, 2011), methods (Lim, 2006; Bruce, 2008), or discussion sections (Dudley-Evans, 1994; Holmes, 1997; Peacock, 2002; Soler-Monreal & Gil-Salom, 2010), discussions and conclusions (Yang & Allison, 2003; Parkinson, 2011; Soler-Monreal, 2016).

As a complement to this, of significance are studies related to academic writing other than RA. In this sense, many studies are dedicated to students' research writings (Lim, 2010), or other postgraduate writings (Hyland 2004, Coskun et al., 2013). Other studies compare RAs to undergraduate or graduate writings, in order to establish whether students structure their papers as researchers do, or whether they use different strategies (Mestre-Mestre & Carrió Pastor, 2012) and which mistakes they might incur into.

And, furthermore, many studies approach the variances in the use of some aspects of the written discourse between Native English speakers (NE) and Non-Native English speakers (NNE) of the English language, in order to trace where and how these differences appear. These analyses can be used to look into deficiencies in the pragmatic acquisition of the second language. A remarkable example of differences in use can be seen, for instance, when studying Discourse Markers (DM) (Romero-Trillo (2002), Iglesias Moreno (2001)) or Metadiscourse Markers (MDM) (Del Saz-Rubio, 2011). In all such cases, it seems that further instruction is necessary in order to attain pragmatic proficiency.

Taking all these perspectives into account, the objectives of this paper are first to look into metadiscourse strategies used by university students in academic writings. In particular, the sections analysed are the Conclusions and Discussion sections of Masters Dissertations written by students. These sections have been chosen to examine student production because they are particularly delicate; they offer a general perspective of the work graduates have carried out and in them future lines of research are proposed. Secondly, to compare the writings depending on whether they were written by

NE students or by NNE students in order to find out whether there are significant dissimilarities between them, and how can these be classified and considered with pedagogic or other pragmatic purposes.

For the study, a corpus of 30 dissertations written in English (15 dissertations written by NNE and 15 written by NE) is analysed using Hyland's proposal for and interpersonal metadiscourse model. In particular, focus is set on Swales' 2004 Move 3; where the presentation and discussion of the results and the proposals for further work are presented. As a result, some NE/NNE differences were found in the moves and move cycles used by the students. Based on these results, some of the conclusions are that the findings have relevance for the teaching of research writing, as there exists great discrepancy in the texts, possibly due to different educational and research cultures.

1.1. ACADEMIC WRITING

Generally speaking, scientific texts have their own unique form of expression, as has been widely explained in literature (Bazerman, (1988); Crismore, (1989); Hartley, (2008); Hunston & Thompson, (2000); Hyland, (1999); Swales, (1990)). To mention the most recurrent features used to describe it, I will just mention (1) impersonal, objective language, (2) third party expression, (3) passive-structured times, (4) complex concepts, (5) various notes and reference systems or simple, understandable and objective expression. These characteristics make scientific texts easily recognisable: equally terms and structures shape a sort of concept map in which proficient readers jump from one known concept to the next. Because of this, experienced readers can follow the path of common places, and move from one part to the next; they can foresee what is ahead, because texts follow predictable structures and conventions. Due to all this, unless a text is perceived as part of that scientific-academic genre, it is not included as scientifically reliable. Scientific texts must not only be structured and written for their identification as knowledge, but also for knowledge dissemination. This is a premise that the researcher must know and comply with.

As one of the most productive genres, many linguists have dedicated their efforts to exclusively analyse Research Articles (RA). In this case, studies have investigated some explicit aspects in them, as for instance the discourse structure of specific sections within the RA, which are expected to be found in such papers: abstracts (Hyland, 2000; Melander, Swales, & Frederickson, 1988; Salager-Meyer, 1990, 1992; Samraj, 2005), introduction: Swales 1981, 1990; Swales & Najjar, 1987; Cooper ,1985; Crookes, 1986; Taylor & Chen, 1991), methods and results section (Conduit & Modesto, 1990; Thompson, 1993), results section: Brett, 1994; Thompson, 1993; Williams, 1999), discussion section (Hopkins & Dudley-Evans, 1988; Yang & Allison, 2003). Other scientists have focused on patterns of use of linguistic features or lexical and grammatical features, such as tense choice (Martínez,

2001), transitivity structures (Martínez, 2001), citation practices (Hyland, 1999), discourse markers (Romero-Trillo 2002a), metadiscoursal elements (Del Saz Rubio, 2011) or sentence connectors (Carrió Pastor, 2013).

1.2. MASTER'S THESIS

As has been seen, literature is prolific when analysing RAs. However, few studies have focused on the structure of Master's Theses. Several reasons can explain this, as MTs are usually documents of restricted access, and their scientific impact is lower. Also, it must be mentioned that they are written by graduate students, who frequently take them as a sort of class exercises, their guided and tutored final assessment, and not by consecrated researchers who seek the publishing and dissemination of their work. Thus, the studies found related to this matter are usually aimed to create relevant EAP material for master's students.

Other approaches include the organisation of certain parts of the texts, such as introductions and discussion sections (Dudley-Evans, 1986), or conclusions (Hewings, 1993). However, most of these analyses focus on texts from single disciplines produced in Britain, or have used relatively small corpora. For instance, Paltridge (2002) studied the overall organisation of 30 Master's and PhD theses, in which an examination across disciplines was carried out. Indeed, the consideration of disciplinary variation has been a source of interest in recent research, (Prior, 1998; Samraj, 2000, 2002), as an interesting approach to add information and perspective to the different proposals researchers make to share their results, within the wide and varied scientific realm. Thus, variances in the introductions or the particular structure of MTs are for instance analysed, and it appears obvious that some disciplines, such as natural sciences, use more traditional approaches than, for instance, philosophy, or other social sciences.

1.3. RA VS MT. GREATEST VARIATIONS

Because of this, following Hyland (2000), published texts are the most tangible insight of the social practices of academic writing. However, student-produced texts do not completely embody the discursive practices of the disciplines. Always according to Samraj (2000, 2002), the main differences between texts written by students (MT) and research articles written by scientists are a) intertextual links, and b) first person use. With regards to intertextual links, these seem to vary along disciplinary fields, although all authors use them in their attempt for their papers to fit in existing discussions of any sort of interest in that particular field at the moment of publication. Thus, an author's contribution is presented as relevant to the research questions pursued by other researchers in that disciplinary field, and not as something isolated from it.

To prove both consistency and substance, the use of references to previous research is expected as an integral part of this rhetorical function of introductions to a greater extent in MTs than in RAs. Also, regarding the use of the first person, RA use first person pronouns for authorial presence (Hyland, 2001) to state the objectives, to outline procedures and to make a knowledge claim (Harwood, 2005; Hyland, 2001), whereas undergraduate writers present much lesser use of first person pronoun. Also, they use it for a narrower range of functions. This can be due to the fact that MT students are not often extremely familiarised with the epistemological practices of their individual disciplines (Hyland, 2002), and are reluctant to create a strong authorial presence (Tang & John, 1999).

