

## The Use of Interactional Metadiscourse Markers in the Discussion Section of Master's Theses Written in English by Algerian Students: An Investigation of Gender Variation

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### Abstract

Metadiscourse analysis plays an important role in exploring the rhetorical structure of different academic genres including master's theses. Gender differences in writing the discussion section within this genre has been unexplored in the Algerian setting. Therefore, this study employs Hyland's framework of metadiscourse (2005) to investigate gender variation in Algerian master's theses discussion sections written in English within the field of applied linguistics. It seeks to examine possible similarities and differences in the use of interactional resources across the two gender groups. A mixed-methods approach was opted for to study the frequency and functions of these resources. The findings revealed a higher frequency of occurrence of interactional markers among female writers. Attitude markers were the most preferred interactional resources for both groups of writers with more diversity of lexical choices noticed within the female sub-corpus. Hedges were also significantly frequent among females while males exhibited more preference for using boosters. Self-mentions and engagement markers were found to be the least used interactional categories among both genders. This study also revealed that interactional metadiscourse markers perform different rhetorical functions in the discussion of master's theses.

**Keywords:** Applied linguistics; Discussion sections; Gender differences; Interactional resources; Metadiscourse.

### 1. Introduction

Writing theses and dissertations can be challenging for English as a foreign language (EFL) students for being subject to assessment. Student writers who may seek to successfully get their masters' or PhD degrees are expected to meet their supervisors' and examiners' expectations and rhetorical preferences. Receiving the approval of those assessors is highly needed as they have "an absolute institutional power and status" (Lee & Casal 2014, 40). Theses are regarded as "the longest and most challenging pieces of assessed writing" (Thompson 2013, 284) to be written, organized and composed, especially for L2 novice writers who may not be sufficiently familiar with the L2 writing conventions.

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Among the several research issues in the study of such academic genres is the writers' tendency to establish a writer-reader interaction through employing several rhetorical resources for fulfilling different communicative purposes. It is worth noting that the study of discourse is based on two different and yet complementary perspectives. The ideational perspective considers discourse as a set of scientific facts or statements of information that objectively build on previous knowledge. The second perspective considers academic discourse as a socially determined form of language that comprises interpersonal interactions between writers and their readers (Hyland 2005).

According to the second perspective, writers of academic genres are expected to establish an interactional relationship with their target readers, anticipate their background knowledge and reactions to the text and engage them to their argumentation. Hyland (2005) claims that the task of authors in academic writing must go beyond producing texts and presenting facts to negotiating realities and claims in a persuasive manner, "and balance facts with evaluation and certainty with caution" (Sultan 2011, 28). This other basic level of discourse is known as metadiscourse in which writers tend to guide their readers throughout the course of their reading and interpretation of the primary text by using certain contextual clues and textual markers.

The term metadiscourse was first introduced by Zellig Harris (1959) to refer to the different linguistic items that comment on the main information of the text. After being neglected during the 1960s and 1970s, metadiscourse analysis started to appear in the study of discourse among several researchers in the field of applied linguistics in the 1980s (e.g., Vande Kopple 1985; Crismore 1989). Metadiscourse is defined by Tse & Hyland (2004) as "the range of devices writers use to explicitly organize their texts, engage readers, and signal their attitudes to both their material and their audience" (156). Thus, it can be an effective functional means of social interaction. Hyland (2005) adds that "a good use of metadiscourse depends upon the writer being familiar with the conventions and expectations which operate in particular settings" (74) and he emphasizes the importance of researching and teaching metadiscourse to help students using this rhetorical strategy more appropriately in different social and institutional contexts. Eventually, the use of metadiscourse varies according to the genre of the text, the rhetorical purpose as well as the socio-cultural identity adopted by the writer (Hyland 2004; 2016).

The interpersonal aspects of language representing metadiscourse can also function as persuasive and evaluative tools for pursuing convincing arguments in graduate academic discourse. This writing pattern is essentially applied in the discussion section of research articles (RAs) and dissertations where "writers stake claims about how their results integrate with and contribute to disciplinary knowledge" (Basturkmen 2012, 135). In this section, writers try to provide a set of descriptions, interpretations and then, evaluation of research findings to contribute to any new or more profound understanding of the research problem under investigation (Annesley 2010)

To achieve this communicative purpose, male and female writers may differ in the organization and the realization of their discussions. This can be marked in their employment of distinctive rhetorical features and interactional devices. Research on gender as an individual characteristic was proved to be an influential factor in academic discourse in which the individual identity of the writers could influence

their linguistic choices including the use of metadiscourse markers in academic writing (e.g; Adel 2006; Tse & Hyland 2008).

Therefore, the current study seeks to explore possible gender variations in the use of interactional metadiscourse markers drawing on Hyland's (2005) interpersonal model of metadiscourse. It examines 20 (10 by males and 10 by females) Master's theses discussion sections written in English by Algerian students who are native speakers Algerian Arabic. The main research concern of this study is to explore how male and female students use evaluative language through the use of metadiscourse to write their discussion sections of master's theses. Hence, the following research questions are addressed:

1. How do male and female writers of master's theses use interactional metadiscourse to fulfill the rhetorical purposes of their discussion section?
2. What are the similarities and/or differences in the use of interactional metadiscourse between male and female writers of master's theses?

