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Functions of Meta-discursive Nouns: A Corpus-based Comparison of Post-graduate Genres in L1 and L2 English

Abstract

Academic discourse is characterized by various linguistic features that academic writers utilize to maintain cohesion, reader–writer communication, and authorial stance. Recently, meta-discourse (MD) has received considerable attention as one of the most prominent linguistic and pragmatic features of academic writing. Despite the abundance of nouns in academic genres, there has been little attention paid to their meta-discursive functions. In this study, we intend to address this gap by exploring the usage of nouns, specifically in two important post-graduate genres: MA and Ph.D. theses written by both native and non-native academic writers of English. The analysis draws on a corpus of 1,148,992 words of MA and Ph.D. theses, and the concordance software, AntConc version 3.5.8, was utilized to calculate the frequency counts of MD nouns. Log-likelihood statistics were performed to determine whether there was a statistical difference among four corpora regarding the use of MD nouns. We observed cultural variations in the MD noun usage between native and non-native academic writers of English. The analysis also reflected the same rhetorical decisions by both groups of academic writers regarding the deployment of MD nouns in MA and Ph.D. theses. Hence, it may be suggested that a genre-based approach in academic writing courses may raise students' awareness of socially and disciplinary-based norms of academic genres.

Keywords: academic writing; post-graduate genres; meta-discursive nouns

1 Introduction

There has long been a widely held belief that academic writers employ various linguistic devices in order to convey their stance, pull their readers into their texts, and achieve cohesion in academic genres. By doing so, their ultimate aim is to gain credibility in their academic communities, grounded in the persuasion of readers about the truth of their claims. In the last three decades, the use of linguistic features in academic genres has been a question of great interest. Meta-discourse (MD) has become a crucial linguistic device in all academic genres for gaining credibility in the now globally-oriented academic world. MD is defined by Ädel (2006) as "text about text… a discourse about the evolving discourse, or the writer's explicit commentary on his/her own ongoing text" (p. 2). For Hyland (1998), "[MD] refers to aspects of a text which explicitly organize the discourse, engage the audience, and signal the writer's attitude" (p. 437).

One major issue in MD studies are cross-cultural variations of MD use in academic genres (Abdi, 2009; Blagojević, 2004; Burneikaitė, 2008; Mur-Dueñas, 2011). Several attempts have been made to examine how MD usage varies in disciplines (Cao & Hu, 2014; Dahl, 2004; Hyland, 1998, 2004, 2010; Onder Ozdemir & Longo, 2014; Rezaei Zadeh et al., 2015; Salas, 2015). More recently,

literature offering the analysis of particular genres or particular features of MD has emerged (Abdi et al., 2010; Ädel, 2010; Bondi, 2010; Bunton, 1999; Ifantidou, 2005; Halabisaz et al., 2014; Kondowe, 2014). All these studies recognize and highlight the significant effect of disciplinary and cultural conventions of academic communities on MD usage.

However, these studies have not dealt with the usage of MD nouns to accomplish an author's academic purposes. A literature search revealed few studies dealing with noun use in academic genres (Charles, 2003, 2007; Flowerdew, 2003, 2015). So far, Jiang and Hyland (2018) have claimed that previous studies tended to focus on the importance of nouns in the organization of content, rather than on their pragmatic functions. Thus, they created a new category of MD features, including nouns. Based on this taxonomy, they have been able to draw on systematic research into the employment of these nouns in academic texts (Jiang & Hyland, 2017, 2018). However, these studies have only been conducted on research articles in L1 English and other kinds of academic genres have not yet been considered. An accurate description of MD noun patterns in English would be made possible by investigating these patterns in different academic genres in both L1 and L2 contexts.

MA and Ph.D. theses are two prominent expressions of research in academic communities. Clearly, these two specific academic genres can be expected to provide a reasonably good representation of the linguistic norms of academic disciplines and meet the expectations of readers, composed of scholars and specialists in the thesis defence committee. To date, previous research has not carefully examined the use of MD nouns in MA and Ph.D. theses by following a contrastive interlanguage analysis (CIA) approach. Considering this gap in the literature, this study attempts to compare MD noun usage of native academic writers of English (NAWs) and non-native academic writers of English (NNAWs) in their MA and Ph.D. theses, using the taxonomy of MD nouns suggested by Jiang and Hyland (2018). It also explores whether there is a relationship between academic genres and MD noun usage in both L1 and L2 contexts.

This study addresses the following research questions:

1. What types of meta-discursive nouns do native academic writers of English, and non-native academic writers of English employ in MA and Ph.D. theses?
2. Do native academic writers of English, and non-native academic writers of English differ significantly in using meta-discursive nouns in MA and Ph.D. theses?
   2a. Is there a significant difference between MA and Ph.D. theses written by native academic writers of English regarding the use of meta-discursive nouns?
   2b. Is there a significant difference between MA and Ph.D. theses written by non-native academic writers of English regarding the use of meta-discursive nouns?