1.4. METADISCOURSE MARKERS (MDM)

The analysis of the Discussion and Results sections in MTs has been based on the MDM students used in their texts, as they explicitly refer to the organisation of the discourse or the writer's stance towards its content or the reader (Hyland, 2000:109). Based on the early identification of metadiscourse with Halliday's communicative functions (Halliday, 1994); ideational, interpersonal and textual, it seems that the most recent approaches consider only the two latter, that is, the interpersonal (use of language for interaction allowing us to engage with others), and the textual (use of language to organise the text itself). Thus, the term MDM is quite broad and includes a set of characteristics which include the non-propositional aspects of discourse which can be found in a text and help to organise it coherently and also express the writer's character, reader sensitivity and relationship to the message that is being communicated (Crismore et al., 1993). Thus, these markers are the author's linguistic and rhetorical manifestation in the text, and are used to support the discourse organisation and expressive implications (Schiffrin, 1980). In that sense, they are linguistic devices writers employ to shape their arguments to the needs and expectations of their target readers, and the way a writer helps readers to connect, organise, and interpret material (Halliday, 1994).

In this study, I have chosen the model proposed by Hyland in 2005 to deal with the metadiscoursal functions in the text, which he classifies as interactive and interactional resources. In Table 1 can be seen the specific categories and functions for each that he suggested, as well as some examples.

Table 1		
An interpersonal model of metadiscourse (Hyland, 2005, p.49)		
Category	Function	Examples
Interactive	Help to guide the reader through the text	Resources
Transitions	Express relations between main clauses	In addition; but; thus; and
Frame markers	Refer to discourse acts, sequences or	Finally; to conclude; my purpose
Endophoric markers	stages	is
		Noted above; see Fig.; in Section 1

Evidentials	Refer to information in other parts of the text	According to X; Z states
Code glosses		Namely; e.g.; such as; in other words
	Refer to information from other texts	
	Elaborate propositional meaning	
Interactional	Involve the reader tin the text	Resources
Hedges	Withhold commitment and open dialogue	Might; perhaps; possibly; about
Boosters	Emphasize certainty or close dialogue	In fact; definitely; it is clear that
Attitude markers	Express writer's attitude to proposition	Unfortunately; I agree, surprisingly
Self-mentions	Explicit reference to author(s)	
Engagement markers	Explicitly build relationship with reader	I; we; my; me; our
		Consider; note; you can see that

Table 01: An interpersonal model of metadiscourse. Hyland, 2005: 49

The interactive dimension of metadiscourse (Hyland, 2005:49), which concerns the attempts of the writer "to shape and constrain a text, includes all those resources which help the authors deal with the information so that they can monitor the message towards one particular interpretation. This is to say, based on their understanding of their interlocutors, they help organising discourse so that it can be clearly understood what the author is trying to say; what needs to be made explicit, or what needs to be explained in detail. These resources are: 1) Transitions: mainly conjunctions used to mark the steps in a text, and the relations within the different sentences which integrate them (in addition, in contrast, as a consequence), as compared to the external world. 2) Frame markers: references to the text structure used to sequence, to announce, to anticipate the stages of the text (finally, to conclude). 3) Endophoric markers: references in the text itself, to help highlight the important parts of within. 4) Evidentials: textual information from other texts (cross-references, as stated). 5) Code glosses: help explain or redefine essential content in the text. Finally, 6) interactional resources are those aimed at facilitating interaction between author and reader (that is to say, in other words).

Regarding the interactional dimension, it includes the interactional metadiscourse features intended to unite the writer and the readers together (Halliday, 1994). Indeed, using these resources, the author sets the degree of proximity and intimacy with the interlocutor, as well as his or her attitude, communication commitments and involvement. The ones in the proposal, which have been used for the analysis in the present study are: a) hedges, which establish a degree of flexibility and open dialogue (might), b) boosters, which express the opposite in a set of issues within the text, that is, certainty (definitely), c), attitude markers, which show the writer's approach in the text, whether it is surprise, agreement, and so on (surprisingly), and finally d) engagement markers, which are direct addresses to the reader (note that, consider).

1.5. NE/NNE ACADEMIC WRITING

Finally, to address the last variable in the study, we will look into the differences between NE and NNE writings, at a university level in terms of

moves. Previous studies have shown significant variances in the writings of students depending on whether they are English speakers or not. For instance, Peacock (2002), who carried out a study of Discussion Section across diverse disciplines, following a moves pattern in order to contrast NE and NNE production, insists on the fact that, NNE include Move 7 (claim) in their papers far less often than NE author, and for instance in Physics and Biology, NNE authors made move 8 (limitation of the study) much less often than NE.

This hints to the idea that the Mother Tongues (MTs) as well as the academic traditions of the writers play a significant role in the writings they produce in English. In deed to this regard, Yakhontova (1997) points to the fact that NNE research writers have difficulty with genre conventions that differ from their MT. Similarly, Wood (2001) suggests that NNE writers of RAs have higher-level discourse problems and also difficulties publishing, because of them. Insisting on this, Gabrielatos and McEnery (2005) point to the fact that these similarities and differences are directly related to the author's MT and educational backgrounds, to the point that they can be traced back to them. In particular, for example, the use of epistemic modality in the NNE students' practices is directly linked to the practices of epistemic modality in the educational and academic contexts NNE writers.

2. METHODOLOGY

The task of analysing Discussions and Results sections in Master's Thesis has proven challenging mainly due to the difficulty of access to an open corpus. Although MTs in American universities are usually public documents, that is not necessarily so in Spanish universities, where students have the right to choose whether they want to keep their documents private. For the analysis, I am going to take into account MT from different disciplines presented both by NE and NNE speakers, and compare their Discussion and Results sections. In particular, 15 MT written in English by Native English (NE) speakers who have completed and presented them in American universities, and 15 MT written in English by Non-Native English (NNE) speakers who have completed and presented them in the Universitat Politècnica de València (UPV) were studied. The NE texts were obtained from following universities of South Carolina, Ottawa and Southern California. However, the entire set of MT written by NNE speakers was obtained from the UPV, due to restrictions of access to other texts.

With regards to the NE speaker MTs, the dates of presentation were between 2010 and 2015, on the subjects of medicine, veterinary, sociology, mechanical engineering, electronic engineering and marine science. The MT presented by NNE belonged to the disciplines of environmental sciences, computer engineering, artificial intelligence, Business administration, and chemical engineering, and were defended between 2008 and 2013. In the corpus were included only the Discussion and Results sections of the MT.

In total, 67,909 words were collected. However, the distribution of these words was uneven, and 58,368 were extracted from the NE MTs, whereas only 9,541 were extracted from the NNE speaker MTs.

