

*Stance and engagement markers in quantitative and qualitative applied linguistics research articles: The discussion section in focus*

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Abstract

The epistemological diversity of quantitative and qualitative research has left its trace on the role and presence of the interpersonal metafunction in written research reports, and applied linguistics research is no exception in this respect. The present study was designed to compare the use frequency of interactional metadiscourse markers in a corpus of the discussion sections of 40 recent applied linguistics research articles (20 quantitative discussions totaling 22984 words and 20 qualitative discussions totaling 23052 words). To this end, Hyland's (2005) model of such markers, including (a) stance markers: hedges, boosters, attitude markers, and self-mentions; and (b) engagement markers: reader pronouns, appeals to shared knowledge, personal asides, questions, and directives, was employed. Instances were detected and marked by two coders, and inter-coder agreement was set at .78. Chi-square indices indicated

that the discussion sections of qualitative research articles housed a significantly higher number of stance markers (except for boosters, which were more frequent in quantitative research articles discussions), and engagement markers (except for asides and shared knowledge appeals, for which no difference was detected). This shows authors' deployment of more interactional devices in the discussion of qualitative research findings. The results have implications for the role of researchers' awareness of stance and engagement markers in quantitative and qualitative research reports, and for academic writing instruction.

*Keywords:* engagement markers; qualitative research; quantitative research; stance markers

## 1. Introduction

Written academic discourse (including journal articles, theses, and dissertations, among others) occupies a special position in the academic genre system. Accordingly, the success of members of field-specific academic discourse communities is partly contingent upon a familiarity with the features of such discourse, including its associated metadiscourse markers. The surge of studies on the discursial features of different sections of journal articles and theses independently in different fields of study, or comparatively across two or more fields, evidences this concern. One frequently investigated discursial element in written academic discourse is "metadiscourse." Metadiscourse markers constitute a range of functional linguistic items used to organize propositional content and direct readers' interpretation of it in the way intended by the author (Hyland, 2005). As such, identical propositions can be conveyed differently depending on the choice of such markers. A main category of such markers is interactional in nature, used to convey the attitude of the author towards the content and to engage the reader in text comprehension. These are referred to as stance and engagement markers. Studies have investigated the use of these markers in the abstract, introduction, discussion and conclusion sections of academic articles (e.g., Mestre-Mestre, 2017; Suntara & Chokthawikit, 2018), compared their use in the humanities and science journal articles (Sahragard & Yazdanpanahi, 2017), probed the implications of authors' culture and language for their use (Ebadi et al., 2015; Lee & Casal, 2014; Shirzadi et al., 2017; Taki & Jafarpour, 2012), and demonstrated gender-related differences (Rezai Zadeh et al., 2015). This research shows the significance of investigating the interactional attributes of written academic discourse, as this would have important implications for the pertinent use of such discourse features in one's academic writing and for writing instruction.

One main research lacuna, however, is whether academic written discourse has differential interactional associations by virtue of its being based on quantitative (Quan) or qualitative (Qual) research. This distinction is particularly relevant insofar as stance and engagement markers are concerned. Quan and Qual research studies are ideologically different. Unlike the objectivity and pre-ordained design of Quan research, Qual research allows for researchers' subjectivity and emergent design features (Dörnyei, 2007). These inherent differences can be said to visibly surface in their associated discourse, and even more in terms of the legitimacy of the use of interactional markers and the implementation of the interpersonal metafunction. More specifically, the main venue for the differential employment of interactional markers is the discussion section, where authors' interpretations of their findings are presented.

Investigating interactional metadiscourse markers in the discussion section of Quan and Qual research articles (RAs) has become increasingly important in the field of applied linguistics. Following the "social" turn of the mid-1990s, the field experienced an ever growing interest in qualitative (Qual) research (Ortega, 2013). The surge of Qual research journal articles has created the need for an in-depth analysis of their discourse-related features, and of how they differ from those of their Quan counterparts. Accordingly, the present study was designed to investigate the difference between the discussion sections of Quan and Qual applied linguistics RAs in terms of the use frequency of stance and engagement markers.

