

## Interaction in Academic L2 writing: An analysis of Interactional Metadiscourse Strategies in Applied Linguistics Research Articles

ALMUDHAFFARI MUSA  
*School of Language Studies and Linguistics,  
Universiti Kebangsaan Malaysia  
Al-Baidha University, Yemen  
modaffar60@hotmail.com*

SUPYAN HUSSIN  
*School of Language Studies and Linguistics,  
Universiti Kebangsaan Malaysia*

IMRAN ABDULLAH HO  
*School of Language Studies and Linguistics,  
Universiti Kebangsaan Malaysia*

### ABSTRACT

*It has been acknowledged that academic writing is not only content-oriented but also involves various rhetorical strategies that help writers project themselves on text so that the content as well as the writer's stance can be understood. Interactional metadiscourse (MD) strategies are established to play a rhetorical role that contribute to the persuasiveness of argument. Due to the variation of rhetorical strategies across cultures, L2 writers tend to find some problems employing appropriate interactional MD strategies to express a clear stance and engage readers in the content presented. This paper examines the extent to which interactional MD strategies are employed in advanced L2 writing. To this end, 34 research articles written by Yemeni/Arab applied linguistics L2 writers were analysed. Based on Hyland (2005a), interactional MD strategies were identified via AntConc, a concordance analytical software tool. Moreover, a qualitative analysis was conducted to examine the way how advanced L2 writers use interactional MD strategies to pursue persuasive goals. The findings indicate that L2 writers tend to employ impersonal and less dialogic style in academic writing. A closer in-depth analysis indicates that the most salient interactional strategies in Yemeni L2 writing include making bare assertion as well as marking certainty of claims. They mostly tend to make assertion as they indicate research gaps and express conviction when they state findings and summarize their research. The implications of such findings could be useful for genre analysis, academic writing and L2 writing instruction.*

*Keywords: genre analysis; research articles; interaction; interactional metadiscourse strategies; L2 writing*

### INTRODUCTION

Academic writing has been established as interactional, dialogic and essentially persuasive (Hyland, 2005a; Hyland & Guinda, 2012; Mu, Zhang, Ehrich, & Hong, 2015; Swales, 2004). In such a persuasive genre, academic writers are not only expected to impart referential knowledge but they also need to convince members of discourse community of the new knowledge claims put forth. Among the key components of persuasive academic writing is to develop a clear stance and engage readers in the academic argument (Aull & Lancaster, 2014; Hyland, 2005b). Hyland (2005b) suggests that these two features (namely, expressing appropriate stance about claims and engaging readers in an unfolding dialogue) constitute the major functions of academic writing. Expressing authorial stance and engaging readers in a particular academic argument are normally realized through interactional metadiscourse (MD) strategies (Crismore,

Markannen, & Steffensen, 1993; Hyland, 2005a, 2017; Kopple, 1985), which comprise five main linguistic categories, namely hedges e.g. might, in my opinion); boosters e.g. evidently, demonstrates; attitude markers e.g. interesting, it is unfortunate that etc.; engagement markers e.g. note that, let us, should etc. (Crismore et al., 1993; Hyland, 2005a; Kopple, 1985). Such interactional strategies perform a rhetorical role in academic writing contributing to the effectiveness of academic argument (Abdollahzadeh, 2011; Hyland, 2005a; Lee & Deakin, 2016; Mu et al., 2015). Thus, an effective use of interactional MD strategies creates a rhetorical effect on the audience which would probably lead to a convincing academic argument.

Nevertheless, it has been acknowledged that there is a lack of appropriate authorial stance and audience engagement in L2 writing (Hinkel, 2005; Hyland & Milton, 1997; Lee & Deakin, 2016; Ho & Li 2018). L2 writers generally tend to find some challenges to modulate epistemic commitment to claims and use appropriate interactional MD strategies in academic writing in a way that fits the conventions of English academic discourse (Aull & Lancaster, 2014; Hyland & Guinda, 2012; Hyland & Milton, 1997; Loi, Lim, & Wharton, 2016). They also tend to avoid signaling the presence thus rendering text less dialogic as well as insufficiently engaging. (Aull & Lancaster, 2014; Lee & Deakin, 2016). One plausible interpretation for the lack of authorial presence and audience engagement in L2 writing could be associated with the variation of rhetorical strategies across cultures (Blagojevic, 2004; Hyland, 2005a; Mauranen, 1993). While some interactional MD strategies might be regarded as persuasive in the Anglo-American culture (Hinkel, 2005; Lee & Deakin, 2016; Li & Wharton, 2012), they might not be perceived as such in other cultural rhetorical contexts. Therefore, L2 writers, who have not been socialized in an Anglo-American culture might not take account of interactional MD strategies that are essentially compatible with the norms of the English academic writing (Blagojevic, 2004; Mauranen, 1993; Vassileva, 2001). Vassilva (2001), for instance, reported that Bulgarian L2 writers tend to employ more emphatics than hedging strategies in their L2 writing. In the Arabic culture, exaggeration and amplification are claimed to be the salient features of persuasiveness (Hinkel 2005; Hyland 2005) and so Arab L2 writers may attempt to pursue persuasive appeals by marking certainty of claims, and this, in some cases, may well affect cross-cultural communication (Vassileva, 2001) In this paper, we attempt to investigate these claims and examine the most salient interactional MD strategies that characterize Arab L2 academic genre. We also attempt to examine the extent to which these writers employ interactional MD strategies to pursue persuasive goals.