2 Literature Review

In the globalized academic world, where English is the medium of communication, academics follow expected organizational norms and language features in order to become members of their academic communities. Among these language features, meta-discourse is an effective way to foster comprehension in academic genres. Hyland (2005) explains that centred on the community-situated bias, the use of MD is associated with a writer's understanding of interpersonal and intertextual relationships which they need to comprehend in order to publish influential studies in their field, and it is the responsibility of discourse community to supply shared presuppositions and MD strategies. Therefore, genres and communities that give meaning to MD are central issues in understanding the pragmatics of MD. Hyland (1998) draws our attention to the pragmatic functions of MD. A successful academic text conveys two functions: a writer aims to convey a message (an illocutionary effect) and hopes that readers accept it (a perlocutionary effect). There is always the risk of readers' objection to the message conveyed by the writer owing to different interpretations. In this regard, MD is a means of taking precautions against the possibility of readers' refusal of an author's claims.

MD possesses both rhetorical and pragmatic functions in the process of organizing text, mitigating stance, and negotiating with readers, which brings about the abundance of MD taxonomies in the literature (Ädel, 2006; Bunton, 1999; Hyland, 2005; Mauranen, 1993; Vande Kopple, 1985). What is neglected in all the taxonomies of MD is the absence of nouns. In fact, in some previous studies the role of nouns, especially in the construction of stance in academic genres, has been examined. In two corpora of theses across two disciplines, Charles (2003) focused on the nouns preceded by the sentence-initial deictic *this* and observed that this grammatical pattern of nouns helps authors organize their text and draw their readers' attention to particular conclusions. In 2007, she specifically investigated the role of nouns followed by *that* and a complement clause in two corpora of theses in two disciplines and proposed disciplinary variations in the employment of this grammatical pattern. According to Flowerdew (2015), nouns are a crucial feature of discourse that reflects writers' intended meaning to readers.

A significant discussion on the meta-discursive functions of nouns starts with Jiang and Hyland (2015). They analysed the mitigation of stance through a noun complement structure in a corpus of 160 research articles in eight disciplines. They reported that this pattern conveys the explicit evaluation of the proposition based on writers' personal attitudes. In 2016, they coined a new term in the concept of MD, *meta-discursive nouns*, which they defined as "those which refer to the organization of the discourse or the readers' understanding of it" (Jiang & Hyland, 2018, p. 510). Depending on contextual lexicalization, these nouns reflect a constant and pragmatic meaning. MD nouns draw readers' attention to a particular point in a context, shape their response to it, and build a position as a member of the discipline in the lens of readers.

Another point is that MD nouns perform in two dimensions: the *interactive* and *interactional*. The former is concerned with cohesive organization, the accommodation of the propositional content, and writers' attempts to convey the content to readers. The latter dimension is related to the construal of stance and interaction with readers. These nouns frequently occur in the form of four lexico–grammatical patterns that Schmid (2000) labels as follows: *N + post-nominal clause*; *N + be + complementing clause*; *Demonstrative + N*; *Demonstrative + be + N*.

Now that we have clarified what MD nouns mean, let us focus on the results of two main studies dealing with MD noun usage. In a corpus of 120 research articles in six disciplines, Jiang and Hyland (2018) specifically investigated a grammatical form: *meta-discursive noun + post-nominal clause*. They concluded that this particular grammatical form effectively establishes links between parts of a text and reflects the author's stance. In the same vein, Jiang and Hyland (2017) analysed the use of all four grammatical patterns of MD nouns based on the moves in 240 research abstracts in six disciplines. *Determiner + N* is the most frequent pattern in their corpora, followed by *N + post-nominal clause*, and *N + be + post-nominal clause*. *Determiner + be + N* is the least frequent pattern. They concluded that MD nouns enable writers to organize their ideas coherently and meet the needs of their readers in their disciplines.

Overall, an essential component of academic discourse is the representation of linguistic devices employed in this field. A successful academic text is assumed to be a collection of sentences that reflect the reader–writer connection and writers' stance through the use of these devices, one of which is MD nouns. These particular nouns vary greatly according to the academic communities and disciplines in which they are produced. At this point, it is necessary to investigate variations in L1 and L2 academic genres in order to understand the production of these nouns better.

3 Methodology

The current study follows the principles of corpus-based contrastive interlanguage analysis (CIA) (Granger, 1996) in order to identify MD noun usage occurring in the corpus, including MA theses and Ph.D. dissertations written by native academic writers of English (NAWs) and non-native academic writers of English (NNAWs). In order to compare the uses of MD nouns across four sub-corpora, both descriptive and inferential statistics were performed.

3.1 Corpus

The corpus of this study represents MA and Ph.D. theses written between 2010 and 2019 in the field of English language (English Language Teaching, Applied Linguistics, and English Literary Studies). The corpus was compiled after the writers' consent was obtained via e-mails. The introduction, results, discussions, and conclusion sections were included in the corpora by excluding all quotations and paraphrases, so as to avoid possible interference from other authors cited in the dissertations. They were then converted into *text* files.