## 2. Literature review

Understanding a discourse community's discursive practices is regarded as a prerequisite for joining the community or otherwise making sense of its beliefs, values, and ideology (Flowerdew, 2012; Paltridge, 2006). In the academic domain, this understanding constitutes an essential dimension of academic literacy (Defazio et al., 2010). More specifically, written academic discourse can be thought of the most important venue through which knowledge and understanding circulate. Moreover, skillful academic writing required of higher education students in various fields of study hinges on a familiarity with the features of academic discourse. Such discourse has been generally analyzed in terms of its more or less stable features. For one, Birhan (2017) enumerated complexity, formality, coherence, objectivity, explicitness, and hedging as some of the most important of these features. Related studies have also capitalized on specific genres within this domain, including journal articles, theses, and dissertations, and their different sections to unearth their discursal features. Among these discursal features, metadiscourse markers, defined as linguistic devices used to organize and engage readers in a text's propositional content (Hyland, 2005),

have been widely researched (Birhan, 2017; Bruning & Horn, 2000). These markers are important in that they are distinct from the text's propositional content, and their use has important implications regarding how authors intend their audience to interpret that content. According to Hyland (2005), communication is not merely the exchange of information; it also represents the personalities, beliefs, and attitudes of those who are engaged in the act of communication. Accordingly, the interaction could be between the reader and the writer, and also between the writer and the text. Hyland (2000) believes that the careful integration of meta-discourse into a text enables the writer to change a tough boring text into a consistent and interesting one, and convey his audience-sensitivity and integrity through the text. The development of metadiscourse awareness helps readers to grasp social practices underlying texts (Hyland, 2004). Hyland and Tse (2004, p. 168) generally divided such markers into interactive and interactional ones:

Interactive resources refer to features which set out an argument to explicitly establish the writer's preferred interpretations. They are concerned with ways of organizing discourse, rather than experience, to anticipate readers' knowledge and reflect the writers' assessment of what needs to be made explicit to constrain and guide what can be recovered from the text. Interactional resources, on the other hand, involve readers in the argument by alerting them to the author's perspective towards both propositional information and readers themselves.

Hyland (2005) further posited the subcategories of these interactive and interactional resources. In his model, interactive resources are on a par with ways of organizing discourse and leading readers through the text, while interactional resources imply the ways through which writers explicitly express their views, control interaction, and involve their readers by taking advantage of stance and engagement markers. Stance resources show "a textual voice or community-recognized personality" in which "writers present themselves and convey their judgments, opinions, and commitments." Through engagement markers, "writers acknowledge and connect to others, recognize the presence of their readers, pull them along with their argument, focus their attention, acknowledge their uncertainties, include them as discourse participants, and guide them to interpretations" (Hyland, 2005, p. 178). Stance markers include *hedges*, *boosters*, *attitude markers*, and *self-mentions*, and engagement markers include *reader pronouns*, *appears to shared knowledge*, *personal asides*, *questions*, and *directives*. Hyland (2005) defines each of these subcategories as follows:

- *Hedges*: words showing a lack of certainty on the part of the writer; *probably* is an example.
- *Boosters*: words showing the writer's confidence in a proposition; *surely* is an example.

- *Attitude markers*: words showing the author's approach towards a proposition; *hopefully*, *amazing*, and *unbelievably* are some examples.
- *Self-mentions*: first person author pronouns; *I* and *my* are some examples.

In a similar vein, the five engagement markers are defined as follows:

- *Reader pronouns*: pronouns referring to the readers; *our* and *we* are the examples.
- *Personal asides*: brief extra comments by the writer about the proposition;
- *Appeals to shared knowledge*: reference to knowledge shared by the writer and the reader; *we know that* is an example.
- *Directives*: instructions given by the writer to "either refer to some other part in the same article or take some moments thinking about what they are asked so as to finally come up with a certain outcome" (p. 179); *consider* is an example.
- *Questions*: interrogatives used to turn readers' attention to an argument or proposition.

Empirically, studies have probed the use of interactional metadiscourse markers in written academic discourse with a focus on particular genres or sections within those genres, fields of study, languages, cultures, genders, and areas of expertise. Bahrami et al. (2018), for instance, worked on authorial stance in journal articles, and found that the major reason of the rejection of many papers is the inefficient use of metadiscourse. Likewise, Sorayyaei Azar and Hashim (2019) conducted an investigation of attitude markers in the genre of review articles, and found attitude markers to be most frequent in the conclusion section of such articles. A further study was conducted by Sahragard and Yazdanpanahi (2017) on the comparative use of engagement markers in the humanities and science journal articles. The authors found them to be more frequent in the humanities, with directives being used more than other markers in both domains. Even within the humanities, Babai et al. (2016) found lexical stance-taking more common in English psychology RAs as compared with sociology RAs. A further cross-disciplinary study of stance markers in RAs written by students and experts was carried out by Akinci (2016). The results showed that students used more stance markers than experts, although the differences were small. Moreover, it was revealed that applied linguistics RAs contained more stance markers than those of civil engineering. As for culture, a study was conducted by Taki and Jafarpour (2012) in which 120 English and Persian RAs in the fields of chemistry and sociology were analyzed. The results showed that both disciplines, especially sociology, made a considerable use of stance and engagement markers in its associated written academic discourse. Furthermore, Persian