## **2. Previous Related Literature**

The use of Metadiscourse markers in academic discourse has been recently examined by several researchers with different research objectives. Some of these studies emphasized the cross-cultural and cross-linguistic variations of metadiscourse (e.g.; Sultan 2011; Lee & Casal 2014; Alshahrani 2015; Al-Al-Zubeiry 2019) and some others examined the cross-disciplinary variations (e.g., Zarei & Mansoori 2011; Cao & Hu 2014; Estaji & Vafaeimehr 2015; Khedri & Konstantinos 2018; Kashiha & Marandi 2019). Metadiscourse was also examined within the abstract section (e.g., Gillaerts & Van de Velde 2010; Khedri, Heng & Ebrahimi 2013, Alotaibi 2015), introduction and methods sections (e.g., Jalilifar & Kabezade 2012; Loi & Lim 2013; Khedri & Konstantinos 2018; Cao & Hu 2022) as well as conclusion and discussion sections (e.g., Mirshamsi & Allami 2013; Ghahremani & Biria, 2017; Liu & Buckingham 2018). Most of these studies addressed the research article genre in particular for its important position in academic literature while theses still lack similar attention and investigation. On the other hand, some researchers such as Tomoyuki (2015) and Alharbi (2021) shifted their interest to the study of metadiscourse across genres within a single discipline to examine the genre variation of metadiscourse in English in terms of its frequency and function.

As far as gender differences in the use of interactional metadiscourse are concerned, few studies have been found in mainstream literature. Crismore et al., (1993), for instance, conducted a comparative study of metadiscourse in persuasive essays authored by American male and female writers. They found out that females used significantly more interpersonal metadiscourse devices than their male counterparts did. This finding was in line with another gender-based study by Tse and Hyland (2008) who analyzed a corpus of book reviews. The study revealed that both gender groups used far more interactional than interactive tools in their evaluative reviews to establish an explicit interaction with their readers and to mark their authorial presence. Moreover, a highly frequent occurrence of engagement devices was observed among female writers reflecting their concern for showing more scholarly solidarity and less judgmental authority (Tse & Hyland 2008). However, more usages of boosters and self-mentions were

marked in the male sub-corpus showing more confidence and great willingness to make bold statements and support their arguments. This was also proved by Yeganeh and Ghoreyshi (2015) in their comparative study of metadiscourse in research articles within abstract and discussion sections. The researchers discovered that female writers used hedges more frequently than males who preferred to use more boosters. This may reflect a major gender difference in constructing rhetorical identity in different academic genres.

In another study of gender differences in the use of interactional metadiscourse among students, Alotaibi (2018) analyzed a corpus of dissertation acknowledgments written by male and female Saudi students at U.S. universities. The researcher found an absence of hedging devices and engagement markers from all texts and a different distribution of boosting and attitude markers across the two genders. Boosters were used by female writers to acknowledge moral support while male authors used them to express gratitude for academic assistance. However, the two functions were reversed when attitude markers were employed. Self-mentions, on the other hand, were used more frequently among female writers unlike what has been found by Pasaribu (2017) and Nasri et.al, (2018) in their studies of argumentative essays where this rhetorical option was more frequent among male writers to signal and personalize their presence. Boosters and self-mentions were also found more frequent among female students in their writing of reflective essays as was revealed in a study by Rahmat et.al, (2020) who commented on this finding by stating that females are usually more assertive in expressing their feelings towards personal experiences.

The study of lexical choices associated with the use of interactional metadiscourse was the main concern of Alotaibi (2021) in a more recent study investigating gender variation in letters of recommendation. The researcher found that male and female writers differed in their choice of tokens expressing hedges and boosters. The modal ‘can’ and the verb ‘think’ as hedging devices, for instance, were more frequently used by the male writers while the modal ‘would’ occurred only in the female group. Attitude markers were the most preferred features among the recommenders of both groups, but they were slightly more frequent among females who were also found to use more instances of plural forms for self-mentions. A high divergence in the use engagement markers was marked between the two genders in which females used more engagement tokens to include their readers as discourse participants. The use of interactional resources was also found by Guçlu (2022) to be significant in organizing the conclusion section of master’s theses for their explicit persuasive nature in this educational genre. However, no clear gender variation was elicited in this study as opposed to the findings reviewed above. Guçlu (2022) attributed this divergent result to the specific evaluative nature of the master’s thesis conclusion section where “the authors prefer to appear in academic texts with their academic identity, rather than with their gender” (207). Nevertheless, it can be assumed that the use of interactional metadiscourse markers can be influenced by the gender factor along with the nature of the genre and the disciplinary conventions associated with it.

This review of previous related studies indicates that the thesis genre needs further investigation, especially, the part of the discussion that is believed to comprise a considerable amount of evaluative and interpersonal language elements. Alotaibi (2018) stressed the fact that metadiscourse boundaries are

flexible as they may vary from one genre to another; hence, he recommended future researchers to investigate different parts of theses and dissertations to develop our understanding of the application of metadiscourse in academic writing. Moreover, despite its critical role in academic writing, the gender variable remains rarely explored in metadiscourse studies, especially in the Algerian context. Hence, the current research is an attempt to fill in this gap in literature by exploring gender differences in the use of interactional metadiscourse in master's theses and relating these variations to possible disciplinary and generic factors.

### **3. Method**

The study explores how Algerian English as foreign language (EFL) graduate students employ the interactional resources of metadiscourse while discussing, evaluating and commenting on their research findings. Gender-based variations are emphasized to arrive at contextual insights about how male and female novice writers of English tend to interact with their readers. Hyland's (2005) model was used to identify metadiscourse patterns with a focus on the interactional resources: hedges, boosters, attitude markers, self-mentions, and engagement markers.