Data for the present research consist of four corpora of MA and Ph.D. theses that stand at 1,148,992 words in total. The MA corpus written by native academic writers of English (CMAN) amounted to 121,846 words and 12 theses. The MA corpus written by Turkish non-native academic writers of English (CMAT) was generated from 19 MA theses and included 320,169 words. The Ph.D. corpus, written by native academic writers of English (CPhDN), consisted of 322,475 words gathered from 16 theses. The Ph.D. corpus, written by Turkish non-native academic writers of English (CPhDT), consisted of 384,502 words and 15 theses.

Initially, it was decided that each corpus would include a minimum of 300,000 words, yet CMAN only ran to 121,846 words in a period of six months. Since it was not ethical to add theses to the corpus without obtaining the writers' consent, we decided not to use any open-access theses to compile this corpus. However, to ensure a standard basis for the comparisons of MD nouns in the corpora, the raw frequency counts of each category of MD nouns were normalized to 1000 words. To calculate the normalized frequency of each category, we multiplied raw frequencies by 1000. The outcome was then divided by the size of the corpus.

3.2 Data Analysis

Jiang and Hyland's (2018) taxonomy of MD nouns provided an excellent locus for analysing these nouns to map MD nouns in the four corpora. As seen in Table 1, this taxonomy consists of 3 categories: *Entity*, *Attribute*, and *Relation*. Nouns in *Entity* focus on "the writers' judgment of texts, events, discourses, or aspects of cognition." This category has four sub-categories. *Text* nouns are seen as "metatext or concrete instances of the text"; *Event* nouns "refer to either occurrence of actions and processes or mention of real-world cases"; *Discourse* nouns are related to "verbal propositions and speech acts" and *Cognition* nouns demonstrate "beliefs, attitudes, and elements of mental reasoning" (Jiang & Hyland, 2018, p. 516).

Nouns in the *Attribute* category are concerned with "writers' evaluation of the quality, status, and formation of entities." Nouns in the *Quality* sub-category define "whether something is admired or criticized, valued or appreciated, with assessment falling on a scale of plus or minus"; *Manner* nouns deal with the circumstances and formation of actions and states of affairs, and *Status* serves to reflect "the authors' judgments of epistemic, deontic, and dynamic modality." The *Relation* category is concerned with "how a writer understands the connection or relationship to the formation in a proposition" (Jiang & Hyland, 2018, pp. 517).

Based on the taxonomy of MD nouns suggested by Jiang and Hyland (2018), analysis was performed through AntConc version 3.5.8 (Anthony, 2019), a freeware corpus analysis toolkit. We uploaded each corpus set to the software and searched each item's frequency in the taxonomy individually across each corpus through a vertical reading. We then conducted an in-depth horizontal analysis of all occurrences of each item found in the corpora to determine whether their functions could be considered meta-discursive. A closer look at each item's individual occurrences revealed a number of tokens that could not be interpreted as meta-discursive, so they were eliminated. An example of a meta-discursive function is "study" in (1) below. Here, this noun reflects a meta-discursive function as it gives background information for the research methodology. In (2), however, it is just a technical term defining a type of research.

(1) In this **study**, a qualitative data analysis method was exploited, especially the descriptive approach.

Table 1. The functional classification of meta-discursive nouns.

Entity	Description	Examples
Text	Concrete metatext	report, paper, extract
Event	Events, processes, and evidential cases	change, process, observation
Discourse	Verbal propositions and speech acts	argument, claim, conclusion
Cognition	Cognitive beliefs and attitudes	decision, idea, belief, doubt
Attribute	Description	Examples
Quality	Traits that are admired or criticized, valued, or depreciated	advantage, difficulty, value
Manner	Circumstances of actions and state of affairs	time, method, way, extent
Status	Epistemic, deontic, and dynamic modality	ability, capacity, possibility, potential
Relation	Description	Examples
Cause–effect, difference, etc.	Cause–effect, difference, relevance	Reason, result, difference

Jiang and Hyland (2018).

(2) Consequently, one could object in the context of this study that the 'treatment' the participants were exposed to (i.e., the implementation of bilingual techniques), which indeed means that a kind of intervention took place, excludes the possibility to define it as a case **study**.

After all occurrences of each item were studied in detail, their categorization based on the MD nouns taxonomy was undertaken. Following this, the raw frequencies were normalized per 1000 words in order to compare each corpus, which enabled us to calculate how often we encounter a particular item per 1000 words. The percentages of each category concerning the total number of MD nouns found in the corpora were calculated. Log-likelihood (LL) statistics were applied for the inferential statistics to explore whether MD usage across the four corpora statistically differed. According to Baker et al. (2006), LL is a test utilized to calculate statistical significance commonly applied in corpus analysis, and it is available at http://ucrel.lancs.ac.uk/llwizard.html.