Research has established that interactional MD strategies play an essential role in academic writing owing to the interactive and dialogic nature of academic genre. They were found to perform a significant rhetorical role in achieving successful interaction (BOLDRINI & TOPI, 1954; Hyland, 1998c; Kopple, 2012), constructing persuasion (Ho & Li, 2018; Lee & Deakin, 2016), indicating speaker's identity (Abdi, 2002), constructing knowledge (Mu et al., 2015), and building successful academic argument (Abdollahzadeh, 2011). Moreover, interactional MD strategies have also been established as discourse analytical tool to compare rhetorical strategies across cultures (Mu et al., 2015), disciplines (Abdi, 2002; Hyland, 1998c; Khedri, Ebrahimi, & Heng, 2013) and gender (Aziz, Jin, & Nordin, 2016).

Further, previous research on interactional MD strategies in L1 and L2 writing explored how these strategies are employed by native and non-native writers (Abdollahzadeh, 2011; Blagojevic, 2004; BOLDRINI & TOPI, 1954; Toumi, 2012; Valero-Garcés, 1996; Yagız & Demir, 2014). Abdollahzadeh (2011) compared the use of interactional MD strategies by Iranian and American applied linguistics writers. The study shows that American writers

deployed more proportions of interactional MD strategies (particularly boosters and attitude markers) than their Iranian counterparts. Comparing a similar group of Turkish L2 and American writers, Yagız & Demir (2014) found that American writers deploy more hedging expressions than Turkish writers.

More recently, Lee & Deakin (2016) and Ho & Li (2018) compared the use of interactional MD features in successful and less successful L2 undergraduate students' essays. The researchers reported that writers of high-rated essays deploy more proportions of interactional MD strategies than writers of low-rated essays. Lee & Deakin (2016) investigated the extent to which L2 successful and less successful argumentative essays differ in their use of interactional MD on the one hand and how these argumentative essays differ in their use of interactional MD from high-rated L1 English argumentative essays. The study shows slight differences in the use of interactional MD between American L1 essays and Chinese ESL successful essays (26.10 vs 23.97 per thousand words). However, pronounced differences were detected between American L1 essays and Chinese ESL less successful essays (26.10 vs 22.49 per thousand words). The study suggests that L1 writers tend to prefer authorial presence whereas ESL students generally favor a detached style. Although such results are interesting, more in-depth analysis of L2 writing at more advanced level is needed to examine effective interactional strategies used to pursue persuasive appeals in writing.

Similarly, Ho & Li's (2018) study was devoted to the analysis of L2 argumentative essays by a group of first year Chinese-speaking university students. Having evaluated students' essays, the researchers divided them into two groups: high-rated and low-rated essays. The study revealed that there is a correlation between essay scores and the use of interactional MD strategies especially hedges, boosters and attitude markers. Another important finding their study shows is that writers of high-rated essays outperformed those of low-rated essays regarding the sophistication and lexico-grammar of MD expressions. Although the researchers indicate that more high-rated essays involve more lexico-grammatically complex and wider variety of MD expressions than low-rated essays, we also need to examine how advanced L2 writers make use of these strategies across rhetorical moves of research articles (RAs) to pursue persuasive appeals in their L2 writing.

Based on the studies reviewed above, effective use of interactional MD strategies to accomplish persuasive appeals in advanced L2 writing essentially merits further investigation. Despite the usefulness of the studies reviewed above, little is known how advanced L2 writers employ interactional MD strategies to pursue persuasive goals across different rhetorical moves of RAs. In this paper, we are curious to learn the extent to which advanced Arab L2 writers employ effective interactional MD strategies to pursue persuasive appeals in their attempt to get their work published. Thus, the implications of this paper would probably contribute to genre analysis and L2 writing instruction. The study intends to probe these questions: 1) What are the interactional MD strategies and their sub-types employed in English applied linguistics RAs by Yemeni L2 writers? 2) How do Yemeni L2 applied linguistics writers make effective use of interactional MD strategies to pursue persuasive goals across rhetorical moves of RAs?