The analysis procedure began with calculating the frequencies of interactional markers' occurrences in the compiled corpus using descriptive statistics. A Chi-square test was ran to check if there is any significant statistical difference between males and females in using interactional metadiscourse. The aforementioned test was used to increase the accuracy of the obtained results. Qualitatively, a pragmatic analysis of metadiscourse markers was conducted to examine the functions of the markers identified based on their contextual occurrence in the discussion section.

#### *3.1. Corpus*

This study is based on a corpus consisting of 20 discussion sections of master's theses written in the field of applied linguistics by Algerian graduate students studying in the faculty of English at Biskra University, Algeria. The corpus is organized into two sub-corpora (10 discussions were written by male students with a total of 11580 words and 10 by female students with a total of 11480 words). The theses selected for the analysis were written during 2019-2021. They were retrieved electronically from D-space website where different published scientific products such as theses, dissertations and research articles written by Algerian researchers in the University of Biskra can be accessed and downloaded as PDF formats for a better dissemination of research by this academic community.

The theses selected for analysis were marked and validated by more than one examiner "ensuring higher reliability of dissertation grades" (Alharbi 2021, 47) and they were evaluated by their examiners as successful examples of theses in the field of applied linguistics. Part of this success is definitely attributed to the rhetorical choices made by students which may include extensive and appropriate usages of metadiscourse resources, especially in the discussion section where the position and the contribution of research can be more established. In fact, this was the main motivation for this sample selection.

The corpus size is considered to be adequate as the study adopted a mixed-methods research design (qualitative and quantitative approaches), involving frequency and functional analyses of metadiscourse. Moreno's (2008) criteria suggested for corpus comparison are taken into account in this study. This includes genre, discipline, level of expertise and form and length of texts. The texts were printed out and coded and then were analyzed manually to make sure that the examples only perform as metadiscourse. For more validity and credibility in this study, the analysis was reviewed by a specialist in genre studies and metadiscourse analysis.

### *3.2 Analytical Framework*

A more practical definition of metadiscourse was provided by Hyland (2004) when he stated that "metadiscourse enables the analyst to see how the writer chooses to handle interpretive processes as opposed to statements relating to the world" (167). This can be realized through a strategic use of both interactive and interactional metadiscursive resources. In this regard, Hyland (2005) provided taxonomy of metadiscourse markers divided into two major categories, namely interactive and interactional metadiscourse markers. The interactive markers can be used to organize the structural units of discourse to ensure cohesion and coherence while the interactional expressions are mainly employed to maintain connection and effective interaction with the target readers of the text. In other words, the interactive resources refer to the explicit ways of organizing discourse and guiding readers through the text while interactional metadiscourse refers to the evaluative, engaging and judgmental interventions of the writer fulfilled through a range of rhetorical expressions (Hyland 2004; Hyland & Tse 2004; Hyland, 2005). According to Hyland (2004), this category of metadiscourse "involves readers in the argument by alerting them to the author's perspective towards both propositional information and readers themselves" (168) as it works on creating an effective reader-writer textual interaction. Only the interactional aspects and functions of metadiscourse are examined in this study. What follows, then is a brief description of these particular features.

The interactional category of metadiscourse includes the use of hedges, boosters, attitude markers, engagement markers and self-mentions. Writers use hedges to avoid showing explicit commitment to their propositional information and to lower their authorial voices. Boosters, on the other hand, indicate the authors' certainty, confidence and strong commitment to their propositions. Khedri and Konstantinos (2018) assumed that "this may be the effect of particular pragmatic conventions in written texts" (51). As an attempt to appraise and evaluate their propositions, writers use attitude markers which may express surprise, importance, agreement, obligation, and others through attitude verbs (e.g., agree, prefer), adverbs (e.g., unfortunately, hopefully) or adjectives (e.g., appropriate, logical, remarkable). Engagement markers are used to directly address readers and invite them to participate in the argumentation. This can be achieved through using personal pronouns, directives, questions or asides. Finally, self-mentions mark the personal presence of the author (authorial presence) in the text. This can be used to establish individual authority and integrity in discourse. Indeed, the current study is based on Hyland's view (2004, 2005, 2008, and 2016) of metadiscourse, drawing on his metadiscourse model (2005) to the study of academic texts as the following table shows:

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**Table 1:** An Interpersonal model of metadiscourse (Hyland 2005, 49)

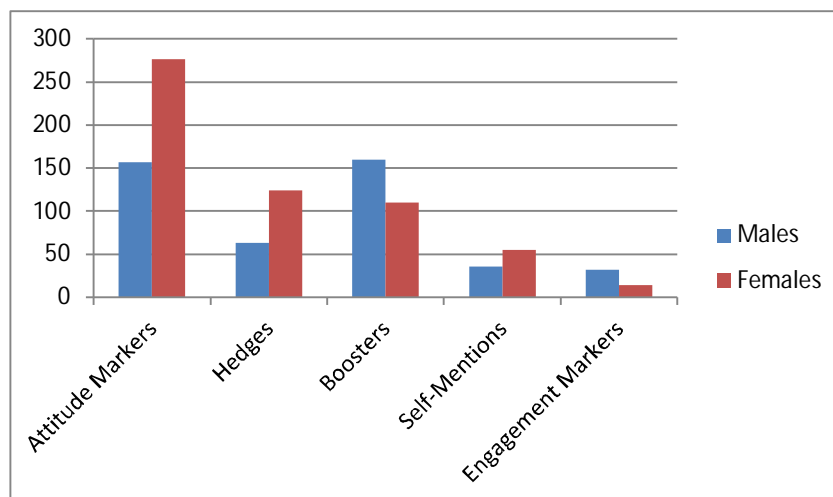
Category	Function	Examples
<b>Interactional Resources</b>	<b>Involve the reader in the argument</b>	
Hedges possible /about	withhold writer's full commitment	to proposition might / perhaps /
Boosters definitely / it is clear that	emphasize force or writer's certainty	in proposition in fact /
Attitude markers surprisingly	express writer's attitude to proposition	unfortunately / I agree /
Engagement marker see that	explicitly refer to or build relationship with reader	consider / note that / you can
Self- mentions	explicit reference to author(s)	I/ we / my / our