articles were found to make a comparably greater use of engagement markers. Gender implications were investigated by Rezaei Zadeh et al. (2015), who probed metadiscourse markers in the conclusion section of English-major Master's theses, and demonstrated the greater frequency of interactional markers in female students' work.

One of the main sections of journal articles, as tokens of written academic discourse, where authors are expected to guide readers in their interpretations of research findings and attempts at grasping their implications, is the discussion section (Bavdekar, 2015). Insofar as the field of applied linguistics is concerned, Dujisik's (2013) mention the "explanation of expected or unexpected results" (p. 41) as one of the most frequent discussion moves in a corpus of 50 related journal articles and assigns an "argumentative" function to it. This presumed "argumentation" aim behind the discussion section (Hashemi & Gohari Moghaddam, 2016) brings to the forefront the significance of interactional metadiscourse markers, which allow authors to bring readers in line with their intended take on the findings. As Mozayan et al. (2017) cogently pointed out, the post-method section of RAs, particularly the discussion section, is a venue for argumentation, which calls for the use of metadiscourse markers.

Atai and Sadr (2008) found qualitative and quantitative differences in the use of hedges in a corpus of 108 applied linguistics RAs' discussion sections. Hedges were found to be more frequent in studies with experimental designs in comparison with those enjoying a descriptive design. Hashemi and Gohari Moghaddam (2016) investigated mixed-methods applied linguistics RAs' discussion sections in terms of its generic structure. The authors demonstrated that results' plausible interpretations, explanation, and evaluation were the essential moves. The effectiveness of these moves can be said to rest on the efficacy of metadiscourse employed to convey propositional content. Hashemi and Shirzadi (2016) compared the use of hedges as a token of stance markers in a corpus of 150 Quan, Qual, and mixed-methods applied linguistics RAs, and found them most frequent in Quan RAs, followed by mixed-methods RAs and Qual RAs. A cross-cultural study of the use of metadiscourse markers in argumentative essays by 80 Iranian and Chinese EFL students showed significant differences (Tabatabaee Lotfi et al., 2019). Another example is the study of engagement markers by Shahriari and Shadloo (2019), who showed a lack of association between the use of such markers and EFL learners' argumentative essays' quality. Shirzadi et al. (2017) conducted a contrastive analysis of stance strategies in native and non-native speakers' English academic writings. Introduction and discussion sections were selected. No significant difference was found between native and non-native writers in terms of the use of stance strategies, although native writers tended to make use of hedges, attitude markers, and self-mentions

more often than non-natives. Non-native writers, on the other hand, used more boosters. In a similar study by Lee and Casal (2014), the cross-linguistic variation of stance features in the results and discussion sections of Master's theses written in English and Spanish was evidenced. Along the same lines, Ebadi et al. (2015) conducted a comparative study of the use of metadiscourse markers in Persian and English academic papers' conclusion and discussion sections. They found interactional markers to be more frequent in RAs written by native speakers. Finally, Rezaei Keramati et al.'s (2019) study marked a significant diachronic decrease in the use of metadiscourse markers, which they interpreted as connected with the decline of interest in stance-taking in the method and results sections of applied linguistics RAs. The evidenced diachronic change of metadiscourse markers' use lends support to the "dynamic" nature of disciplinary genres (Freedman, 1999) and the oversimplification involved in delimiting the scope of discursive practice studies to disciplinary differences (Harwood, 2006). It might be high time for researchers to abstract away from simply evidencing differences to explaining them.