The process of analysis was laborious and long. The texts were examined using Lawrence Anthony's tools. First, the documents were converted to txt with AntFileConverter 1.2.0, and then, 3.4.4 Antconc was used for the identification of the metadiscourse markers itself. Specifically, the study carried out consisted in the identification of the different Interactive and Interactional markers proposed by Hyland in the texts studied. Thus, the interactive markers chosen for analysis were those marking transitions, frame and endophoric markers, evidentials and code glosses. The interactional markers were hedges, boosters, attitude and engagement markers and self-mentions. Then, a Pearson's Chi-square test was used for the analysis and interpretation of the results

3. RESULTS

3.1. CHI-SQUARE TEST FOR THE MDM IN THE CORPUS

A Chi-square test of independence was calculated comparing the frequency of the use of the given MDM in both NE and NNE Discussion sections of MTs. In the explanation of results, first, I will take a general look at the results for all the variables and then I will pay particular attention to some that seem to be more significant than the rest. Table 02 represents in detail the results for every MDM analysed, both for the NE and NNE authors, the number of tokens and the percentages for the totals. In the analysis, all the markers in the table were analysed. Differences can be spotted at first sight. In general terms, more markers were found in the MTs written by NE speakers; that was the case even when the Chi-square analysis was completed. The Chi square results offered a positive correlation (Pearson Correlation Test) $p > 0.05$, for all the variables, except for the code glosse "e.g.", which was eliminated from the table. Indeed, the datum was also discarded because it was considered that the discrepancy could be merely due to the fact that NNE use "for instance", or i.e. instead of "e.g." in their examples.

3.2. INTERACTIVE RESOURCES

Table 02 shows the results obtained for the interactive resources used in the texts. Each marker is represented in the total numbers, as well as in the proportion in the totals obtained both for NE and NNE speakers. This proportion must be considered carefully, taking into account, both the considerable difference in the total numbers and the very little number of occurrences in some of the cases.

INTERACTIVE RESOURCES						
		NE	NNE		NE	NNE
Total	67909	58368		9541 totals		
Transitions	In addition	12	8	20	60%	40%
	But	54	8	62	87%	13%
	Thus	17	8	25	68%	32%
	And	1160	192	1352	86%	14%
Frame markers	Finally	3	5	8	38%	63%
	To conclude	1	1	2	50%	50%
	(my) purpose is	5	0	5	100%	0%
Endophoric markers	(Noted) above	13	1	14	93%	7%
	See (Fig.)	0	3	3	0%	100%
	In Section	18	3	21	86%	14%
Evidentials	According to	13	2	15	87%	13%
	Z states	16	0	16	100%	0%
Code glosses	Namely	2	1	3	67%	33%
	Such as	42	9	51	82%	18%
	In other words	1	0	1	100%	0%
		1357	241	1598		

Table 02: Number of interactive resources in the NNE and NE speaker MT's

Table 03 shows the results for each item with the analysis of the interactive resources with their type-token ratio. In bold, the group which offers a higher type-token ratio for each category. It can be seen that NNE speakers use, in general, greater amount and variety of resources than NE speakers.

INTERACTIVE RESOURCES					
Total		58368	9541		
		NE	NNE	NE	NNE
				type-token ratio	
Transitions	In addition	12	8	0,0002	**0,0008**
	But	54	8	**0,0009**	0,0008
	Thus	17	8	0,0003	**0,0008**
	And	1160	192	0,0199	**0,0201**
Frame markers	Finally	3	5	0,0001	**0,0005**
	To conclude	1	1	0,0000	**0,0001**
	(my) purpose is	5	0	**0,0001**	0,0000
Endophoric markers	(Noted) above	13	1	**0,0002**	0,0001
	see (Fig.)	0	3	0,0000	**0,0003**
	in Section	18	3	0,0003	0,0003
Evidentials	According to	13	2	0,0002	0,0002
	Z states	16	0	**0,0003**	0,0000
Code glosses	Namely	2	1	0,0000	**0,0001**
	e.g.	270	1	**0,0046**	0,0001
	such as	42	9	0,0007	**0,0009**
	in other words	1	0	0,0000	0,0000
		1627	242	**0,0279**	0,0254

Table 03: Type-token ratio of interactive resources in the NNE and NE speaker MT's

If we take the bulk results, the calculations show us the following totals for all interactive resources, for each of the cases according to their total number of tokens. Below is shown first, a general graph with the particular resources, and then, smaller graphs representing the markers themselves in contrast. With regards to interactive resources, it can be seen in Graph

01 that in general terms, NNE authors use greater amount of transitions, endophoric markers and code glosses than NE speakers. Indeed, except for the variance in some frame markers (finally) and, in namely (code glosses), this is always the case. It can also be said that, although NNE make great use of endophoric markers, that is, references within their own texts, they barely use any evidentials, that is, references to other texts. This is an interesting piece of data, which will be retaken in the Conclusions Section.
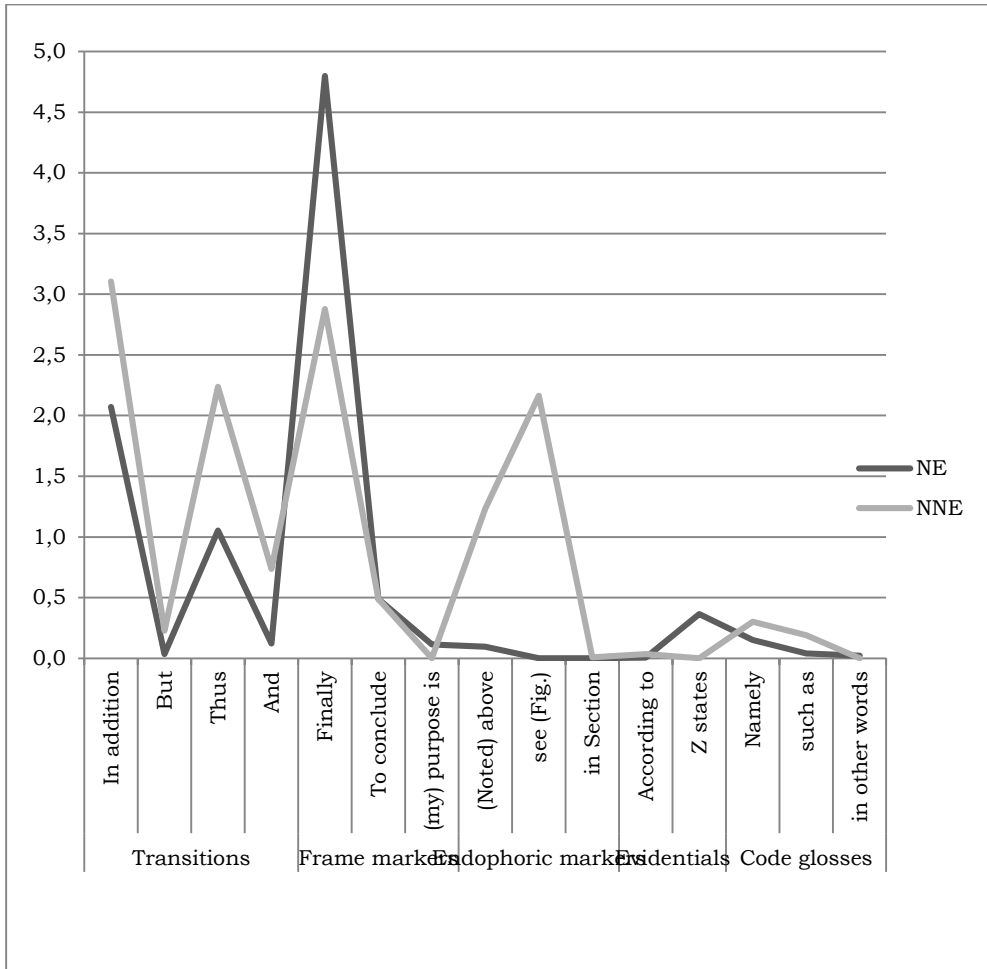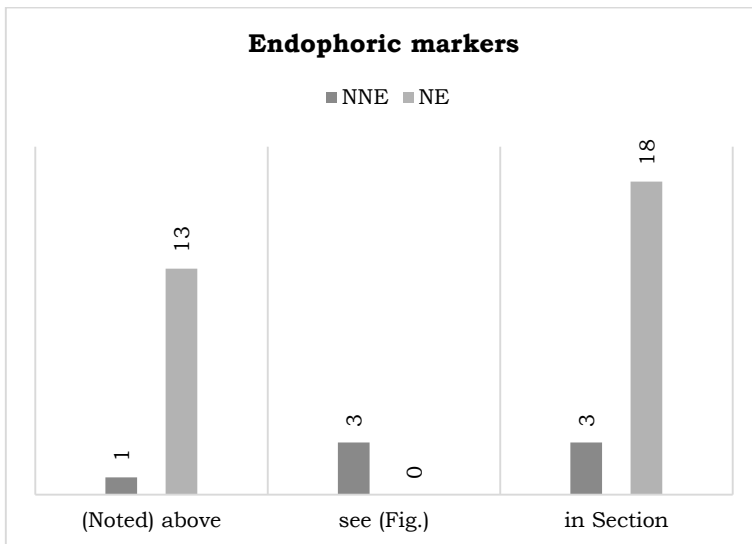