#### 4. Results

It was approved in many studies (e.g., Hyland 2005; Tse and Hyland 2008 and Khedri & Konstantinos 2018) that the use of interactional metadiscourse is markedly frequent in applied linguistics texts to support personal interpretations of qualitative and statistical data, and to present arguments, views and ideas in more appropriate and persuasive ways. The results of the current study revealed some differences between the female and male writers in the use of interactional resources of metadiscourse in this field, reflecting variation in establishing evidence and relationship with readers. Significant quantitative and qualitative differences were revealed across the two sets of corpora. As Table 2 below shows, female English as a foreign language graduate students used far more interactional items (50.4 tokens per 1000 words) than males (38.6 tokens) with remarkable functional differences in the use of interactional devices. This general finding is in line with Tse and Hyland's (2008) where more diverse and explicit interaction with readers was more prominent among female writers.

**Table2:** Interactional metadiscourse Markers in Master's Theses by gender

Category	Male	%	Female	%	Total	%
Attitude markers	157	15.2%	276	26.8%	433	42.1%
Hedges	63	6.1%	124	12.07%	187	18.2%
Boosters	160	15.5%	110	10.7%	270	26.2%
Self-mentions	36	3.5%	55	5.3%	91	8.8%
Engagement markers	32	3.1%	14	1.3%	46	4.4%
Per 1000 words	38.6		50.4		44.5	



**Figure1:** Overall Distribution of Interactional Metadiscourse Markers in Master's Theses

The mean frequency of interactional markers in the discussion section written by EFL male and female students was ( $m=89.6$ ) and ( $m=115.8$ ) respectively. This statistical difference clearly indicates that females used a higher number of interactional markers than their male counterparts.

**Table3:** Results of Chi Square Test of Male and Female Students' Use of Interactional Markers

<i>N</i>	<i>df</i>	<i>P</i>	<i>P-Value</i>
5	4	0.05	1.18

We also ran a Chi square test of male and female students' use of interactional markers in writing the discussion section of master's theses. The results confirmed that there is a significant statistical difference ( $p\text{-value } 1.18 > 0.05$ ) between males and females in their use of interactional markers. The following subsections will provide a pragmatic analysis of results for each interactional metadiscursive type, namely attitude markers, hedges, boosters, self-mentions and engagement markers:

#### ***Attitude Markers***

Attitude markers are linguistic expressions used by writers to project themselves into their discourse through signaling their attitudes towards statements and propositions. These items can be used to express feelings, emotions, and evaluative views to guide readers towards certain interpretations. In this regard, Hyland (2004; 2005) stressed the importance of using evaluative metadiscoursal features, especially in soft sciences texts where "interpretations are typically more explicit and the criteria for establishing proof less reliable" (Hyland 2004, 144). Moreover, it is believed that student writers use more expressive markers than professional writers to express stronger emotions (Hyland 2016).

As shown in Table 2, female students deployed a higher number of attitude markers than their male counterparts as females used 276 tokens (26.8%) of attitude expressions while males used only 157 tokens (15.2%). This may indicate the tendency of women to offer more subjective comments on their statements showing stronger emotional reactions and willingness to build up more interactional relationship with their readers. Crucial differences in the use of attitude markers were noticed between the



two genders in terms of their lexical choices and usages. In their description and evaluation of their results, females, for instance, were found to use words and phrases that express surprise, appraisal and importance. They used some adjectives such as *great*, *significant*, *important* and some adverbs such as *expectedly*, *markedly*, *essentially*, *notably*, *originally*, *reasonably*, *surprisingly*, as they used certain stylistic expressions such as *it is worth mentioning*, and *in a similar fashion* (see Examples 1 and 2). Males, on the other hand, emphasized necessity, relevance and precision while commenting on their findings. They used adjectives such as *beneficial*, *valuable*, *useful*, *effective*, *crucial*, *vital* and adverbs like *more precisely*, *particularly* as well as some expressions like *it is necessary to review*, *it is relevant to notice* (see Examples 3 and 4).

- (1) From the data analysis and interpretations, *it was remarked that* edublogs are of a *great significance* in the EFL learning process.
- (2) *Expectedly*, the master's degree rests on how committed the student is; it requires a *substantial effort* and working full-time.
- (3) It was found that students' self-esteem is of *vital importance* in their learning experience and their path into benefiting the most from their education.
- (4) *More precisely*, it demonstrated that classroom interaction is an *effective strategy* to be adopted for both teachers and students.

### **Hedges**

Based on the results in Table 2, hedges were also used more frequently among female student writers as opposed to their male colleagues (124 vs. 63 tokens respectively) showing more caution in interpreting results and "awareness of power asymmetries inherent in novice-expert interactions" (Lee & Casal 2014, 21). This necessitated the use of some tentative expressions to withhold commitment to personal interpretations and to consider counter views and perspectives (Hyland 2005).