4 Findings and Discussions

This section presents and interprets the results gathered from the analyses of MD nouns in the four corpora. The first concern of the study is to ascertain the types of MD nouns employed by NAWs and NNAWs in MA and Ph.D. theses. Table 2 includes the general results for MD nouns found in the corpora. With a frequency of 23.2 per 1000 words, they were employed most frequently in CMAN, followed by CPhDN with 22.4 times per 1000 words, while they were found 19.7 and 18.6 times per 1000 words in CMAT and CPhDT, respectively. Normalized frequency counts revealed that MD nouns were employed more frequently by NAWs than NNAWs at both master's and doctorate levels. In addition, we observed that MD noun usage by both NAWs and NNAWs was more frequent at the MA level than at the Ph.D. level.

According to the overall distribution, it might be stated that NNAWs followed the cultural–linguistic norms of their academic communities, which are different from the native academic community. The overall frequencies may imply a shared knowledge among NAWs to organize their texts when they marshal their arguments about content and negotiate with their readers. Still, this implication echoes through another culturally-based MD noun usage in MA and Ph.D. theses written by NNAWs. This finding is not surprising, since the employment of MD is based on culture-specific linguistic conventions.

Table 2. Overall distribution of MD nouns in the four corpora.

	CMAN	CMAT	CPhDN	CPhDT
Corpus size in words	121846	320169	322475	384502
Number of MD nouns used(n)	2831	6314	7229	7175
n/1000	23,2	19,7	22,4	18,6

n: raw frequency of MD nouns
n/1000: frequency of MD nouns per 1000 words

The observed frequency counts regarding the overall distribution of MD nouns in the four corpora may also indicate that both groups of writers trust the same rhetorical strategies at the MA and Ph.D. levels. Arguably, Ph.D. theses are the means of gaining credibility in an academic community, so doctoral students have the responsibility of making an original contribution to their field. However, MA theses play a crucial role in post-graduate students' mastery of organizing a long academic text. Hence, adopting identical rhetorical strategies in these two post-graduate genres may be problematic among NAWs and NNAWs.

Table 3 indicates the frequency counts of each category of MD nouns found in the four corpora. The most frequent category in all corpora was *Entity*, which conveys writers' judgment of content, followed by *Attribute*, reflecting writers' personal evaluation of the propositional content. These two categories were the most frequent in CMAN with 13.6 and 7.8 frequency counts per 1000 words respectively. The least frequent category among the four corpora was *Relation*, used to encode connection and relation to information in the content. Seemingly, both NAWs and NNAWs displayed similar tendencies in terms of using the main categories of MD nouns in their MA and Ph.D. theses, which is consistent with Jiang and Hyland (2017, 2018).

Table 3. Overall distribution of MD nouns in the four corpora.

	CMAN		CMAT		CPhDN		CPhDT	
	n	%	n	%	n	%	n	%
Entity	13,6	59	10,8	55	11,6	52	10,6	57
Attribute	7,8	34	6,6	34	7,7	35	5,8	32
Relation	1,6	7	2,2	11	2,9	13	2,1	11

n: normalized frequency of MD nouns per 1000 words
%: percentage of each category to the overall frequency of MD nouns

Before proceeding to examine the subcategories of MD nouns, it should be noted that we did not focus on subcategories within the *Relation* category in Table 4, since Jiang and Hyland (2018) did not assign any sub-categories with this function. As shown in Table 4, the normalized frequencies per 1000 words of the sub-categories of *Entity* showed variation among four corpora. Let us first focus on the variation between MA theses written by NAWs and NNAWs.

Among the four sub-categories of *Entity*, we find considerable use of *Text* (4.4) nouns in CMAN, with "*study*" and "*research*" items predominating. In the following extracts, *Text* nouns' deployment displayed the limitation of the study (3) and how the study fills a gap in the literature (4).

(3) This **research** has shown promise, but has yet to tease out the details of the effectiveness of various components of FFI for phonological learning (CMAN-5).
(4) The findings of this **study** address a gap in the literature on Blackfoot phonology, and also has implications for typology, theory, and research methodologies (CMAN-10).

Table 4. Overall distribution of MD nouns in the four corpora.

	CMAN		CMAT		CPhDN		CPhDT	
	n	%	n	%	n	%	n	%
Entity								
Text	4,4	33	3,0	28	2,3	20	2,6	25
Event	3,6	26	3,2	30	4,4	38	3,1	30
Discourse	2,4	18	0,9	8	1,4	12	1,2	11
Cognition	3,1	23	3,6	34	3,5	30	3,6	34
Attribute								
Quality	1,2	16	1,4	22	1,0	14	1,1	20
Manner	2,1	57	1,8	28	1,6	21	1,5	26
Status	4,4	27	3,3	50	5,0	65	3,1	54

n: normalized frequency of MD nouns per 1000 words
%: percentage of each sub-category to the overall frequency of the main category

(5) As in the **case** of the Blackfoot IU list in (32), feature (e) is language specific, due to the segmental effects of glottal stops in Navajo (CMAN-10).

Cognition, showing mental reasoning strategies, was observed at a frequency of 3.1 per 1000 words. The following extracts show that the writers' reasoning strategies rested heavily on empirical findings (as in 6) or personal beliefs (as in 7). In (6), we also see a functional strategy of linking the pieces of information. Here, the writer emphasized the information mentioned previously and connected it to the ongoing evaluation of it.