Graph 01: Interactive resources, NE vs. NNE

Graphs 02-06 below show the distribution in the use of the particular markers in each set of texts. In all the graphs, results are shown for NNE speakers, and for NE speakers. Significant differences can be observed.
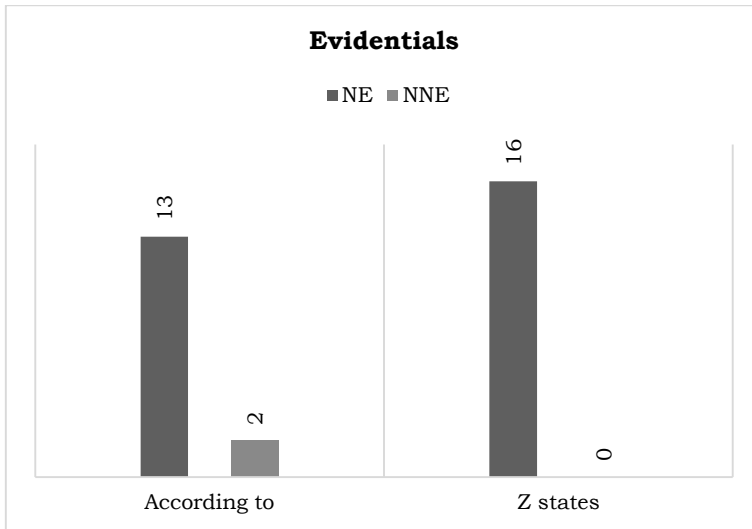
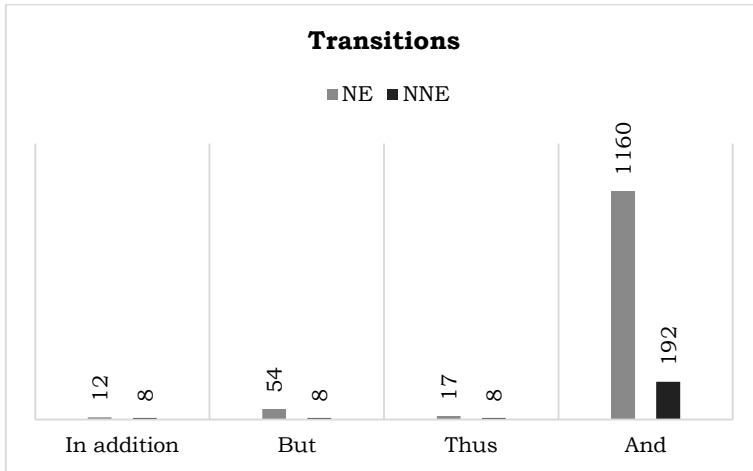Graph 02: Interactive resources. Evidentials

So, if we start by looking at the evidentials that can be found in the texts, for instance, NNE speakers only use "According to" as an evidential marker, whereas the distribution of use for NE speakers is quite even for the two markers proposed for analysis.

Graph 03: Interactive resources. Endophoric markers

Regarding endophoric markers, NNE speakers use in some cases either "see" or "in section", although it is not a resource that they commonly use,

whereas NE speakers mainly use "noted (above)" and "in section" with a much more significant number of occurrences.

Transitions

■NE ■NNE

| In addition	But	Thus	And
12 / 8	54 / 8	17 / 8	1160 / 192

Graph 04: Interactive resources. Transitions.

If we look at the graph representing transitions, we will see that the use of "and" by NE speakers is appallingly bigger than its use by NNE speakers, although it is by far the mose frequently used resource with regards transitions.

Frame markers

■NE ■NNE

Finally	To conclude	(my) purpose is
3 / 5	1 / 1	5 / 0
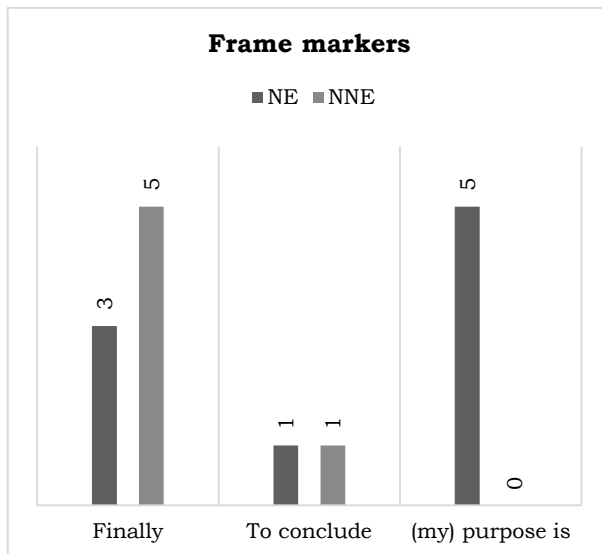
Graph 05: Interactive resources. Frame markers.