Notably, female and male student writers in this study used hedges differently. Females used hedging devices such as *may*, *would be*, *can be*, *likely*, *possibly* mostly to restate their hypotheses while starting their discussions (see Example 5). Higher frequency of the epistemic verb '*might*', was noticed when females were reporting their results as an attempt to mitigate their reporting tone and to show less commitment to certain claims (Example 6). *Might*, *could be* and *might potentially* were frequently used among females while interpreting their findings to lower their authorial voices. This was often followed by reference to previous research to support their interpretations or deduction (Example 7). Finally, verbs like *assume*, *argue*, *appear*, *seem*...etc were employed in the female sub-corpus to express uncertainty when presenting findings (Example 8).

- (5) It was hypothesized that the use of concept mapping *may* work on enhancing students' reading comprehension.
- (6) However, the other half of students considered L1 interference as a marker of a linguistic deficit that *might* impact negatively their speaking progresses and performances.

- (7) The strategy of CS *could be* regarded as a linguistic deficit whose practicality in language classes *might* leave the students with an inadequate linguistic mastery of the target language, English (Elridge 1996; Modupeola 2013; Rathert 2012).
- (8) It *appears* as if learners as far as this sample is considered, have a strong theoretical understanding of collocations, but significantly inadequate knowledge when it comes to practice or application.
- Males, on the other hand, used hedges very infrequently with mostly one single reason which was to set some interpretations or to give possible account and explanation of certain findings. Few and limited lexical hedges were used such as *may, likely, may be, and might be* as the following examples show:
- (9) This *may be* due to the fact that females are more interested to study foreign languages and English language particularly than males who often choose to carry on scientific studies.
- (10) This *might be* because both curriculums were not based on predetermined objectives.

### **Boosters**

Boosters, however, were far more employed by male student writers showing higher confidence in presenting and interpreting their findings and more certainty in asserting their claims. This finding is also in accordance with Crismore et al. (1993), Hyland (2008) and Hyland (2016) who attributed the tendency of men to use more boosters to their “greater willingness to make bold statements and boost their arguments” (Hyland 2016, 1240).

Interesting statistical variation was detected across the two gender groups as males used 160 tokens (15.5%) and women used 110 tokens (10.7%). Both groups of students used boosters to make assertions of their findings, displaying more commitment to their statements, but different boosting preferences were detected in both sets of writing.

Males as users of more frequent boosters in this study employed a variety of linguistic devices such as epistemic lexical verbs, adjectives, adverbs and modal auxiliaries functioning as boosters. Verbs such as *to assert, to confirm, to reveal, to show, to prove, to demonstrate, to affirm, to indicate and to find* were frequently used among the male writers to present and discuss new results discovered. This was often accompanied with the use of certain adverbs such as *really, clearly, certainly and explicitly* as an attempt to convince readers of the importance and validity of results. The following examples illustrate these usages (see Examples 11, 12, 13 and 14):

- (11) This also *indicates* that the teacher *really* wants his/her students to be involved with him/her in such type of interaction which has an impact on the students’ performance in speaking.
- (12) This *shows clearly* that the chosen topic is crucial for a successful interaction.
- (13) It was *found out* that the English language course in both departments did not meet the students’ needs.
- (14) The results *explicitly proved* the successfulness of classroom interaction as a strategy to develop EFL students’ speaking skill.

Remarkably, boosting adjectives such as *clear, obvious, certain* and *apparent* were frequently used in the male sub-corpus (see Examples 15 and 16) along with some intensifier adverbs such as *very, in*

*fact, indeed* (see examples 17 and 18). These metadiscursive items were mainly used among males to boost their arguments which are supposed to be based on credible results and concrete data.

(15) It is *clear* that students are receptive to the usefulness of authentic videos and have positive outlooks towards it.

(16) It is *apparent* that teachers have an important role to play in fostering and improving self-esteem.

(17) *Indeed*, teacher-learner interaction could be more successful if learners feel at ease with their teachers.

(18) It is therefore *very* important for students to not only use ICT and expect to be autonomous, but to make good use of ICT and E.D and do efforts to achieve the aim of the existing educational system.

Other metadiscursive items used in this sub-corpus are modal auxiliary boosters such as '*will* and '*would* to explicitly express certainty (see Examples 19 and 20). Again, this may express assertive arguments in a form of reactions to real world findings which is a principal part in the discussion section. This can also reflect group membership, involvement and solidarity with readers (Hyland 2016) showing more commitment and responsibility for predicting practical outcomes based on empirical findings. Boosting adverbs were often used to support these assertions. It is worth noting that females also used this boosting strategy for the same communicative purposes in their writings.

(19) The variety of learning techniques for young learners *will definitely* result in a syllabus that meets their needs. Experiencing different aspects of learning *would* also *greatly* help students to improve their knowledge and skills. (Male sub-corpus)

(20) Edublogs are *highly* useful as a learning model to autonomously develop EFL students' writing productivity and relying on them *will essentially* come up with positive results. (Female sub-corpus)

Females, on the other hand, used a smaller number of boosters, but diverse and interesting instances were detected. Boosting verbs such as *to prove, to assert, to show, to affirm, to reveal, to elicit* and *to exhibit* were used frequently to report facts and results. This was also supported with the use of boosting adverbs such as *indeed, highly, very, fully, firmly* (see Examples 21, 22 and 23 below):

(21) It is *firmly affirmed* that writing productivity is *highly* required for the successful EFL learning process, especially at master levels.