(6) The results of the **analysis** for the attitudinal data indicate that though the integrated group appeared to have more positive orientations towards their vocabulary learning, the difference was not large enough to be statistically significant—a factor which should be considered when interpreting these results (CMAN-4).
(7) Lastly, it is my strong **belief** that researchers operating within a Western paradigm need to be flexible in conducting research in Bangladesh (CMAN-8).

Discourse (2.4) had a higher use in this corpus, indicating NAWs' concern with verbal propositions. As can be inferred from (8), the writer tended to foreground an unresolved issue in the discipline and grasped this issue in the research using "*argument*."

(8) The **argument** is two-fold: first, in keeping with Christ's demand that admonition follow self-examination, Gregory calls upon preachers to first take the plank from their own eyes before addressing their flocks (CMAN-1).

While MD nouns with the *Text* function were the most prominent in CMAN, the most frequent sub-category of *Entity* in CMAT was *Cognition* (3.6), followed by *Event* (3.2) and *Text* (3.0). With a frequency of 0.9, *Discourse* did not frequently appear in the corpus. The heavy use of *Cognition* to convey beliefs and attitudes seemed to be a feature of MA theses for NNAWs, which can be an indicator of a personal stance. "*Knowledge*" and "*idea*" were the most frequently applied items of *Cognition* in this corpus. In the extracts below, the writers emphasized a connection between their evaluations and more comprehensive disciplinary knowledge. It is likely that they were aiming to portray themselves as members of the disciplines in the eyes of readers by sharing the same disciplinary knowledge. As Jiang and Hyland (2018) state, writers in the 'soft' disciplines rely on personal evaluations in order to shape their arguments to their readers' expectations.

(9) With this **knowledge**, a post-test was designed to enrich the research with long-term results of the study (CMAT-6).
(10) This **idea** creates a contrast with Frankenstein's belief that science is the most beneficial practice (CMAT-18).

Emphasizing the occurrence of actions and concrete instances of texts was also important, represented through the employment of the *Event* and *Text* sub-categories. "*Process*" was the most frequent item from *Event*. Extract 11 illustrates the predominance of particular empirical knowledge. "*Study*", as an item of *Text*, had the highest frequency counts in CMAT and in the other three corpora. In (12), the writer conveyed the importance of the research.

(11) This cyclical **process** can be witnessed in the natural phenomena of the world and these phenomena can be regarded as "symbols" to understand the goings-on of the universe (CMAT-12).
(12) In this **study**, a qualitative data analysis method was exploited, especially the descriptive approach (CMAT-4).

Dontcheva-Navrátilová (2013) explains that authors in the Anglo–American academic community mark their authorial stance to convince potential readers, due to the competitive nature of the community. However, it can be clearly seen in our corpus that NAWs distanced themselves from their MA theses and highlighted the content objectively with the frequent use of *Text* and *Event* nouns. They seemed only to emphasize their mental reasoning partially. A probable explanation of this text-oriented approach is that NAWs may decide that it is the readers' task, especially their supervisors, to evaluate their MA theses critically. On the contrary, NNAWs were reluctant to express their self-evaluation of the content explicitly through the frequent use of *Cognition* nouns. This finding must be approached with some caution because the general tendency in the Turkish academic community is to take an impersonal stance and follow an objective presentation of the content. Therefore, our findings may be due to individual writer style regardless of the cultural context studied.

It is now necessary to explain the use of MD nouns in Ph.D. theses. Looking at the frequencies of the sub-categories of *Entity*, *Event* nouns (4.4) and *Cognition* items (3.5) constituted a prominent place in CPhDN. In (13), "*case*" labels a situation as a case that can be understood from the following information given. The MD noun "*sense*" as a *Cognition* item clearly stamps the writers' personal stance towards the proposition as can be inferred from (14).

(13) In this **case**, a traditional step-wise model selection approach would come up with the same model ranked highest in the multimodel output procedure (but in essence, assign it 100% probability) (CPhDN-1).
(14) While I did not design the study to assess this, I have a **sense** after speaking with my participants that there could be a connection between reports of: (a) difficulty reading, (b) trouble in school, and (c) taking time off during college and the presence of high condensed inner speech VISQ scores (low IP Quiz values) (CPhDN-15).

Text (2.3) and *Discourse* (1.4) were scarce in CPhDN. NAWs sought to display a more balanced stance, emphasizing the occurrences of actions and their own evaluations on the content while minimizing the role of metatext and verbal propositions.

While *Event* nouns were the most frequently employed sub-category of *Entity* in CPhDN, *Cognition* (3.6) played a more visible role in CPhDT. In (15), we see the writer intervening to guide readers to theoretical reasoning.

(15) According to this **understanding** a shaman and an actor seem to be similar figures for which they share the signs and codes of theatricality (mask and costume; gesture and voice) (CPhDT-6).