Against this backdrop, the surge of Qual applied linguistics RAs in leading academic journals, and the epistemological turn the field has experienced in the last two decades (Ortega, 2013) underscores the significance of investigating discursive practices in relation to one of the essential embodiments of this paradigmatic shift: research methodology. The role discursive practices have in understanding beliefs held by academic communities cannot be overstated. Quan research stands in sharp epistemological contrast to Qual research, which is evident in purists' position dismissing one in favor of the other (see Dornyei, 2007). In relation to the concerns of the present study, Choy (2014) stated that Qual research offers a wider space for the articulation of authors' subjective interpretation of the findings, while Quan research aims for impersonality and generalizability. The former aims for individual meaning, while the latter aims for normalization and group meaning. Such differences can be said to be encapsulated noticeably in the section of RAs supposed to provide an interpretation and evaluation of findings: the discussion section. There are only few studies which have sketched metadiscourse markers' use in RAs in view of the research methodology they rest upon. Moreover, these few studies have either focused on only one subcategory of metadiscourse markers (e.g., Hashemi & Shirzadi, 2016), or on generic moves (e.g., Hashemi & Gohari Moghaddam, 2016). Given this, the present study investigated the use frequency of interactional metadiscourse markers (stance and engagement markers) in a corpus of Quan and Qual applied linguistics RAs. The following two questions were addressed:

1. Is there a significant difference between the discussion sections of Quan and Qual applied linguistics RAs in terms of the use frequency of stance markers?
2. Is there a significant difference between the discussion sections of Quan and Qual applied linguistics RAs in terms of the use frequency of engagement markers?

### 3. Methodology

This comparative corpus-based study was designed to investigate the use frequency of stance and engagement markers, as put forth by Hyland (2005), in Quan and Qual RA discussions. To achieve this goal, the researchers compiled the corpus, and manually detected and analyzed lexical tokens of the just-mentioned markers (*attitude markers, hedges, boosters, and self-mentions* as stance markers, and *reader pronouns, personal asides, appeals to shared knowledge, questions, and directives* as engagement markers). This section sheds light on the corpus as well as the data analysis procedure.

#### 3.1. Corpus compilation

Corpus compilation involved the random selection of three reputable journals in the field of applied linguistics (indexed in the Web of Science Core Collection, with an Impact Score (IS) beyond 1 (Q1) from 2017 to 2020):

1. *Language Awareness* (published by Taylor & Francis Ltd.)
2. *Language Teaching Research* (published by Sage Publications)
3. *TESOL Quarterly* (published by Wiley-Blackwell)

Forty papers (20 Quan and 20 Qual) published in these three journals from 2017 to 2020 were randomly selected from a bank of 127 RAs. The selected papers met the following criteria:

1. They were all single-authored, but the nationality of the authors was not controlled.
2. They had a distinct "discussion" section.
3. They involved either Quan data and analysis, or Qual data and analysis. Mixed-methods RAs were not included.
4. Their topics were exclusively related to "second language acquisition."



The discussion section of each of the selected articles was then subjected to manual stance and engagement markers' detection. Discussions amounted to a total of 46,036 words (22984 words for Quan and 23052 words for Qual RAs).

### 3.2. Procedure and data analysis

Lexical stance and engagement tokens, as interactional metadiscourse markers, were manually marked in the corpus by two of the researchers, following a debriefing session by one of the researchers. To this end, Hyland's (2005) taxonomy of such markers was employed. Definitions and examples of each of the stance and engagement markers detected in the corpus are presented here.

#### 3.2.1. Stance markers

Hyland (1999) asserted that stance markers are "the ways that writers project themselves into their texts to communicate their integrity, credibility, involvement, and a relationship to their subject matter and their readers" (p. 101). As it was mentioned before, stance markers are divided into four categories including hedges, boosters, attitude markers, and self-mentions. According to Hyland (2005), "hedges are the means by which we express tentativeness and possibility, and they are crucial to academic writing where statements are rarely made without subjective assessments of their reliability" (p. 99). Also, Lakoff (1972) described hedges as "words whose job it is to make things more or less fuzzy" (p. 194). These markers facilitate the relationship between readers and writers (Hyland, 2005). Here are some examples of hedges in the corpus analyzed in this study:

- The interview data *suggested* that the absence of these features *may* have resulted from the fact that TPS writers' aim to demonstrate their teaching beliefs, their knowledge, and their experience without focusing on making an argument or a conclusion based on published literature.
- *Perhaps* not surprisingly for a methods class, the end drawings/explanations showed more varied teaching strategies.
- Further research involving larger groups of teachers *could possibly* elaborate further on the occurrence of the five domains in relation to teachers' beliefs.
- The truth is that almost any program *can* be supported by an educational theory, and some "approaches" *may* need so few funds that adequate funding is not an issue.
- Indeed, it is *possible* that his high social status was instead a product of his rich reading identities.