(22) It was *asserted* that the participants were *fully* aware of the important use of edublogs.

(23) This *indeed proved* the positive attitude of the students towards the implementation of e-portfolio assessment.

Interestingly, females used 'all' as a quantifier pronoun to express certainty and to persuade readers (mainly examiners) of the absolute success and completion of their research work. Therefore, 'all' in this case functions as a booster device (see the following examples):

(24) The study results answered *all* the research questions and achieved *all* the study aims. Likewise, *all* research hypotheses have been confirmed.

(25) They *all* developed positive attitudes towards applying peer assessment in EFL context.

(26) They *asserted* that this method is *very* helpful and *all* of them *approved to* integrate it in their course because it contributes in enhancing students' essay writing.

Finally, a remarkable finding elicited in this sub-corpus is the use of words expressing ability not at an ideational, but rather at a metadiscoursal level. Words such as *can*, *cannot*, *can never* and *possible* were used in the discussion sections of female students to persuade their readers of their arguments which were supposed to be deduced through data analysis. These words seem to serve the internal argumentation of the writers, and thus, they function as metadiscourse markers (Hyland 2005). The following examples illustrate this metadiscursive function:

- (27) Reflecting this on the educational context, students *can* benefit a great deal from possessing such ability when being exposed to emotional-based learning.
- (28) Owing to the fact that students do not have similar learning experiences, their weaknesses in reading *cannot* be justified by means of a single cause.
- (29) This advanced degree *can never* be easily realized for it does require not only the digging deeper into an area of knowledge, but also integrating the previously learnt structures into the new one.
- (30) It is *possible* to apply DDL as it is with other internet assisted methods as long as careful and organized planning is involved in the process and the human factor is willing to make the efforts involved.

### ***Self- mentions***

A number of 55 tokens (5.3%) of self-mentions were found among female students while males used 36 tokens (3.5%). As it can be noticed, self-mentions are among the least frequent interactional categories in this study which can be attributed to the maintenance of formality and objectivity of academic writing, especially for post-graduate students (Hyland 2004). Notably, both groups of students seemed reluctant to use first person pronouns for “students are generally instructed to avoid them as they are viewed as hallmarks of informal and subjective writing” (Hyland 2016, 9). Only instances including plural forms such as ‘*we* and ‘*our* and the word ‘*the researcher* were identified in both sets of writing. They were basically employed to display authorial stance and visibility, but in the most reserved way.

These expressions of self-reference were used among females to exhibit their presence and control of their research through explicitly stating their research hypotheses (see Example 32), objectives (Example 33), decisions (Example 34), findings (Example 35), personal comment (Example 36) and personal observation (Example 37):

- (31) *We* hypothesized that learners and teachers may develop positive attitudes toward employing peer assessment.
- (32) *We* aimed at figuring out the motivational reason(s) that stimulated L1 interference when speaking English.
- (33) *We* decided to covertly be non-participant observers to collect the necessary information relevant to *our* research study.
- (34) Throughout *our* observation to the students in their Oral Expression’s sessions, *we* realized that CS was largely practiced by the students whenever they expected a breakdown in communication would take place.

(35) *Our* study did not reflect a purely qualitative or quantitative perspective, but rather the combination of both, pragmatism was adopted as the research paradigm.

(36) *We* noticed that the extra-sentential and intra-sentential types of CS were frequently used by the students when engaging in certain class communicative tasks.

Male writers of discussion sections of master's theses in this study also used personal references to state research objectives (see Example 38), to report empirical procedures (Example 39) and findings (Example 40), to state personal interpretation (Example 41) and more importantly, to express personal commitment to research significance and contribution (Example 42):

(37) *Our* main objective of this research is to highlight the most effective factors in the process of speaking English among the culture of EFL students

(38) *We* forwarded electronically an online questionnaire to 32 students in an attempt to answering the central questions that started *our* research study. *We* added another parameter in the students' questionnaire.

(39) *We* have found that students prefer the teacher to be included as a guide and source of feedback.

(40) *The researcher* deduced that through regular interactions in the classroom, learners can reduce their speaking mistakes, produce new grammatical forms and words, thus strengthening their language ability.

(41) Through this study, *we* seek to develop EFL students' speaking skill through suggesting the strategy of adopting classroom interaction.

### ***Engagement Markers***

Through engagement markers, "the writer introduces readers as real players in the discourse rather than merely as implied observers of the discussion" (Hyland 2004, 3). These markers were the least used category of interactional markers in our corpus. This is perhaps due to the general tendency of students to keep impersonal and objective in their academic writing. However, some instances of overt reader engagement were depicted in this study where both male and female writers were explicitly trying to bring their readers into their texts as discourse participants. Different interactional features were used to signal reader engagement including the use of obligation modals referring to actions of the reader such as *must*, *ought*, *should*, *have to*, *need to* (Examples 42, 43, 44, 45), references to shared knowledge (Example 46), and asides addressed to the reader (Examples 47, 48, 49, 50).

(42) Teachers of ESP in the faculty of Science and Technology at the University of Biskra *should* take into consideration students' needs in the development of the ESP course to boost students' interest and enthusiasm towards the course. (Male sub-corpus)

(43) In reference to the data obtained, *there should be* more emotional awareness, in self and others, and self-management as a way to optimize the use of emotions properly. (Female sub-corpus)

(44) Both parties *need* to work collaboratively in order to create a successful learning/teaching environment. (Male sub-corpus)

(45) *There need to be* more diversity in the teaching methodology opted for in the EFL classroom to prevent possible disinterest of learning and loss of motivation. (Female sub-corpus)

As it is displayed above, these instances illustrate the male and female writers' attempts to directly engage their readers into their dialogic discourse through suggesting certain practical actions to students, teachers and administration who may read the theses.