Event, with a frequency count of 3,1, was in second place in CPhDT, followed by *Text* (2.6). The examples below show how the writers highlighted action in the research (16) and framed the novelty of the study (17).

(16) This first **experience** constitutes an important component in their period of learning to teach (CPhDT-3).
(17) According to the findings of the **study**, a relatively substantial proportion of the participants perceive that their programs equip or equipped them with the necessary instructional technologies and other resources (CPhDT-6).

Discourse (1.2) was the least frequent MD noun sub-category in CPhDT. In (18) readers, with their background knowledge outside the content, were invited to the text. This type of engagement may enable the writer to be considered as a member of the discipline by the readers.

(18) So, back to the previous **discussion**, again, the interlanguage issue could be questioned by considering the proficiency, especially in terms of pragmatics (CPhDT-7).

Overall, within the *Entity* category the frequent use of *Event* nouns indicated that NAWs were more concerned with emphasizing processes and actions in their research. In contrast, NNAWs gave prominence to mental reasoning with *Cognition* and actions, processes, or evidential cases with *Event*. Both groups of writers addressed concrete instances of text and verbal propositions less frequently.

Regarding the *Attribute* category, there was no variation among the four corpora when divided into sub-categories. Both MA and Ph.D. theses written by NAWs and NNAWs displayed relatively high frequencies of *Status*, showing writers' own judgments of epistemic, deontic, and dynamic modality, as in (19).

(19) This **fact** receives a direct explanation under the assumption that only final consonants are moraic, since it follows that only word-final syllables could have distinctions in syllable weight (CPhDN-3).

Manner was the second most frequent sub-category in the four corpora, defining the circumstances and formation of actions. In (20) and (21), the writer described the construction of a circumstance.

(20) As mentioned before, this time **period** also marks the rise of the post-modern novel (CPhDT-15).
(21) Throughout **time** a certain kind of romanticism sprang up as a need for an escape from the reality surrounding the author was so insurmountable, which showed itself in the imaginative, and creative; and a need for the real followed it as people became tired of soaring through with the wings of the imagination and lost sight of their actual surroundings in a recoil from that romanticism (CPhDN-6).

Quality nouns, which assess something positively or negatively, were not emphasized in either corpora. This finding is not in line with Prados (2018), who found that *Quality* nouns were primarily applied in abstracts, whereas *Status* nouns were scarce. The extract below is specifically concerned with the writer's personal judgment towards the propositional content.

(22) Yet when we look at her professional career and regard its implications, her involvement in the theatre was of the utmost **importance** (CMAT-3).

Table 4 is also revealing in understanding the rhetorical strategies used by NAWs and NNAWs. These results indicate that NAWs were more focused on promoting the contribution of the research and the processes of the research in their MA theses with the heavy use of *Text* and *Event*

categories. *Cognition* took third place, while *Discourse* was the least frequent. They were more concerned with the processes in the research and their contribution to the literature in their MA theses. However, they balanced their stance-staking with the high use of *Event* and *Cognition* in their Ph.D. theses. They used *Text* and *Discourse* less frequently. They took a personal position towards their propositional content and highlighted the evidential status of the study.

On the other hand, the overwhelmingly used sub-category of *Entity* applied by NNAWs in their MA and Ph.D. theses was *Cognition*. *Event* and *Text* nouns were observed at high frequencies, while *Discourse* nouns were scarce. NNAWs built claims and knowledge based on personal evaluation of the content. This personal voice may be subsumed by Turkish community knowledge and routines. The same rhetorical strategies in MA and Ph.D. theses may indicate unreflective rhetorical practices applied by NNAWs.

Having compared the MD nouns preferences of both groups of writers, the following section addresses whether NAWs and NNAWs significantly differ in the use of MD nouns in MA and Ph.D. theses. The log-likelihood analysis was employed to determine whether the four corpora significantly differed in the overall distribution of MD nouns. Firstly, we looked at the LL ratio of MD nouns in CMAT and CMAN and calculated a −51.42 LL ratio, which revealed a statistically significant difference between the two corpora. Secondly, a −121.00 LL ratio between CPhDT and CPhDN proved a statistically significant underuse of MD nouns in CPhDT compared to CPhDN. Significantly, more MD nouns were found in MA and Ph.D. theses written by NAWs than NNAWs. This finding supported cross-cultural variations in MD nouns preferences of NNAWs and NAWs, tightly bound to the academic community and genre.

Table 5 presents the LL ratios among four corpora regarding the categorical use of MD nouns. The highest LL ratio regarding the categories of MD nouns in MA corpora was calculated for *Entity* with −59.74. Surprisingly, *Discourse*, which was the least frequent sub-category of *Entity* in both corpora, displays underuse in CMAT against CMAN with a −133.23 LL ratio. Regarding MD nouns in the CPhDT and CPhDN, the *Attribute* category was significantly underused by NNAWs in their Ph.D. theses, which was proved with −96.75 LL. However, both NNAWs and NAWs displayed the same strategies in the use of the *Attribute* category. The highest LL value among the sub-categories of *Attribute* in Ph.D. corpora was found for *Status*, with a −159.44 LL ratio. *Text*, with +114.40 LL, was significantly overused by NNAWs compared to NAWs.