Along the same lines, Peacock (2006) defined boosters as the embodiment of the “communicative strategy for increasing the force of a statement and emphasizing certainty, strong commitment, conviction, and accepted truth” (p. 65). Furthermore, Mur-Duenas (2011) explained that boosters are characteristics that underscore authors’ certainty and conviction. Here are some examples detected in the corpus:

- Although Lobsang’s comments were brief and more clarification would be required to establish what Lobsang means by such statements as “70% of the world will know about it,” it is *clear* that his speech has personal relevance to him because, in his words, “I am Buddhist and I’m Tibetan.”
- For teachers such as Hanna and Lena, we wonder: Without PD that *truly* mediates teachers’ cumulative learning to resolve disjunctures in the confines of their daily work, will teachers begin to take the world for granted again?
- To meet the assignment requirements, she cited references to *demonstrate* her understanding of course readings.
- *Indeed*, based on a research study by Mehrabian (1972), 93% of emotional meanings are communicated nonverbally.
- Moreover, if the term metalinguistic refers to processes where (more or less analysed) knowledge is applied consciously and deliberately, then error correction does *in fact* qualify as a metalinguistic activity.

Attitude markers are the third group of stance markers. According to Hyland (2005), attitude markers are defined as features which “indicate the writer’s affective, rather than epistemic attitude to propositions” (p. 53). According to Crismore (1990), attitude markers facilitate reader and writer’s relationship, and present conditions for readers to take part in an implicit dialogue. Some examples from the corpus are presented here:

- *Interestingly*, the development of immediacy within a communicative context has also been linked to increased production of language (Richmond et al., 2012), a key implication in relation to L2 learning and acquisition.
- More *importantly*, the intermediate-level learners, when provided with L1 focus-on-form assistance, were found to gain a similar level of target vocabulary knowledge as their advanced counterparts.
- Another important finding of the study was the *essential* function of nonverbal communication.
- Given that many instructors in these contexts are novices and may therefore rely on materials and textbooks provided to them, it is perhaps *not surprising* that findings from the current study indicated that

pronunciation instruction comprises a relatively small portion of class time and is dominated by controlled practice.

- *Apparently*, the input of the video, combined with the content-focused written instructions, created conditions in which the learners improved these capabilities simultaneously during task performance.

As the final subcategory of stance markers, Hyland (2004) described self-mentions as features which demonstrate writers' presence through the use of first person pronouns. Here are some examples:

- In addition to this disagreement about how much CF should be given, *our* study uncovers further discrepancies between teachers' and students' beliefs in relation to the method of correction which should be used and the emotional responses that immediate CF can produce.
- Although learners in both groups at least maintained flow levels across tasks, the absence of any strong trends means *our* findings are not sufficient to support Kim's (2013) notion that procedural repetition can increase task motivation.
- This finding appears to contradict *our* initial hypothesis in which *we* anticipated more attention to form in the last performance of the ETR group because of the learners' familiarity with both task content and procedure, which would free up extra resources to devote to the language form.
- Thus, although *I* would not suggest that direct instruction is inappropriate for ELLs (or any other group), *I* was surprised at the prominent role that it had in the drawings, especially at the end of the course.
- In addition to analyzing teachers' beliefs in relation to the five domains of LA, *we* analyzed the differences in teachers' beliefs about LA.

### 3.2.2. Engagement markers

Hyland (2005) defined engagement markers as "explicitly address[ing] readers, either to focus their attention or include them as discourse participants" (p. 53). Engagement markers are divided into five categories including reader pronouns, personal asides, appeals to shared knowledge, directives, and questions. Reader pronouns are "the most explicit way that readers are brought into a discourse." Accordingly, they send "a clear signal of membership by textually constructing both the writer and the reader as participants with similar understanding and goals" (Hyland, 2005, p. 182). Here are some examples of reader pronouns from the corpus investigated in this study:

- *We* cannot be sure how this planning time may have influenced learners' performance either.