(46) *Needless to say* that the physical obstacles remain an issue as well, issues such as monetary support, resources unavailability, and infrastructure. (Female sub-corpus)

(47) Though we *were hesitant* concerning the implementation of a new approach at first and *expected* much anxiety within the classroom, the majority of the learners had appreciative and positive insights and outlooks. (Male sub-corpus)

(48) *One* can conclude that students of Mathematics are not aware of the importance of being able to understand discipline-related English lectures. (Male sub-corpus)

(49) *One consideration that should be noted* is that overcrowded classrooms were not highlighted by the interviewees as a factor that may stand against the integration of such strategies in their instruction. (Female sub-corpus)

(50) Therefore, the *current limitation may call* for a further future investigation(s) in the field of ESP. (Female sub-corpus)

These instances show that in their discussions, males tended to make personal side remarks and involve their readers into conclusions, exhibiting more concern for guiding them to certain interpretations. Females also used engagement items to highlight side notes and to make explicit appeals and recommendations for future work.

## 5. Discussion

The current study compared a set of 20 discussion sections written in English by Algerian EFL students at Biskra University where gender differences were examined. It aimed at exploring the different patterns of interaction that male and female students use to organize their discussion sections and to establish an interactional relationship with their readers by employing a range of metadiscursive resources. The overall examination revealed more differences than similarities in both gender groups with more frequent occurrence of interactional metadiscourse markers among female writers. To begin with, female students had more preference for using attitude markers with a total number of 276 instances and more variety of lexical choices. This may reflect females' general tendency to elaborate their arguments and to appraise their findings. This result is in line with Tse and Hyland's (2008) and Hyland's (2016) where females' discourse seemed more evaluative and persuasive during their interpretation of ideas. Different usages of attitude markers within the discussion section were noticed between the two genders in this study. While commenting on their results, females used words and phrases that express surprise, appraisal and importance such as *great, significant, important, essentially, surprisingly*. Males, on the other hand, preferred to emphasize the necessity; the relevance and the precision of their findings by using words such as *beneficial, valuable, useful, effective, it is necessary to review, it is relevant to notice*. This may indicate the tendency of females to offer more subjective comments on their results showing

stronger emotional reactions and willingness to build up an interactional relationship with their readers. Males, on the other hand, might prefer to emphasize the relevant application of their findings more objectively.

Another difference was depicted in the use of hedges which were also deployed more frequently among females to stress caution and tentativeness while males relied more frequently on boosters when stating and explaining their results. This was also found to be a major tendency in the Anglophone academic culture, especially in the field of applied linguistics (e.g., Hyland 2004; Tse & Hyland 2008; Lee & Casal 2014; Khedri 2018). In our corpus, lexical hedges limited to 'may be' and 'might be' were used by male students to present their personal interpretations of research findings while females used far more diverse tentative words and expressions such as *could be*, *might potentially*, *likely*, *possibly*. Boosters, on the other hand, were used among males to perform more various rhetorical functions while organizing their discussions showing more commitment to their statements and more certainty in asserting their claims. This finding is in accordance with Crismore et al. (1993), Hyland (2008) and Hyland (2016) who attributed the tendency of men to use more boosters to their "greater willingness to make bold statements and boost their arguments" (Hyland 2016, 1240). In fact, this can be also attributed to the inherent social power and authority projected in the discourse of males, which could be extended to their academic writing unlike females who usually prefer to mitigate their authorial voices as a form of socio-cultural conditioning. Hence, first language interference is another possible factor underlying these rhetorical preferences. Findings concerning hedges and boosters approve of those by Lee and Casal, (2014) and Alharbi (2021) who affirmed that their use is vital and crucial for student writers who may need to "evaluate their assertions in ways that are likely to be accepted and persuasive to their examiners and supervisors" (Hyland 2004, 140). It is worth noting that these studies did not examine gender differences, but they could arrive at interesting information about the use of metadiscourse in master's theses.

As self-mentions are concerned, no remarkable difference was found in this study. Both groups of students restricted the use of self-reference markers to setting objectives and explaining methods showing less authorial stance. The personal pronoun 'I' which is usually used to express personal opinion and personal authority was not found in our corpus. This strongly matches Hyland's (2016) findings about the use of self-mentions in English dissertations written by Chinese students. In this regard, Hyland stated that "First person pronouns are a powerful way of projecting a strong writer identity and this individualistic kind of stance clashed with their cultural beliefs about being too assertive, particularly when it meant getting behind views for a teacher who was also judging their work for a grade" (2016, 9). The explicit use of self- mentions among novice writers is generally believed to be inappropriate for its possible influence on the formality and objectivity of academic discourse (Hyland 2004). Furthermore, self-mention expressions were found to be more frequent in humanities and social sciences such as the field of applied linguistics (e.g., Hyland 2004; Khedri and Konstantinos 2018; Siahpoosh & Sabri 2021) as opposed to hard sciences where linguistic objectivity and disciplinary knowledge is favoured over personal interpretations (Hyland 2005). In this regard, Khedri and Konstantinos (2018) noted that "such

discrepancies reflect the susceptibility of metadiscursive features to the socio-rhetorical cultures conditioned by the discipline to which the writers belong” (47). Thus, self-mentions are probably discipline specific and not only gender specific features.