Table 5. LL ratio of categorical MD nouns in the four corpora.

	CMAT	CMAN	LL Ratio ($p < 0.05$)	CPhDT	CPhDN	LL Ratio ($p < 0.05$)
Entity	3465	1666	−59.74	4106	3770	−11.86
Text	966	543	−50.72	1005	742	+114.40
Event	1033	443	−4.35	1226	1428	−71.43
Discourse	299	298	−133.23	471	471	−7.28
Cognition	1167	382	+6.70	1404	1129	+1.11
Attribute	2135	960	−18.30	2252	2512	−96.75
Quality	478	152	+3.84	458	347	+2.05
Manner	589	262	−4.32	580	528	−1.86
Status	1068	546	−30.40	1214	1637	−159.44
Relation	714	205	+13.30	817	947	−46.09

n: raw frequency of the categories of MD nouns
(−): indicates underuse in the two corpora
(+): indicates overuse in the two corpora

The present study was also concerned with whether native academic writers of English significantly differ in the use of MD nouns in MA and Ph.D. theses. We found no statistical difference between CMAN and CPhDN, with +2.59 LL value in terms of the overall distribution in the two corpora. This may be a sign of identical use of MD nouns in the two genres by NAWs. Even though the overall distribution did not reveal a significant difference between the two corpora, *Relation* nouns appeared fewer times in MA theses than in Ph.D. theses, with −58.62 LL value. As shown in Table 6, a significant overuse by the authors in CMAN compared to those in CPhDN was observed in the sub-category of *Text*, with +130.26 LL value, followed by the *Discourse* sub-category with +49.22 LL value. A possible explanation for the overuse of *Text* nouns by NAWs in MA theses may be explained by the tendency to focus on the novelty of their claims and distancing themselves from their theses. As novice post-graduate students, it is risky for them to mitigate themselves explicitly, so they seem to highlight the contribution of the research repeatedly.

Table 6. LL Ratio of MD nouns in CMAN and CPhDN.

	CMAN	CPhDN	LL Ratio ($p< 0.05$)
Entity	**1666**	**3770**	**+27.75**
Text	543	742	+130.26
Event	443	1428	−13.60
Discourse	298	471	+46.22
Cognition	382	1129	−3.54
Attribute	**960**	**2512**	**+0.09**
Quality	152	347	+2.26
Manner	262	528	+12.58
Status	546	1637	−6.50
Relation	**205**	**947**	**−58.62**

n: raw frequency of the categories of MD nouns
(−): indicates underuse in the two corpora
(+): indicates overuse in the two corpora

We also conducted LL statistic analysis in order to examine whether Turkish non-native academic writers of English significantly differ in the use of MD nouns in MA and Ph.D. theses. Regarding the overall distribution of MD nouns in MA and Ph.D. theses written by NNAWs, +10.25 LL value was calculated, which proves a slight difference between these two genres. Even though we did not observe a very strong effect of academic genres on the use of MD nouns among NNAWs, usage rates of each MD category in CMAT and CPhDT were compared through LL statistics, and the results are shared in Table 7.

According to Table 7, LL values obtained from the analyses of the MD nouns categories reveal no significant difference between MA and Ph.D. theses written by NNAWs, which proves that they followed identical rhetorical strategies while applying MD nouns in their MA and Ph.D. theses. Despite this fact, there were still minor differences across the two academic genres. The most significant difference was observed in the use of MD nouns with the *Attribute* function (+18.42 LL ratio). In contrast, the *Entity* and *Relation* functions emerged with similar frequency counts and the LL ratio values supported this. Even though we did not observe a clear difference between CMAT and CPhDT, LL values indicate that NNAWs at the masters' level are inclined to utilize all the MD noun categories more frequently than the occurrences in Ph.D. theses, except MD nouns with the *Discourse* function.

Table 7. LL Ratio of MD nouns in CMAN and CPhDN.

	CMAT	CPhDT	LL Ratio ($p< 0.05$)
Entity	**3465**	**4106**	**+0.34**
Text	966	1005	+10.13
Event	1033	1226	+0.08
Discourse	299	471	−13.70
Cognition	1167	1404	−0.00
Attribute	**2135**	**2252**	**+18.42**
Quality	478	458	+11.92
Manner	589	580	+11.50
Status	1068	1214	+1.71
Relation	**714**	**817**	**+0.89**

n: raw frequency of the categories of MD nouns
(−): indicates underuse in the two corpora
(+): indicates overuse in the two corpora

To summarise, it is feasible to state that NAWs utilized MD nouns more frequently at both MA and Ph.D. levels when compared to the occurrences of MD nouns in the post-graduate academic writings of NNAWs. Hence, the results might reveal that MD noun usage is affected by cultural norms. In addition, it is interesting to note that both NAWs and NNAWs at MA and Ph.D. levels resorted to the identical use of the main categories of MD nouns. For this reason, we may conclude that the academic genre does not affect the overall distribution of MD noun usage. However, this study also observed that NAWs and NNAWs had different conventions in the employment of subcategories of MD nouns.