- Although *we* believe that the pre-task is not the right place for explicit grammar teaching, investigating more explicit ways to focus on form through video modeling could be interesting for teachers who want to implement tasks in their curriculum but also want to incorporate (inductive) grammar teaching.
- In the process, *we* as teachers and researchers also needed to remind ourselves of our mission to promote intercultural citizenship education.
- *As far as we know*, this is the first study that used guided observation of peer-model videos as part of a planning strategy.

Personal asides are also a main subcategory of engagement markers. Hyland (2005) believes that personal asides “allow writers to address readers directly by briefly interrupting the argument to offer a comment on what has been said.” He maintained that “such comments often add more to the writer–reader relationship than to the propositional development of the discourse” (Hyland, 2005, p. 183). Here are some examples:

- Exceptions from the drawings include emphasis on English language development (*although such depictions were basic*) and native language support (*although such depictions did not represent best practices*).
- I argue that this dimension of personal relevance, combined with the freedom of physical movement, both helped to transform academic into internally persuasive discourse (*in that students were able to translate their everyday language and experience into academic language*) and gave students a sense of greater agency and control over language use.
- Even if services categorically fail to meet the Castaneda Guidelines, accountability for schools rests heavily on a stakeholder – *most likely a parent*—filing a complaint with the OCR.

Referring to the next category of engagement markers, Hyland (2005) stated that appeals to shared knowledge “seek to position readers within apparently naturalized boundaries of disciplinary understandings.” He referred to this category as “the presence of explicit markers where readers are asked to recognize something as familiar or accepted” (p. 184). No examples regarding this category were found in the corpus.

As for directives, Hyland (2005) mentioned that they function to “instruct the reader to perform an action or to see things in a way determined by the writer” (p. 184). Some examples from the corpus are presented here:

- *It should be noted*, however, that the scale of this study did not allow us to report on any generalizable, quantitative insights into teachers’ beliefs.

- In turn, *note that* teacher educators must have a nuanced understanding of teachers' localized experiences in school systems in order to support them in developing this complex skill set.
- *Readers are invited to consider* the importance of raising teachers' and learners' awareness of the cyclic interaction between the two and the various factors in play, so that the interactions could be turned into a positive cycle that contributes to effective language learning.
- At the same time, however, any interpretations as to the optimal type of input for successful classroom L2 speech learning *should be considered by readers* as tentative given the exploratory nature of the method we adopted.
- Because this study relied on self-report data, and research has demonstrated that there can be a mismatch between what instructors think is best to do and what they actually do . . . , *interested readers are invited to expand* upon data collection methods to provide evidence from classroom observations to better understand classroom practices with regard to pronunciation (e.g., Baker 2014; Foote et al., 2016; Tergujeff, 2012 for examples of this in ESL/EFL contexts).

Regarding the last subcategory of engagement markers, Hyland (2005) maintained that questions "arouse interest and encourage the reader to explore an unresolved issue with the writer as an equal, a conversational partner, sharing his or her curiosity and following where the argument leads" (p. 185). Here are some examples:

- *Without PD that truly mediates teachers' cumulative learning to resolve disjunctures in the confines of their daily work, will teachers begin to take the world for granted again?*
- *Why do interpretations that create inequality as well as oppose macro laws and policies continue to persist?*
- *How will teachers continue to refine their practice to support ELLs after they conclude this program?*

Subsequent to analyzing the corpus, inter-coder agreement was checked using Cohen's Kappa. The results showed an acceptable agreement index [ $\kappa = .78, p < .05$ ]. Cases of disagreement were then discussed by the coders, and final agreement was reached. In order to find out if the deployment frequency of stance and engagement markers was significantly different in Quan and Qual RA discussions, a series of Chi-square tests was conducted.

#### 4. Results

The analysis of the 40 RA discussions revealed a total number of 422 stance and engagement markers in Quan RA discussions and 539 stance and engagement

markers in Qual RA discussions. As shown in Tables 1 and 2, *hedges* were the most frequent interactional metadiscourse markers in both Quan and Qual RA discussions. The second most frequent markers were *boosters* in Quan RA discussions, but *self-mentions* in Qual RA discussions.

For the purpose of finding out whether Quan and Qual RA discussions were different regarding their stance and engagement markers, a series of Chi-square tests was run. According to the results, there was a significant difference between Quan and Qual RA discussions regarding the use of interactional metadiscourse markers [ $\chi^2 = 94.10, p < .05$ ]. This significant difference was observed for stance markers [ $\chi^2 = 20.04, p < .05$ ] and engagement markers [ $\chi^2 = 74.06, p < .05$ ], separately as well. The effect size or the magnitude of association in both cases was also calculated through the *Phi* coefficient ( $\phi$ ). Based on the results, the effect size was small for stance markers [ $\phi = .25$ ], but substantial for engagement markers [ $\phi = .79$ ].