## THE CORPUS

The corpus analysed in this paper was chosen based on a set of criteria suggested by Paltridge (1996), which includes genre, ESP and text type. RAs were selected for the analysis in the

present study since they are established as the most prominent academic genre (Hyland, 1998c; Swales, 1990, 2004). Moreover, RAs are considered the most readily accessible written products which may be easily extracted from journals. Within such an academic genre there are various types of RAs published in different disciplines. The selection was only made on *applied linguistics* to meet the second criterion. Moreover, the selection was further refined to focus on certain text-types within RAs in order to satisfy the third criterion. Accordingly, only three sections within RAs were finally analysed, namely the introduction, discussion and conclusion sections. Such text-type selection was made on argumentative ground since writers mostly expend one’s utmost rhetorical efforts using rhetorical strategies in these sections to convince members of discourse community of knowledge claims put forth

The question remaining is what size of corpus of *applied linguistics* RAs this paper is based on. Two processes have been undertaken to account for this issue. These include the collection and selection of applied linguistics RAs by Yemeni/Arab applied linguistics writers. The RAs were collected based on their availability in different journals. The researchers have collected 86 RAs from 24 journals. After rigorously refining the collection, only 34 RA (totaling 130828 words) were eventually selected from 11 journals. Table 1 illustrates the corpus analysed in the present study.

TABLE 1. Description of the corpus

RA	No of words			
34	Introduction	Discussion	Conclusion	Total
	71407	47393	12028	130828

The corpus selection process was done based on four criteria, namely the nativity of authors, the discipline, the journals and type of RAs. In fact, the nativity of the authors was confirmed during the collection process. That is, the researchers had to ensure that all the collected articles were published by Yemeni academic authors during the collection process. As for the discipline, the researchers have selected applied linguistics RAs since these articles were presumably written by the most advanced Yemeni L2 writers. This is because these writers serve as lecturers of English at Yemeni universities and thereby the interactional MD strategies they use would be most likely typical of interactional MD strategies used by Yemeni advanced L2 writers. As regards the journals, we have conducted a search which yielded 86 articles published in 34 journals out of which only 24 which are specialized applied linguistics journals. Out of these journals, only 11 journals were eventually selected. The selection of the journals was only made to those journals which are indexed and peer-reviewed.

As far as research articles are concerned, the selection was done based on four criteria, namely the topic, the length, the diachronic variation and the type of RAs. As the topic may influence the type of metadiscourse strategies used (Crismore et al., 1993; Hyland, 1998b; Milne, 2003), the selection was limited to one sub-discipline within applied linguistics. RAs on language teaching were selected as they represent the majority of the collected articles. In addition, the type of RAs was limited to data-driven articles i.e. those articles consisting of IMRDC (Introduction, Methods, Results, Discussion Conclusion) structure, and so the other RAs sub-genres such as review articles and theoretical articles were excluded. Regarding the length, all the articles selected does not exceed 9000 words. Finally, since the time may influence genre (Bazerman, 1994), the selection of articles was only limited to those articles published within the period from 2010-2017.

## METHODOLOGY

Traditional linguistics have mainly distinguished between two aspects of communication, the transactional and interactional, the latter; however, was often considered inferior to the former (Hyland, 2005a). Around four decades ago, some linguists such as Williams, (1981) and Kopple (1985) looked beyond the referential function of language to find out the effect of language on a particular audience by studying the interpersonal aspect of discourse, which they referred to as metadiscourse. They defined metadiscourse as the non-propositional aspect of discourse that does not add to the content but guides the reader to interpret text and expresses stance towards the content and readers. Based on this definition, MD has been classified into two major categories: textual MD and interpersonal MD (Crismore et al., 1993; Kopple, 1985).

Despite the bulk of research produced so far on MD, it has remained a fuzzy concept. The fuzziness of MD may be ascribed to the way in which it can be distinguished from the so called “propositional content” of discourse as several expressions may be used to perform metadiscoursal function in one context but may function as propositional in others (Hyland, 2005a; Swales, 1990). Thus, there have been different approaches to the study of MD; the broad and narrow approaches are the most prominent. The broad approach (Crismore et al., 1993; Hyland, 1998c, 2005a; Kopple, 1985) views MD as a broad category encompassing various features expressing authorial stance towards the content and readers. Advocates of the narrow approach (BOLDRINI & TOPI, 1954; Mauranen, 1992), on the other hand, view MD as a self-reflexive material which refers to the ongoing text. According to this view, all such expressions as hedging, boosting and attitude expressions are not deemed metadiscoursal since they do not refer to the textual material. Although Adel (2006), refined Mauranen’s earlier model by categorizing MD into metatext and writer-reader interaction, it seems that, like Mauranen, she still views MD to be restricted to expressions referring to the ongoing discourse. Despite the explicitness of the narrow approach restricting MD to those expressions that refer to the ongoing text, it does not regard expressions that describe the writer’s stance as well as some engagement features referring to the audience as metadiscourse features. Therefore, in this paper, we adopt the broad perspective for defining and analyzing MD expressions.