With regards to frame markers, NNE speakers only use "finally (17%)" and "to conclude (83%), whereas NE speakers use for the great majority "my purpose is (56%). All in all, it is seen that the distribution is quite uneven in most cases and that there is greater degree of variation in the use of the markers by the NE speakers.
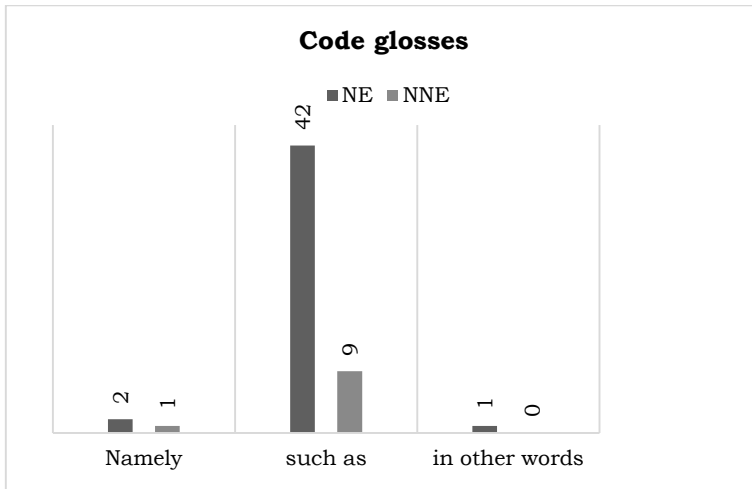
Graph 06: Interactive resources. Code glosses.

NNE speakers barely exploit the resource of code glosses, except for a sporadic use of "such as"

3.3. INTERACTIONAL RESOURCES

In the case of interactional resources, Table 03 shows the results for hedges, boosters, attitude markers, self-mentions and engagement markers. Here, the results are more similar than in the previous group, for NE and NNE speakers. However, significant differences are seen in the self-mentions resource section. As with the previous set of results, it can be seen that in the bulk numbers, NE speakers use greater amount of resources. In this case, the particular resources never used by NNE speakers are greater than in the previous group.

INTERACTIONAL RESOURCES						
		NE	**NNE**		**NE**	**NNE**
	67909	**58368**	**9541**	**totals**		
	Might	29	1	**30**	**97%**	**3%**
	Perhaps	3	1	**4**	**75%**	**25%**
	Possibly	5	0	**5**	**100%**	**0%**
Hedges	About	54	9	**63**	**86%**	**14%**
	In fact	0	2	**2**	**0%**	**100%**
Boosters	Definitely	0	0	**0**	**0%**	**0%**

|						
	It is clear that	2	0	**2**	**100%**	**0%**
Attitude markers	Unfortunately	0	2	**2**	**0%**	**100%**
	I agree	1	0	**1**	**100%**	**0%**
	surprisingly	0	0	**0**	**0%**	**0%**
Self-mentions	I	36	0	**36**	**100%**	**0%**
	We	81	68	**149**	**54%**	**46%**
	My	13	0	**13**	**100%**	**0%**
	Me	2	1	**3**	**67%**	**33%**
	Our	60	20	**80**	**75%**	**25%**
Engage-ment markers	Consider	6	3	**9**	**67%**	**33%**
	Note	9	0	**9**	**100%**	**0%**
	You can see that	0	0	**0**	**0%**	**0%**
		301	**107**	**408**		

Table 04: Number of interactional resources in the NNE and NE speaker MT's

Table 05 shows the results for each item with the analysis of the interactional resources with their type-token ratio. In bold, the group which offers a higher type-token ratio for each category. In this case, it can be seen that NNE speakers use, in general, lesser amount and variety of resources than NE speakers, except in the section of self-mentions, which will be analysed in detail.

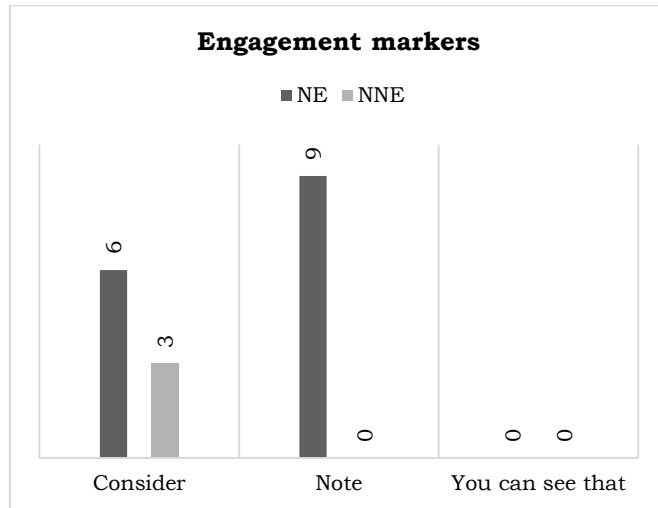| INTERACTIONAL RESOURCES					
		NE	**NNE**	**NE**	**NNE**
				type-token ratio	
Hedges	Might	29	1	**0,0005**	0,0001
	Perhaps	3	1	0,0001	0,0001
	Possibly	5	0	**0,0001**	0,0000
	About	54	9	0,0009	0,0009
Boosters	In fact	0	2	0,0000	**0,0002**
	Definitely	0	0	0,0000	0,0000
	It is clear that	2	0	0,0000	0,0000
Attitude markers	Unfortunately	0	2	0,0000	**0,0002**
	I agree	1	0	0,0000	0,0000
	surprisingly	0	0	0,0000	0,0000
Self-mentions	I	36	0	**0,0006**	0,0000
	We	81	68	0,0014	**0,0071**
	My	13	0	**0,0002**	0,0000
	Me	2	1	0,0000	**0,0001**
	Our	60	20	0,0010	**0,0021**
Engagement markers	Consider	6	3	0,0001	**0,0003**
	Note	9	0	**0,0002**	0,0000
	You can see that	0	0	0,0000	0,0000
		301	**107**	0,0052	**0,0112**

Table 05: Type-token ratio of interactional resources in the NNE and NE speaker MT's