Table 1 Stance and engagement markers in Quan RA discussions

	Frequency	Percentage of all markers
<i>Stance markers</i>		
Hedges	181	42
Boosters	87	20
Attitude markers	34	8
Self-mentions	75	17
<i>Engagement markers</i>		
Reader pronouns	8	1.8
Personal asides	3	.7
Appeals to shared knowledge	0	0
Directives	28	6.6
Questions	6	1.4

Table 2 Stance and engagement markers in Qual RA discussions

	Frequency	Percentage of all markers
<i>Stance markers</i>		
Hedges	211	39
Boosters	71	13
Attitude markers	47	8.7
Self-mentions	138	25
<i>Engagement markers</i>		
Reader pronouns	21	3.8
Personal asides	1	.18
Appeals to shared knowledge	0	0
Directives	32	5.9
Questions	18	3.3

Next, the deployment frequency of each of the stance and engagement subcategories was compared through a separate Chi-square test across Quan

and Qual RA discussions (see Table 3). As far as stance markers are concerned, significant differences were invariably detected; however, effect sizes were small in all the four cases:

- hedges [ $\chi^2 = 24.82, p < .05; \phi = .25$ ]; more frequent in Qual research;
- boosters [ $\chi^2 = 16.11, p < .05; \phi = .31$ ]; more frequent in Quan research;
- attitude markers [ $\chi^2 = 5.92, p < .05; \phi = .27$ ]; more frequent in Qual research; and
- self-mentions [ $\chi^2 = 27.19, p < .05; \phi = .35$ ]; more frequent in Qual research.

Regarding engagement markers, differences were significant in terms of reader pronouns, directives, and questions. The effect size was moderate for reader pronouns and questions, but weak for directives:

- reader pronouns [ $\chi^2 = 7.12, p < .05; \phi = .49$ ]; more frequent in Qual research;
- directives [ $\chi^2 = 3.78, p < .05; \phi = .25$ ]; more frequent in Qual research; and
- questions [ $\chi^2 = 7.18, p < .05; \phi = .57$ ]; more frequent in Qual research.

On the other hand, the difference in the case of appeals to shared knowledge and personal asides was insignificant. Appeals to shared knowledge were not used at all in either corpus, and personal asides were used minimally:

- appeals to shared knowledge [ $\chi^2 = 0, p > .05$ ]; and
- personal asides [ $\chi^2 = 1.94, p > .05$ ].

Table 3 Stance and engagement markers in Qual RA discussions

Markers	Subcategories	$\chi^2$	Sig.
Stance markers	hedges	24.82	.00
	boosters	16.11	.00
	attitude markers	5.92	.00
	self-mentions	27.19	.00
Engagement markers	reader pronouns	7.12	.00
	directives	3.78	.00
	questions	7.18	.00
	appeals to shared knowledge	-	-
	personal asides	1.94	.14

Overall, the results shed light on hedges as the most frequent interactional markers in both Quan and Qual RA discussions, followed by boosters in the former and self-mentions in the latter. This study also showed a statistically significant difference between Quan and Qual RA discussions in terms of their stance and engagement markers. Regarding subcategories, significant differences were detected for hedges, boosters, attitude markers, self-mentions, reader pronouns, directives, and questions. Effect sizes were moderate for all stance markers

and directives, but large for questions and self-mentions. Both research questions were answered in the affirmative.

## 5. Discussion

The present study involved the investigation of the use frequency of interactional metadiscourse markers in Quan and Qual RA discussions. The results showed the following:

1. Interactional metadiscourse markers were more frequent in Qual RA discussions.
2. Hedges were the most frequent interactional metadiscourse markers in both Quan and Qual RA discussions, followed by boosters in the former and self-mentions in the latter.
3. Personal asides and appeals to shared knowledge were used minimally in both Quan and Qual RA discussions.
4. Qual RA discussions contained a significantly greater number of hedges, self-mentions, attitude markers, reader pronouns, questions, and directives.
5. Quan RA discussions contained a significantly greater number of boosters.