Nevertheless, as indicated above, different models have been proposed within the broad approach to MD. Despite the usefulness of earlier MD models within the broad approach to MD (Kopple; Crismore et al 1993), they seem to view MD as a secondary aspect of discourse. In addition, Kopple (1985) and Crismore et al (1993) view MD as a category comprising all the non-propositional features and so “it is much more difficult to establish its boundaries” (Swales 1990:188). In this paper, we follow Hyland’s (2005a) model as it seems to have avoided theoretical problems associated with the previous models by setting some explicit principles for delimiting the boundaries of MD so that MD features can be distinguished from the ‘propositional content’. To delimit the boundaries of MD, Hyland (2005a) set three principles for identifying expressions that may be classified as MD from items that are propositional:

- Metadiscourse is distinguished from the propositional content of discourse
- Metadiscourse refers to aspects of text that represent writer-reader interaction
- Metadiscourse refer exclusively to internal relations of discourse

(Hyland, 2005a, p. 38)

Moreover, Hyland's model is genre-based since it has been designed based on a large corpus of RAs (Mu et al., 2015), and has proven useful in several studies on MD (Ho & Li, 2018; Lee & Deakin, 2016; Milagros del Saz Rubio, 2011). Hyland (2005a) views MD as an interpersonal feature with two dimensions: interactive and interactional MD. In this paper, we focus on the latter category which comprise five sub-types: Hedges (e.g. may, possible, probably) boosters (e.g. show, of course, obviously etc.) attitude markers (e.g. agree, surprisingly etc.), self-mentions (e.g. I, we, the researcher etc.) and engagement features (consider, note, should etc.). We also used Hyland's model to examine the extent to which Yemeni L2 writers make use of MD to pursue persuasive appeals. Drawing on Crismore & Farnsworth (1989), Hyland proposed that MD can be used to pursue persuasive appeals. MD contributes to the rational, credible and affective appeals which characterize persuasive discourse:

- it promotes rational appeals when it explicitly links ideas and arguments;
- it relates to credibility appeals where it concerns the writer's authority and competence;
- it addresses affective appeals when it signals respect for the readers' viewpoint or that the message has direct relevance to the audience.

(Hyland 2005, p. 63)

The study adopts a corpus-based design employing both quantitative and qualitative methods to analyse interactional MD strategies and the way in which they were deployed to pursue persuasive appeals. Some studies of MD have employed quantitative methods to analyse the frequencies and distribution of MD features across different sections of texts. Nevertheless, it would be more useful if the quantitative is coupled with qualitative analyses in order to get a deeper understanding about the effective use of MD strategies in context (Beauvais, 1989; Ho & Li, 2018).

To identify and analyse instances of interactional MD in the corpus, we used Hyland's (2005a) MD model. However, we also adapted Halliday & Matthiessen, (2004) taxonomy of hedging sub-types since they have not been fully delineated in Hyland's model. Based on Hyland's (2005a) MD model, AntConc, a textual analysis software, was used to identify MD identities in the corpus. Although we used the list of potential MD expressions provided by Hyland (2005a) to search MD identities in the corpus, we had to look for other MD resources as this list is by no means exhaustive. Due to the fuzziness of MD expressions, we had to examine each occurrence of interactional MD in context to determine its metadiscourse function. As a result many potential MD candidates had to be excluded i.e. they appeared to function as metadiscourse but after careful scrutiny, they turned to be part of the propositional content rather than conveying authorial purpose. As an example from the corpus, the verb 'appear', which is listed as a hedging expression, can be considered in some contexts as metadiscourse and thus has been labelled as metadiscourse [1]. However, the same expression may be used to contribute to the content and thus it was excluded [2].

[1] While there was an interest in using corpora for linguistic research, communicative language teaching (CLT) *appeared* to be the dominant approach for foreign language teaching and learning.

[2] It *appeared* mostly with other strategy in the subjects' performances.

We have really detected hundreds of examples which apparently convey MD functions but they were eventually excluded as they turned to be propositional rather than metafunctional. To establish reliability, a sample was selected randomly from the corpus and was coded by another researcher. The inter-coder reliability was 87.50%. The few items in which there was disagreement were eventually reconciled. Having identified and analysed the frequencies of interactional MD strategies in the corpus, we then conducted a qualitative analysis to examine the extent to which interactional MD strategies were employed to pursue persuasive goals.

## FINDINGS

### OVERALL USE OF INTERACTIONAL MD

Interactional MD strategies indicate writers' attempt to create interpersonal negotiation with readers (Abdi, 2002; Hyland, 2004, 2005b). The use of interactional MD strategies used in writing renders the text more dialogic and interactional. The overall findings of the present study suggest that Yemeni L2 writers tend to prefer more impersonal style using fairly limited interactional MD strategies. Given the relatively limited interactional MD strategies used, Yemeni L2 writers generally tend to pay little attention to interaction as they write RAs. We can clearly see from Table 2 that the normalized frequency of interactional MD strategies in the analysed RAs is only 11.46 per thousand words, appearing only once in every 80 words.

TABLE 2. Interactional MD Strategies

Categories	Freq.	Freq. per 1000 words
Hedges	801	6.12
Boosters	254	1.94
Attitude markers	268	2.05
Self-mentions	58	0.44
Engagement markers	118	0.90
Total	1499	11.46

The findings indicates that hedging is the most salient interactional MD strategy in Yemeni L2 writing. The use of hedges seem to constitute over half of the interactional MD strategies used in the corpus. As Tabl 2. demonstrates, hedges are the most frequent interactional MD strategy used in Yemeni L2 RAs (6.12 per thousand words). The second most frequent interactional MD category is 'attitude markers' followed by 'boosters'. In fact, there are no differences in the frequencies of attitude markers and boosters in the corpus. Engagement and self-representation seems to be less prominent in Yemeni L2 writing; engagement markers and self-mention are the least frequent interactional MD strategies. While the former accounted for 0.90 per thousand words, the latter only amounted to 0.44 per thousand words.