5 Conclusion

Theses that are the key to engaging in an academic community are high stakes post-graduate genres accomplished by novice academic writers. Using rhetorical features, they organize their claims and the propositional content based on their readers' expectations. The present study investigated MD nouns in MA and Ph.D. theses written by NAWs and NNAWs. The analysis revealed an intimidating relationship between the cultural expectations of the communities and MD nouns usage. Reliance on personal evaluation of the content was the main feature of MA and Ph.D. theses written by NNAWs. NAWs emphasized the originality of the research in their MA theses, whereas they constructed knowledge on personal evaluation and objective representation of the findings in their Ph.D. theses. The same MD nouns usage in both MA and Ph.D. theses written by NAWs and NNAWs may be due to unreflective practices of genre-based rhetorical features.

Exploring the patterns in the native and non-native corpora in this study helped us to show that MA and Ph.D. theses are academic genres in which writers are required to make different rhetorical decisions. The importance of these decisions lies in the pragmatic functions they fulfil in academic genres: negotiation with readers, construction of stance, and organization of the text. Novice academics need to make appropriate rhetorical decisions oriented to their readers' cultural and global expectations to be competent members of their disciplines. Therefore, we suggest integrating a genre-based approach in academic writing courses to assist students in becoming familiar with socially and disciplinary recognized conventions and employing them in their academic texts. As Ellis et al. (1998) stated, awareness of rhetorical structures increases students' ability to effectively combine them to maintain their communicative goals in their highly textured writings.

In its broadest sense, a genre-based approach includes examining and deconstructing genres' features and main characteristics and creating new texts. Derewianka (2003) labels the principles of this approach:

- focus on the text: the construction of meaning throughout the text,
- focus on the purpose: meeting culture-specific expectations of the academic community,
- focus on meaning and choice: recognizing and making lexical and grammatical choices of the particular genres,
- language in context: a language system consisting of culturally-constrained choices,
- culture and ideology: concerned with specific communities and institutions.

Additionally, Hyland (2019) proposes a teaching–learning cycle for this approach: setting the context and building the field, modelling and deconstruction, joint construction, and independent construction.

Authors of MA and Ph.D. theses in English language-related fields are expected to have adequate linguistic and pragmatic competence to write comprehensible academic pieces. Even though they could improve their linguistic competence through intensive and extensive language training, having a good command of pragmatic competence might not always be possible. Since MD nouns have various pragmatic functions, academic writers of English need to be trained in their appropriate use. Thus, they could become acquainted with MD nouns through pragmatics training in addition to form-focused instruction. According to Blum-Kulka et al. (1989), "[e]ven fairly advanced language learners' communicative acts regularly contain pragmatic errors, or deficits, in that they fail to convey or comprehend the intended illocutionary force of politeness value" (p. 10). Romero-Trillo (2002) proposed that both the formal and pragmatic sides of language should be promoted to support this claim. This will yield grammatically, syntactically, semantically, and pragmatically appropriate language production for learners. Additionally, Ellis (2003) stated that language instruction should cover activities that help L2 speakers to increase awareness of socially and pragmatically appropriate language in specific genres.

Since MD nouns also have pragmatic functions, we believe that awareness of MD noun usage at the post-graduate level could be raised through authentic materials brought to academic writing classes. These materials might be extracted from corpora compiled from academic genre samples. Students may be encouraged to examine the concordance of MD nouns with the help of concordance programs and how they are applied in particular genres in disciplinary communities. The pragmatic functions of these nouns are a different angle that needs to be embedded in this analysis. In the second phase, learners can manipulate and modify the use of MD nouns in a given text, and finally they can employ them in their own texts.

6 Suggestions for Further Studies

This study investigated MD noun usage in MA and Ph.D. theses written by native speakers of English and Turkish non-native academic writers of English. The results indicated that cultural-linguistic conventions significantly affect the use of MD nouns. However, both NAWs and NNAWs relied on the same MD noun type preferences in their MA and Ph.D. theses. Nevertheless, the results obtained in this study could only unravel MD noun usage in MA and Ph.D. theses produced by L1 English speakers and Turkish L2 English speakers in the field of English language-related fields: English Language Teaching, Applied Linguistics, and Literary Studies. Hence, MD noun usage among L1 English academic writers and Turkish L2 academic writers of English in the fields of applied sciences, medical sciences, and social sciences could give more comprehensive results regarding MD usage among Turkish academic writers of English. Furthermore, MD noun usage by L1 English speakers and L2 English speakers coming from various L1 backgrounds might explicate the relationship between cultural norms and language use in academic writing, which might shed light on the cultural and global tendencies of L2 English academic writers coming from different L1

backgrounds. Thus, a further study might explore how MD nouns are exploited in academic pieces produced by various L2 English academic writers with different L1 and cultural backgrounds.

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