Finally, engagement markers were the least frequent interactional category in our corpus. This finding is consistent with those from previous studies that found engagement markers infrequent compared to other metadiscourse categories in master’s theses (Hyland 2004; Lee & Casal 2014; Alharbi 2021). This is perhaps due to the general tendency of students to keep impersonal and objective in their academic writing. However, some instances of overt reader engagement were depicted in this study in which both male and female writers were explicitly trying to bring their readers into their texts as discourse participants. Male students exhibited more preference for using engagement exponents which reflected a sense of solidarity and credibility in the end of their discussions where recommendation and justification are among the major rhetorical moves (Hopkins and Dudley-Evans 1988). Surprisingly, there was a high divergence between our finding and some previous others like Tse and Hyland (2008) and Alotaibi (2021) in which engagement markers were more frequent among female writers. The former investigated book reviews and the latter examined letters of recommendation. This must reveal a significant difference of authorial stance across different academic genres in relation to gender.

Through this study, we realized that gender is a significant variable in academic writing, especially in the way writers of different genders prefer to project themselves to their readers, evaluate their content knowledge and control the level of their authorial stance. However, other variables were found to interfere with gender to affect the use of metadiscourse, among which the type of the genre, the social discipline and the linguistic and cultural background of the writer (L1 interference).

## **6. Conclusion**

The study presented here investigated gender variation in the use of interactional metadiscourse in writing the discussion section of master’s theses within the field of applied linguistics. Hyland’s (2005) framework of metadiscourse was used to analyze the two sets of corpora. We sought to shed light on the importance of exploring gender differences in the use of evaluative and interactional discourse for a more understanding of this variation that can be applied to genre-based teaching. Gaining awareness about gender specific rhetorical patterns produced by students in their theses may help EFL teachers to guide them towards more careful and conscious usages of these rhetorical strategies without diverging from the writing standards and social norms associated with the academic genre. The study was made on a small sample size that was based on twenty (20) discussion sections, which means that the findings cannot be generalized. Moreover, the study focused only on the interactional category of metadiscourse and hence, further research is needed to examine interactive markers within the same part-genre.

Since different rhetorical sections/chapters of theses and dissertations fulfill different communicative functions (Hyland 2005), it is recommended to investigate other parts of master’s theses (e.g., abstract, introduction). It was also noticed in this study that genre differences can lead to significant variation in the deployment of metadiscourse between male and female writers. Student writers of master’s theses and more experienced writers of research articles or book reviews may differ in their use of metadiscourse.



Therefore, generic variation in relation to gender is also worth investigating in future research. Moreover, based on the other variables noticed in this study which may play a major role besides gender to shape academic discourse, it is recommended for future researchers to examine gender in relation to metadiscourse across different languages, academic genres or disciplines.

Most importantly, despite the interesting usages of metadiscourse depicted in this research, novice student writers in this study were found to narrow their use of metadiscoursal resources in general when writing their discussions. This could be resulted from their lack of knowledge and understanding of metadiscourse use. It is essential for students to increase their awareness of the effective use of metadiscoursal features in different types of texts. In this regard, Hyland stated "assisting students to an awareness of metadiscourse can thus provide them with important rhetorical knowledge and equip them with ways of making discourse decisions which are socially grounded in the inquiry patterns and knowledge structures of their disciplines" (Hyland 2010, 141–142). Hence, we encourage teachers to put more focus on teaching metadiscourse to their students and to provide them with the necessary rhetorical tools to produce better and more organized academic writing.

## استخدام أدوات ما وراء الخطاب التفاعلية في مناقشة نتائج رسائل الماجستير المكتوبة باللغة الإنجليزية لطلبة جزائريين: دراسة الاختلاف بين الذكور والإناث

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### الملخص

لقد أثبت أن تحليل ما وراء الخطاب يلعب دوراً مهماً في اكتشاف البنية البلاغية لمختلف أنواع الكتابة الأكاديمية التي من بينها رسائل الماجستير، إذ إن دور جنس الكاتب في مناقشة نتائج دراسة الماجستير لم يستكشف بشكل كاف في الجزائر، لذا تعتمد هذه الدراسة على الإطار التحليلي الخاص بـ (هايلند) 2005 لدراسة التباين في استخدام أدوات التفاعل الخطابية بين الجنسين من طلاب اللغة الإنجليزية في جامعة بسكرة، الجزائر. وذلك خلال كتابتهم لمناقشة نتائج رسالة الماجستير في مجال اللغويات التطبيقية، وأظهرت نتائج هذا البحث وتيرة أكثر ارتفاعاً لأدوات التفاعل الخطابية من طرف الإناث، في حين أظهر كلا الجنسين تفضيلاً لأدوات التعبير عن موقف الكاتب مع استخدام الإناث لمجموعة أوسع من العبارات المخصصة لهذا الغرض. كذلك أظهرت الدراسة أيضاً أن الإناث هن أكثر استخداماً لأدوات التحوط في حين يفضل الذكور العبارات الأكثر حدة ووضوحاً. ووزعت هذه الفئات من أدوات ما وراء الخطاب توزيعاً مختلفاً بين المجموعتين وذلك لأداء مهام خطابية مختلفة ومتباينة، وكانت الإشارات الذاتية وعلامات المشاركة أقل الأدوات استخداماً من طرف المجموعتين.

الكلمات المفتاحية: اللغويات التطبيقية، مناقشة النتائج، رسالة الماجستير، أدوات التفاعل، ما وراء الخطاب.

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