### HEDGES

As stated above hedges are the most frequent interactional MD strategy in the corpus. Despite the fact that hedges were the most frequent in the corpus of this study, it can be claimed that they are fairly infrequent (6.12 per thousand words) compared to previous studies on interactional MD.

TABLE 3. Hedges subcategories

Subcategories	Freq.	Freq. per 1000 words
Modal Auxiliaries	391	2.99
Modal Adjuncts	172	1.31
Modal Attributes	30	0.23
Epistemic verbs	155	1.18
Circumstances	53	0.41
Total	801	6.12

Furthermore, it is important to note that the most frequent sub-types of hedges are modal auxiliaries, modal adjuncts and epistemic verbs whereas modal attributes such as *possible*, *probable etc.* and circumstances such as *to some extent*, *according to my knowledg etc.* are the least frequent (See table 3). Modal auxiliaries such as *may*, *might* were more frequent than all the other hedging expressions altogether. This indicates that Yemeni writer tend to depend on limited varieteis of hedging. Perhaps, they use limited vairety of hedging (e.g. the modal auxiliary *may*) as they could lack linguistic repoitoire of hedging expressions (Lee & Deakin, 2016). However, the least frequent hedging sub-types were modal attirbutes.

#### BOOSTERS

Unlike hedges which allow readers to disagree with a particular claim, boosters are used to mark the writer’s conviction and thereby restricts readers’ options.

TABLE 4. Boosters Sub-categories

Subcategories	Freq.	Freq. per 1000 words
Amplifying Adverbs	42	0.32
Emphatic adjectives	39	0.30
Emphatic verbs	136	1.04
Emphatics	18	0.14
Emphatic modals	19	0.15
Total	254	1.94

The findings demonstrate that Yemeni L2 writers commonly use emphatic verbs when they mark certainty of one’s claims. As we can see from Table 4, emphatic verbs such as *show*, *demonstrate* are the most frequent emphahtic expressions; they were even more frequent than all the other emphatic expressions altogether. These expressions could be less complex in terms of lexico-grammar than other expressions (Ho & Li, 2018). Emphaic adverbs and emphatic adjectives come next; yet they tended to be very limited. However, emphatics such as *in fact*, *no doubt*, *of course* as well as emphatic modals such as *must* were found the least frequent emphatic markers used (See Table 4). Arguably, L2 writers, tend to avoid expressing emphatics such as ‘of course’ as they quite probably view the ue of these marker as being restricted to spoken language and therefore they tend to avoid using them in foraml academic writing. Nevertheless, we can argue that the use of such emphatic expresson is frequent in spoken and written discourse (Simon-Vandenbergem & Aijmer, 2003), and thus can be used, when appropriate, to create a persuasive effect on audience.

#### ATTITUDE MARKERS

While hedges and boosters are used to reflect epistemic commitment, attitude markers convey the writers’ affective attitude to the content.



TABLE 5. Attitude Markers Sub-categories

Subcategories	Freq.	Freq. per 1000 words
Attitude adverbs	62	0.47
Attitude adjectives	201	1.54
Attitude verbs	5	0.04
Total	268	2.05

The most frequent attitude sub-types, as table 5 reads were attitude adjectives such as *important, essential etc.* It is worth mentioned that the attitude marker ‘important’, was the most frequent attitude marker in the corpus. Attitude adverbs such as *unfortunately, suprisingly etc.* were not frequent compared to attitude adjectives. However, the least frequent attitude markers were attitude verbs such as *agree hope etc.*

#### ENGAGEMENT MARKERS

Engagement markers are often used to engage the reader in an implicit dialogue. Given that engagement features were the second least frequent interactional MD features used, Arab L2 writing can be viewed as generally less dialogic..

TABLE 6. Engagement Markers Subcategories

Subcategories	Freq.	Freq. per 1000 words
Obligation modals	6	0.05
Directives	42	0.32
Reader Pronoun	70	0.54
Questions	0	0.00
Total	118	0.90

Reader pronouns were found the most frequent engagement markers in the corpus (see Table 6). Interestingly, it was found that the inclusive pronouns “we” is the most frequent engagement device whereas the other engagement sub-types were not frequent. A plausible interpretation to this could be that the use of this pronoun may also be common in the Arabic rhetorical culture, which is often utilized to seek solidarity with audience and point to a collective commitment that should be fulfilled.

#### SELF-MENTIONS

The findings indicate that Yemeni L2 writers avoid expressing self-representation in academic writing. As Table 6 demonstrates, self-mentions were scarcely used; they only accounted for 0.44 per thousand words. Thus, this study provides an empirical evidence that Yemeni L2 writers tend to avoid the use of self-mentions in academic writing.