Graph 07 shows the representation of all the markers used in the texts related to interactional relations. It can be seen at first sight that NE usually make use of greater amount of markers than NNE.
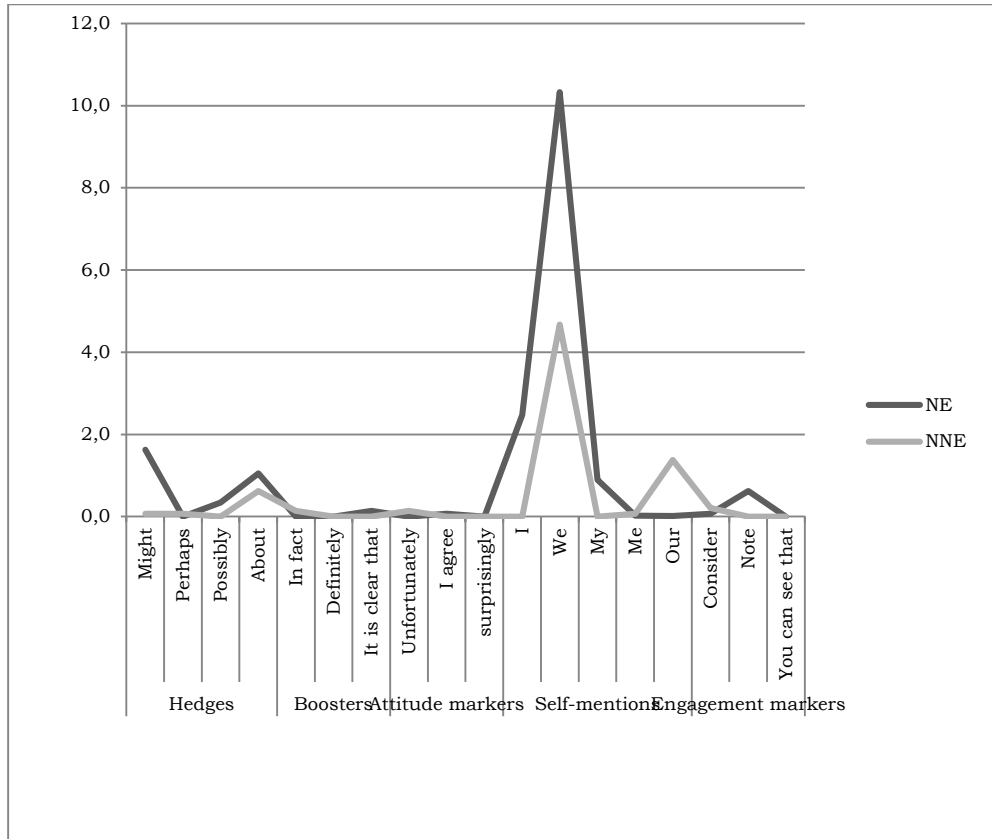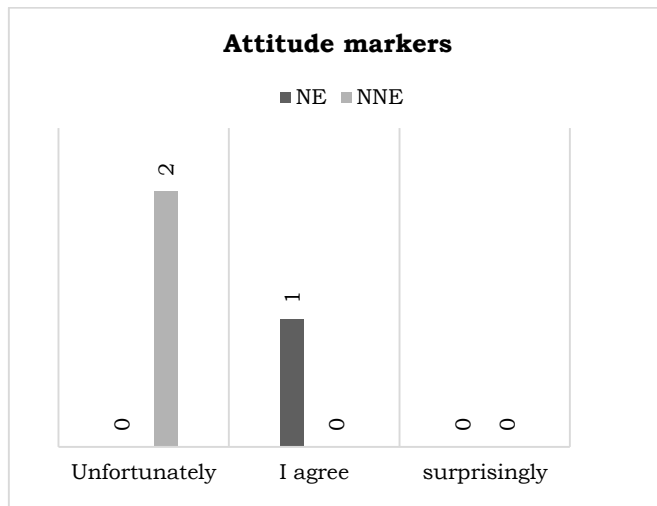

Graph 07: Interactional resources, NE vs. NNE

Also, if we look at the particular results for each of the groups, we can see that in general there is lesser variety of markers used by NNE speakers than by NE speakers. Also, that there exists very little variation in the use of the markers, in any of the groups chosen for analysis. With regards to engagement markers, for instance, NNE speakers only make use of "consider", whereas NE speakers use both "consider" and "note". The greatest differences can be found in the markers used for self-mention, in which NNE speakers use "we" or "our" in all the cases, and there is not one single use of "I". The distribution of hedges is much more similar in this case, except for the use of "might" by NE, which is much more common (32%) that in texts written by NNE (9%). The results for each resource are shown in graphs 08-12. The variety of markers used in general is lower than in the previous cases.

Graph 08: Interactional resources. Engagement markers

It can be seen that as engagement markers, NNE only use "consider", whereas NE speakers use "note" to a greater extent than "consider". Considering the attitude markers, NE speakers use "unfortunately" in all the cases, where NNE speakers use "agree".


Graph 09: Interactional resources. Attitude markers

Looking at attitude markers, the most representative issue to highlight is that NE choose to highlight those cases in which they are coincidental with

some proposal, by choosing "I agree" in the great majority of cases, whereas NNE choose to show those cases in which there is no coincidence with the expectations, and use "Unfortunately".
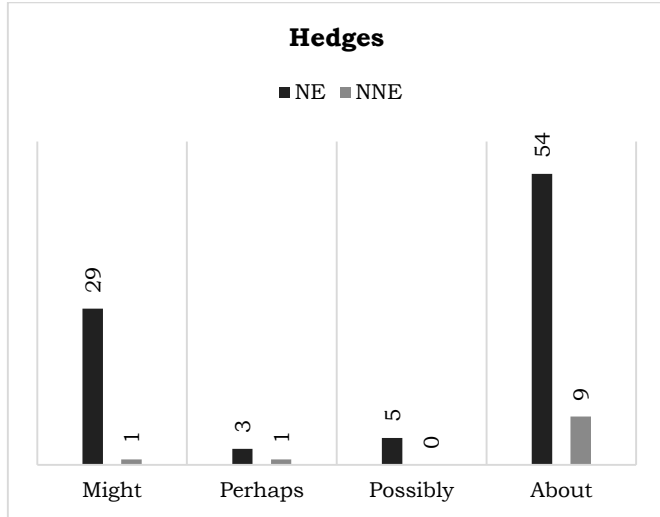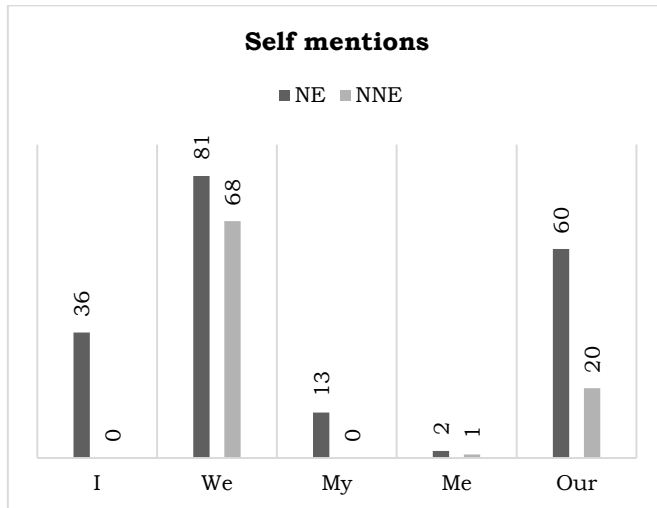

Graph 10: Interactional resources. Hedges
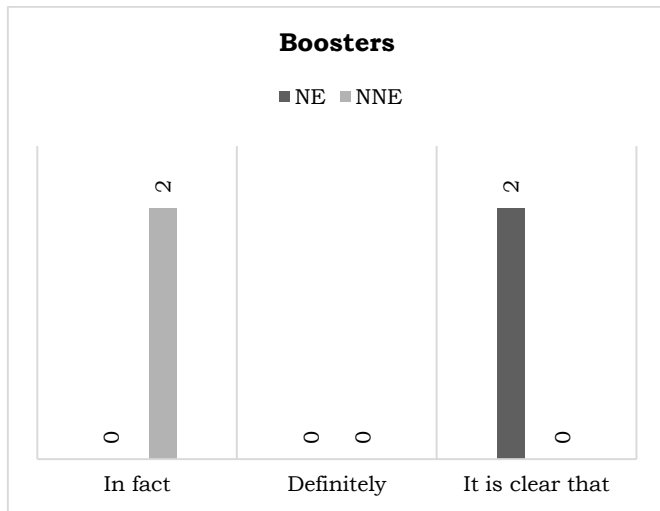
Graph 11: Interactional resources. Boosters

Regarding hedges, NNE speakers use "about" for the great majority of cases (82%), and "might" or "perhaps" in similar numbers, whereas NE speakers use "about" in more than half of the cases, but "might" in a third of the cases and possibly in &% of the cases. "Perhaps" is the least used

hedge in this group. Looking at the boosters, NE speakers only use "it is clear that", whereas NNE speakers only use "in fact".