TABLE 7. Self-mentions sub-categories

Self-mentions sub-categories	Freq.	Freq. per 1000 words
First person singular	4	0.03
first person plural	21	0.16
The researcher(s)	33	0.25
Total	58	0.44

It is interesting to note that the most frequent self-mention marker is ‘the researcher’. This mostly indicates that L2 writers tend to avoid marking self-representation but in cases where it is necessary to refer to oneself they resort to this expression. This is evidenced by the lack of the first person pronouns especially the first person pronoun which is almost non-existent in the corpus.

#### INTERACTIONAL MD AND PERSUASIVE APPEALS

Having identified the overall use of interactional MD and their sub-types in the corpus, we will now consider how they employed these strategies to pursue persuasive goals across rhetorical moves of RAs. To begin with, we will see how Yemeni L2 writers employ interactional MD strategies to pursue persuasive appeals as they attempt to establish a niche i.e. to indicate a research gap that needs to be filled. Extract 1 is a typical example from the corpus where writers attempt to indicate a research gap.

##### Extract 1 [RA1]

This study is an investigation into the use of DMs in the composition writings of Yemeni EFL learners. The motivation behind initiating this kind of work stems from the fact that there is a dearth of research that is concerned with how DMs are actually utilized in the written discourse created by Arab EFL learners. Thus, this study is meant to fill this gap in research and it is hoped (attitude marker) that it will yield some insight into this 'overlooked' though extremely important [**Attitude marker**] area of second language writing.

The writer of extract 1 attempted to indicate a research gap in the study of DMs in the composition writings of Yemeni EFL learners. The argument seems quite assertive as the writer expressed his/her claim by making an assertion. The writer attempted to show that there is a research gap by making a bare assertion stating that *there is a dearth of research* on discourse markers. The writer concludes the argument attempting to share his/her attitude with the reader expressing his/her hope: *it is hoped that* his/her study would provide insight into the effective use of discourse markers. Although the use of an attitude marker may be useful here, the argument would have been more convincing had the author employed more interactional MD strategies that may qualify his/her claim and signal sensitivity to audience.

Having looked at the rhetorical strategies utilized in the introduction of L2 research papers to indicate a gap in research, let us now look at the way in which interactional MD strategies are employed in the discussion section as writers state and comment on findings. Extract 2 demonstrates the way Yemeni L2 writers use interactional MD strategies as they state findings.

##### Extract 2 [RA8]

In this study and the previously mentioned studies, the results *show* [**Booster**] that there is no relationship between the level of foreign language anxiety and the year of study and the reason might [**Hedge**] be due to the novelty effect (Rezazadeh & Tavakoli 2009). Thus, when the students move from one year to another, they come across new courses in which they would study new topics and this creates some challenges for the students. The challenges which students encounter every year keeps them associated with anxiety which might [**Hedge**] decrease slightly but the difference is not significant from one year to another.

In extract 2, the writer stated the findings of a study on the relationship between foreign language learning anxiety and year of study among Yemeni EFL university students. The writer presented the findings by marking one's conviction using the emphatic verb *show* in order to emphasize the findings of research hypothesis and establish ethos. The writer softened one's first claim to acknowledge alternative views stating that the lack of relationship between foreign language anxiety and year of study *might* be due to novelty effect. However, s/he argued quite categorically by asserting that the relationship between anxiety and year of study is not significant because each year has its challenges. The argument would have been more effective had more interactional MD strategies been employed to acknowledge alternative views and signal sensitivity to audience.

In the extracts above, we have seen L2 writers' use of interactional MD strategies in the introduction (as they attempt to establish a niche) and in the discussion section (as they attempt to state and comment on findings), in extracts 3, we will see the way in which they employed interactional MD as they wrap up their papers (i.e. when they summarize their study).

#### Extract 3 [RA17]

Based on the results mentioned in Table 1, the findings showed [**Booster**] that all the participants exhibited positive attitudes toward reading English materials via CAREY program. Therefore, they emphasized that their reading skills improved because of their reading through the CAREY program. The CAREY program pushed up the participants from the negative side to the positive side towards reading English materials.

Extract 3 summarizes the findings of a study on the role of CAREY program on the development of EFL reading skill. The writer expressed his/her certainty stating that the findings *show* that EFL learners display a positive attitude towards CAREY program. S/he continued one's argument making an assertion that learners improved their reading skills using this program and that it *pushed up* learners' level positively. Given the lack of stance and engagement features, the writer(s) did neither seem to have gained ethos nor has he effectively appealed to readers' pathos. S/he first marked his/her conviction using the emphatic verb *show* basically in order to support his/her hypothesis and s/he presented the rest of the argument focusing on the content presented.

## DISCUSSION

The first research question asked the extent to which Yemeni L2 writers employ interactional MD strategies in their RAs. The findings suggest that Yemeni L2 writer tend to employ limited interactional MD strategies in RAs. These findings appear to differ from previous research on interactional MD in academic writing such as interactional MD in RAs (Hyland, 1998a) postgraduate dissertation (Hyland, 2004) and undergraduate students' essays (Lee & Deakin, 2016). In these studies, interactional MD strategies were heavily used to mark authorial stance and signal sensitivity to audience. The lack of interactional MD strategies in Yemeni L2 writing indicates that Yemeni L2 writers pay little attention to interaction in writing. It is possible that Yemeni L2 writers are probably inclined to focus more on the propositional content and pay less attention to interaction (Cheng & Steffensen, 1996; Hyland, 2012). Although the content is by no means important, it is important to take into account the way in which the content may be

perceived by audience which may be manifested by expressing authorial stance and voice in writing. Thus, the present study provides empirical evidence that even advanced Yemeni L2 writers tend to lack the familiarity about the important role of interactional MD strategies in L2 academic writing.

At any rate, the study shows that Yemeni L2 writers tend to express caution to some extent in L2 academic writing. Like previous research (Abdollahzadeh, 2011; Hyland, 1998c, 2010), hedges in the present study are the most frequent interactional MD strategy in the corpus. This reflects the argumentative nature of academic writing which demonstrates the writers' tendency to decrease one's epistemic commitment towards knowledge claims. Modal auxiliaries are the most frequent interactional MD expression in the corpus. The heavy use of modal auxiliaries is established in previous research on interactional MD in RAs (Abdollahzadeh, 2011; Ho & Li, 2018; Hyland, 1998c), students' essays (Ho & Li, 2018; Lee & Deakin, 2016) and post-graduate dissertations (Hyland, 2004). This may plausibly be ascribed to the fact that these expressions are lexico-grammatically less complex than other hedging expressions (Ho & Li, 2018).

However, the use of hedges may be considered relatively limited in the present study compared to the use of hedges in previous research. For example, Hyland's (1998a) study shows that hedges are two times more frequent than they are in the present research. This supports the assumption that hedging is culture specific (Bloor & Bloor, 1991) and that while hedging might be deemed persuasive in the Anglo-American context (Hinkel, 2005), it might not generate the same rhetorical effect in other cultural contexts. More importantly, this quite supports the view that L2 writers tend to utilize a few proportion of hedges in writing (Hinkel 2005).

Nevertheless, it was found that Yemeni L2 writers used much less emphatics (i.e. boosters) than hedges. These findings concur with Abdollahzadeh (2011), who report that Iranian L2 writers used much more frequency of hedges than boosters. This suggests that L2 writers tend to prefer more detachment than commitment in their RAs genre to get their argument accepted. Although writers are recommended to hedge plausible reasoning, there are cases where they need to mix their caution with conviction as they might not be sufficiently persuasive if they are always accommodating (Crismore & Farnsworth, 1989; Hyland, 2005a). The amalgamation of caution and conviction renders the argument more persuasive than adopting one single strategy (Dafouz-Milne, 2008; Hyland, 2005a; Lee & Deakin, 2016). Moreover, the study indicates that Yemeni L2 writers tend to express relatively limited affective stance using scarce attitude markers in their L2 RAs. This finding is consistent with Lee & Deakin (2016) who found that L2 writers tend to use limited attitude markers. Likewise, Abdollahzadeh (2011) found that Iranian L2 writer employ fewer proportions of attitude markers than their American counterparts. This reinforces the view that L2 writers prefer more detached and impersonal style (Lee & Deakin, 2016).

More surprisingly, engagement markers and self-mentions are utterly scarce. Nevertheless, the lack of engagement features seems to resonate with (Lee & Deakin, 2016) who report that L2 writers tend to employ limited range of engagement features in academic writing. It is important to note that the use of engagement indicates the extent to which writers show sensitivity to audience. Therefore, L2 writers should be encouraged to make use of these features in their academic writing. Moreover, the scarcity of self-representation seems to resonate with previous research (e.g. Lee & Deakin, 2016) who report that L2 writers tend to avoid marking rhetorical self. This could suggest that L2 writers still believe that academic

writing is objective and faceless (Hyland, 2005a) and so they contend that the use of personalization should be avoided as much as possible.

The second research question was set to examine the extent to which Yemeni L2 writers employ interactional MD strategies to pursue persuasive goals across some rhetorical moves of RA introduction, discussion and conclusion sections. The study suggests that Yemeni L2 writers employed utterly limited persuasive appeals as they attempt to indicate research gaps. Like Lee and Deakin's (2016) on undergraduate argumentative essays, the current study shows that Yemeni advanced L2 writers mostly express their claims using bare assertion as they indicate research gaps:

- 1) The motivation behind initiating this kind of work stems from the fact that there is a dearth of research that is concerned with how DMs are actually utilized in the written discourse created by Arab EFL learners. [RA1]
- 2) This issue has not received enough attention from the researchers in Yemen especially the variables associated with anxiety like the year of study. [RA6]
- 3) As Yemeni EFL context is concerned, FL reading anxiety and related variables have not been examined namely at schools. [RA8]

Given the lack of interactional MD strategies used, Yemeni L2 writers do not seem to pursue persuasive appeals as they attempt to indicate research gap. Arguably, they tend to present their argument assertively as they feel it is not necessary to express their stance about the content presented (Abdollahzadeh, 2011; Vassileva, 2001). Compared to expert writing which exhibits dialogically expansive stance (Aull & Lancaster, 2014), the present study suggests that Yemeni L2 writing is quite assertive.