Graph 12: Interactional resources. Self-mentions

The most remarkable results in this analysis are those provided by the use of self-mentions in the texts. Whereas NE speakers use, in number of occurrences "We" (42%) and "Our" (31%), followed by "I" (19%), "My" (7%) and "Me" (1%), there is not one single occurrence of I in the entire corpus of texts written by NNE. In this set of MTs, students use the majestic use of the pronoun "We" in more than 75% of the cases, followed by "Our", in 25%.

4. CONCLUSIONS AND DISCUSSIONS

From the results obtained, the following conclusions can be extracted. First, that there exist significant differences already in the space dedicated within the texts and therefore the importance allocated by the authors to the Conclusion and discussion sections in the MTs of NNE and NE speakers, as can be seen in the volume of words obtained in the corpus for each of those groups. Discussion sections are integrated in Swales' 2004 Model as pertaining to Move 3. In this move, writers are expected to announce principal outcomes, and state the value of their research, that is, present their work and defend their results. Regarding the use writers make of MDM in their discussions and conclusions sections, NNE use evidentials which reflect greater distance and detachment to previous works, since they use exclusively "according to". This can be proof of little involvement with prior literature on their matter of study. Also with regards to endophoric markers, fewer references to their own text are found in NNE speakers texts. If look

at the detail shown in the results, it can be seen that the endophoric markers are used to point to parts of the text, not so much to the contents or hypotheses within ("see", or "in section"). The Frame markers used also seem to back this interpretation, as there is no reference to the personal aims or hypotheses of the authors.

Regarding interactional resources, it can be seen that NNE focus exclusively on the successes that can be found in their works, avoiding any reference to surprises, mistakes or misinterpretations (agree). The most surprising result of the study is that there is not one single mention to the author in the singular form. There are no "I" mentions in the text, authors only use "we" to refer to their work and to their results. This is particularly significant in the case of MTs, in which the idea is that students can show the knowledge and expertise they have obtained at the end of a period of study. It is a sort of public presentation of a newcomer in the scientific field. Here, although NE use "we", they only do so in less than half of the occasions when they defend their work, whereas in the case of NNE speakers, we obtain 99% of all self-mentions in the texts by adding up the totals for "we" and "our". In this same wavelength, NNE speakers show no personal implications in their choice for boosters, merely using the form "in fact" in all the cases. All this seems to point to the idea that NNE students express lesser involvement with their work than NE students, although this can be merely due to a choice of words, since the use of the plural or impersonal pronouns are recommended in Spanish (Alonso Alonso, 2011).

Concerning the pedagogical implication of this work, several proposals can be derived from it for the improvement of both the content and the pragmatic distribution of elements in the Master's Thesis written by NNE speakers. Indeed, the contents of the Conclusions and discussion section in a MT should include the author's contribution presented as relevant to the research questions pursued by other researchers in that disciplinary field. It is therefore an opportunity for the presentation of personal work, in the first person, which should also imply greater personal involvement. Also, students should be more daring in the presentations of their results, instead of writing a synopsis of previous work, or just summarising the entire paper in the discussion section. This part of the text should be used for persuasion, and seduction of the reader: it is the part which should be dedicated to creating a niche and occupying it. This issue should be addressed by tutors or teachers when supervising the student in order to avoid misinterpretations related to the degree of involvement or personal implication of students in their own work.

<div align="center">

REFERENCES

</div>

ALONSO ALONSO, M. (2011): "Un estudio comparativo de la impersonalidad en el lenguaje académico a través de la UAM Corpus Tool". *Hesperia.* *Anuario de filología hispánica* XIV-2, pp. 23-38.

ADAMS SMITH, D. E. (1984): "Medical discourse: aspects of author's

comment". *English for Specific Purposes* 3, pp. 25–36.

BAZERMAN, C. (1988): *Shaping written knowledge.* Madison: University of Wisconsin Press

BRETT, P. (1994): "A genre analysis of the results section of sociology articles". *English for Specific Purposes,* 13, pp. 47-59.

CARRIÓ-PASTOR, M. L. (2013): "A contrastive study of the variation of sentence connectors in academic English", *Journal of English for Academic Purposes, 12*(3), pp. 192–202. http://doi.org/10.1016/j.jeap.2013.04.002

CONDUIT, A. & MODESTO, D. (1990): "An investigation of the generic structure of the materials/methods section of scientific reports". *Australian Review ofApplied Linguistics, Series S, No. 6, pp.* 109-134.

COOPER, C. (1985): *Aspects of article introduction in IEEE publications.* Unpublished M.Sc. dissertation, University of Aston, UK.

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

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 (1), pp. 39-71.

CROOKES, G. (1986): "Towards a validated analysis of scientific text structure". *Applied Linguistics*, 7, pp. 57–70.

DEL SAZ RUBIO, M. (2011): "A pragmatic approach to the macro-structure and metadiscoursal features of

research article introductions in the field of Agricultural Sciences". *English for Specific Purposes, 30*(4), pp. 258–271. http://doi.org/10.1016/j.esp.2011.03.002

DUDLEY-EVANS, T. (1986): "Genre analysis: an investigation of the introduction and discussion sections of M.Sc. dissertations", Coulthard M. (Ed.): *Talking about text.* University of Birmingham.

DUDLEY-EVANS, T. & HENDERSON, W. (1990): "The organization of article introductions: Evidence of change in economics writing", Dudley-Evans T. & Henderson W. (Eds): *The language of economics: the analysis of economic discourse.* London: Modern English Publications /British Council.

GABRIELATOS, C. & MCENERY, T. (2005) "Epistemic modality in MA dissertations", Fuertes Olivera, P.A. (Ed): *Lengua y Sociedad: Investigaciones recientes en linguistica aplicada. Linguistica y Flilogia no. 61,* Valladolid: Universidad de Valladolid, pp. 311-331.

HALLIDAY, M. A. K. (1993): "On the language of physical science", Halliday M. A. K. & Martin J. R. (Eds.), *Writing science.* London: The Falmer Press, pp 54–68.

HALLIDAY, M. A. K. (1994): *An Introduction to functional grammar.* London: Edward Arnold

HARTLEY, J. (2008): *Academic writing and publishing - A practical handbook.* New York and London: Routledge.

HARWOOD, N. (2005): 'We do not have a theory. The theory I present here attempts to fill

this gap': Inclusive and exclusive pronouns in academic writing". *Applied Linguistics*, 26, pp. 343-375.

HEWINGS, M. (1993): "The end! How to conclude a dissertation", Blue G. M. (Ed.): *Language, learning and success: Studying through English.* London: Modern English Publications, pp. 105-112.

HOLMES, R. (1997): "Genre analysis and the social sciences: An investigation of the structure of research article discussion sections in three disciplines". *English for Specific Purposes*, 16, pp. 321–337.

HOPKINS, A. & DUDLEY-EVANS, A. (1988): "A genre-based investigation of the discussion sections in articles and dissertations". *English for Specific Purposes*, 7, pp. 113–122.

HUNSTON, S. & Thompson, G. (2000): *Evaluation in Text : Authorial Stance and the Construction of Discourse: Authorial Stance and the Construction of Discourse.* Oxford University Press: UK.

HYLAND, K. (1998): "Persuasion and context: The pragmatics of academic metadiscourse". *Journal of Pragmatics*, *30,* pp. 437–455. http://doi.org/10.1016/S03 78-2166(98)00009-5

HYLAND, K. (1999): "Academic attribution: Citation and the construction of disciplinary knowledge". *Applied Linguistics*, 20(3), pp. 341–367.

HYLAND, K. (2000): *Disciplinary discourses: Social interactions in academic writing.* London: Pearson.

HYLAND, K. (2001): "Humble servants of the discipline? Self-mention in research articles". *English for Specific Purposes*, *20*(3), pp. 207–226. http://doi.org/10.1016/S08 89-4906(00)00012-0.

HYLAND, K. (2002): "Authority and invisibility: Authorial identity in academic writing". *Journal of Pragmatics,* 34, pp. 1091-1112.

IGLESIAS-MORENO, Á. E. (2001): Native speaker–non-native speaker interaction: the use of discourse markers. Elia, 2(1996), 129–142. Retrieved from http://www.institucional.us. es/revistas/elia/2/10. angela.pdf

LUUKA, M. R. (1994): "Metadiscourse in academic texts". Gunnarsson, B. L., Linell, P. & Nordberg B. (Eds.): *Text and talk in professional context.* Uppsala, Sweden: ASLA, pp. 77-88.

MARTÍNEZ, I. (2001): "Impersonality in the research article as revealed by analysis of contrastive structure". *English for Specific Purposes,* 20, pp. 227–247.

MAURANEN, A. (1993): "Contrastive ESP rhetoric: Metatext in Finnish-English Economics texts". *English for Specific Purposes,* 12, pp. 3–22.

MELANDER, B., SWALES, J. M. & FREDRICKSON, K. M. (1997): "Journal abstracts from three academic fields in the United States and Sweden: National or disciplinary proclivities?", Duszak A. (Ed.): *Intellectual styles and cross-cultural communication.* Berlin: Mouton De Gruyter, pp. 251–272.

MESTRE-MESTRE, E. M. & CARRIÓ PASTOR, M.L. (2012): "A pragmatic analysis of errors in University students' writings in English". *English*

for Specific Purposes World, 12(35), pp. 1–13.

MORENO, A. (1997): "Genre constraints across languages: Causal metatext in Spanish and English RAs". *English for Specific Purposes*, 16(3), pp. 161–179.

MORENO, A. (1998): "The explicit signalling of premise-conclusion sequences in research articles: A contrastive framework". *Text*, 18(4), pp. 545–585.

PALTRIDGE, B. (2002): "Thesis and dissertation writing: an examination of published advice and actual practice". *English for Specific Purposes*, 21, pp. 125-143.

PEACOCK, M. (2002): "Communicative moves in the discussion section of research articles". *System*, 30(4), pp. 479-497.

PRIOR, P. (1998): *Writing disciplinarity: A sociohistoric account of literate activity in the academy.* Mahwah, NJ: Lawrence Erlbaum.

ROMERO-TRILLO, J. (2002) "The pragmatic fossilization of discourse markers in non-native speakers of English". *Journal of Pragmatics* 34: 769-784

SALAGER-MEYER, F. (1990): "Discoursal flaws in medical English abstracts: A genre analysis per research and text type". *Text*, 10, pp. 365–384.

SAMRAJ, B. (2000): "Discursive practices in graduate-level content courses: The case of environmental science". *Text,* 20, pp. 347-371.

SAMRAJ, B. (2002): "Introductions in research articles: Variations across disciplines". *English for Specific Purposes,* 21, pp. 1-17.

SAMRAJ, B. (2005): "An exploration of a genre set: Research article abstracts and introductions in two disciplines". *English for Specific Purposes,* 24, pp. 141–156.

SCHIFFRIN, D. 1980. "Metatalk: Organisational and evaluative brackets in discourse". *Sociological Inquiry,* 50, pp. 199-236.

SOLER-MONREAL, C. & GIL-SALOM L. (2010): "Moves, steps and linguistic signals in RA Discussion sections", Hahn W. & Vertan, C. (Eds.), *Fachsprachen in der Weltweiten Kommunikation / Specialised Language in Global Communication.* Series Sprache in der Gesellschaft, Band 30 / Language in the Society 30. Bern: Peter Lang, pp. 519-528.

SOLER-MONREAL, C. (2016): "A move-step analysis of the concluding chapters in computer science PhD theses", *Ibérica* 32, pp. 105–132.

SWALES, J. (1990): *Genre analysis: English in academic and research settings.* Cambridge, England: Cambridge University Press.

SWALES, J. (2004): *Research genres: Exploration and applications.* Cambridge, England: Cambridge University Press.

SWALES, J. M. & FEAK, C. B. (2000): *English in today's research world: A writing guide.* Ann Arbor: The University of Michigan Press.

SWALES, J. M. & NAJJAR, H. (1987): "The writing of research article introductions". *Written Communication,* 4, pp. 175–191.

TANG, R. & JOHN, S. (1999): "The 'I' in identity: Exploring writer

identity in student academic writing through the first person pronoun". *English for Specific Purposes*, 18, S23eS40.

TAYLOR, G. & CHEN, T. (1991): "Linguistic. cultural and subcultural issues in *336* R. Holmes contrastive discourse analysis: Anglo-American and Chinese texts". *Applied Linguistics, 3,* pp. 319-336.

THOMPSON, D. (1993): "Arguing for experimental "facts" in science: a study of research article results sections in biochemistry". *Written Communication, 10, 106-128.*

VALERO-GARCES, C. 1996. "Contrastive ESP rhetoric: Metatext in Spanish-English Economics texts". *English for Specific Purposes* 15(4), pp. 279-294.

WILLIAMS, I. (1999): "Results sections of medical research articles". *English for Specific Purposes,* 18(4), pp. 347–366.

WOOD, A. (2001): "International scientific English: the language of research scientists around the world", Flowerdew, J., Peacock, M. (Eds.): *Research Perspectives on English for Academic Purposes.* Cambridge University Press, Cambridge, pp. 71–83.

YAKHONTOVA, T. (1997): "The signs of a new time: academic writing in ESP curricula of Ukrainian universities", Duszak, A. (Ed.), *Culture and Styles of Academic Discourse.* Berlin: Mouton de Gruyter, pp: 103–112.

YANG, R. & ALLISON, D. (2003): "Research articles in applied linguistics: Moving from results to conclusions". *English for Specific Purposes*, 22, pp. 365–387.