As regards stating findings, Yemeni L2 writers generally tend to mark conviction using emphatic expressions. This findings seem to concur with previous research on L2 writing (Abdollahzadeh, 2011; Elie Hinkel, 2005; Hyland & Milton, 1997; Vassileva, 2001) which report that L2 writers tend to express commitment more than caution in writing. Yemeni L2 writers tend to express conviction as they state findings mostly using emphatic verbs such as show, demonstrate etc.

- 4) Results *revealed* that students' communication performance scores for those participating in the experimental group were greater than their matched control group students. [RA25]
- 5) The findings *demonstrated* that student writing in the current course was basically inadequate. [RA16]
- 6) The findings *showed* that all the participants exhibited positive attitudes toward reading English materials via CAREY program. [RA17]

Similarly, the study indicates that Yemeni L2 writers express conviction and assertion as they summarize research. Similar to these findings are those reported by Abdollahzadeh (2011) who shows that Iranian applied linguistics writers tend to express certainty as they summarize their research to reinforce the validity of their hypothesis. Yemeni L2 writers were found to express certainty the most as they summarize their research using emphatic verbs.

- 7) This study *revealed* that in general, Yemeni school students of English as a foreign language experienced an above moderate level of reading anxiety. [RA6]

- 8) This study has demonstrated that students need a sound knowledge of English to practice their roles as English language teachers in Yemen and this can be attained with emphasis on improving learners' communicative competence. [RA 29]
- 9) The result of this study *shows* that multimedia annotations have a great impact on acquisition of vocabulary. [RA19]

These examples support the assumption that Yemeni L2 writers tend to be influenced by the most salient rhetorical norms used in the Arab culture such as assertion and amplification. These rhetorical characteristics may not be appropriate in English academic context in which hedging is more favorable. Although it is recommended to mark conviction in academic writing; writers need to mix their conviction with caution in order to get their views ratified. Further, the lack of interactional MD strategies might undermine the presence of audience and so the argument may not appeal to readers' pathos. Thus, it would be fruitful if L2 academic writers take account of such interactional strategies as they write in order to boost their chances for publication in international journals.

## CONCLUSION

This study explored the extent to which Yemeni applied linguistics writers employ interactional MD strategies to signal authorial voice and engage with members of academic discourse community. The quantitative analysis indicates that Yemeni L2 writers tend to use relatively limited interactional MD strategies in L2 academic writing. They seem to be focusing on the ultimate product of their writing and they generally pay little attention to the role of interaction in writing (Cheng & Steffensen, 1996; Toumi, 2012). It might also support the findings indicating that L2 writers generally avoid marking authorial stance and they prefer more detached and impersonal style (Lee & Deakin, 2016). The qualitative analysis, on the other hand, indicates that the most salient interactional strategies in Yemeni Arab L2 writing are making bare assertion as well as marking certainty of claims. They mostly tend to make assertion as they indicate research gaps and express conviction when they state findings and summarize their research. This might be ascribed to the assumption that Arab L2 writers tend to be influenced by Arabic rhetoric, which favors amplification and exaggeration (Connor, 1996; Hinkel, 2005). Since these strategies may not be appropriate in the English academic context, the use of these strategies may not achieve effective persuasive appeals and hence might decrease the chances of getting their work published in international journals.

Nevertheless, the findings of the present study may not be fully generalizable to all advanced Arab L2 writers due to some limitations. Firstly, our study was conducted on a relatively small number of RAs and therefore future research might examine a more sizable corpus incorporating some other Arab L2 writers in order to validate these findings. Secondly, since our study is corpus-based, a future research may combine corpus and ethnographic analysis by taking into account the perceptions of L2 writers using text-based interviews to investigate the functions of interactional MD strategies in Arab L2 academic writing. Thirdly, the study was only conducted on Yemeni Arab L2 writers as non-native writers, and so another imperative line of research might be pursued to compare the extent to which Arab L2 writers employ interactional MD strategies in comparison to Anglo-American L1 writers.

To conclude, the findings of the present study have some useful implications for academic writing and EFL writing instruction in Yemeni universities. Supporting previous research on L2 writing, the present study stresses the persuasive role of interactional MD strategies in academic writing. Therefore, Yemeni academic writers especially novices need to familiarize themselves with the role of interactional MD strategies in order to increase their chances for publication in international journals. Moreover, as the study suggests that MD is not given due attention in L2 writing instruction, university writing instructors need to reconsider the teaching approaches to English writing in order to develop interactional competence of Yemeni L2 writers. Specifically, interactional MD strategies should be incorporated in academic writing courses to enable L2 writers to develop appropriate stance and voice in academic writing.

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