Given the paradigmatic difference of research reported in the two constituent corpora, the differential use of such markers, as evidenced in the findings, was expected. While Quan data collection and analysis aim for generalizability and replicability, Qual research aims for the interpretive exposure of contextual meanings (Dornyei, 2007; Leedy & Ormrod, 2014). This difference surfaced in RA discussions in terms of the use of metadiscourse markers. That hedges were most frequent in both corpora (about 40 percent of all tokens) indicates that the authors of both Quan and Qual RAs explained and argued for their findings with reservation. This can be justified in accordance with the nature of the field falling in the category of humanities where alternative voices, even in supposedly subjective Qual papers, are recognized. This was shown in the significantly more frequent use of hedges in Qual RA discussions. The support for this proposition comes from studies that have substantiated the unique discursive practices in the humanities and even in different disciplines within the humanities (Babai et al., 2016; Sharagard & Yazdanpanahi, 2017). The minimal use of personal asides and appeals to shared knowledge are also attributable to the generic features of applied linguistics RA discussions, which are supposed to involve formal and evidenced reasoning and argumentation. These features of RA discussions can be said to have precluded the use of the just mentioned markers which would, otherwise, render the text informal and unjustified.



As for the first research question, differences were detected in the use frequency of stance markers in Quan and Qual RA discussions. More specifically, boosters were used more frequently in Quan RA discussions. Boosters show Quan RA authors' confidence in their findings, which is expected owing to the more objective data collection and analysis procedure. On the other hand, attitude markers and self-mentions were used more frequently in Qual RA discussions. One of the essential features of Qual research is the space it allows for the expression of attitudes, particularly in the discussion of its findings, and for the identification of the author. As far as self-mentions are concerned, Rahimpour et al. (2015) detected frequent self-mentions in Qual applied linguistics RAs for the representation of the author or the discourse community s/he belongs to, and for the establishment of his professional and authorial identity. About two decades ago, Hyland (2001) pointed to the confusion of producers of written academic discourse, including RAs, as to whether to represent themselves through self-mentions or adopt an impersonal stance. This authorial representation is also embodied in attitude markers. It can be seen now, based on the results of this study, that trends have been developing regarding the discourse-related implications of the epistemological and paradigmatic underpinnings of research. Regarding the present study, while authors of Quan RAs tended to avoid attitude markers and self-mentions, Qual RA authors used them frequently. This is while the general direction in pedagogic texts might have created the expectation that in all academic writing, including Quan and Qual RAs, attitude markers and self-mentions are inappropriate (Hyland & Tse, 2004). It should be noted that that calculated effect sizes for hedges, boosters, attitude markers, and self-mentions were all moderate, which might be due to the corpus size. Had the corpus been larger, larger effect sizes could have been obtained.

The second research question as to differences in the use of engagement markers was also answered in the affirmative. Qual RA discussions deployed reader pronouns, questions, and directives more frequently. Reader pronouns and questions were the two interactional metadiscourse markers for which strong effect sizes were obtained. Given the small corpus compiled in this study, it can be assumed that authors of Qual RA discussions aim not only for establishing their authorial voice through attitude markers and self-mentions, but also for engaging readers in their own perspective and interpretation of the findings. Sahragard and Yazadanpanahi (2017) showed the greater use of engagement markers in the humanities RAs, and assigned them a "writer-reader relationship establishment" function. Given the results of the present study, cross-disciplinary studies of the sort are illuminating, but demarcations would also have to be posited within the humanities. This study showed the greater frequency of engagement markers in the Qual RAs. Worthy of note is the inherent contradiction between

reader pronouns and directives; the former markers are intended to create an appropriate relationship with readers, while the latter, as pointed out by Hyland (2002), can be categorized as potentially face-threatening acts. It can be posited that the main function of directives (i.e., to bring readers in line with one's own interpretation of the findings (see Hyland, 2002)) justifies their more frequent deployment in Qual RA discussions. Such discussions are indispensably laden with the researcher's viewpoint, and directives and questions function to consolidate it. This is the reason why Quan RA discussions, by virtue of their presumed impersonal aura, are devoid of such markers. Finally, since the calculated effect size for two of the engagement markers was greater than that for stance markers, it might be that the observed difference between Quan and Qual RA discussions was greater. In other words, Qual RA authors were more concerned with ushering readers to their intended interpretation of the findings embodied in stance markers. On the other hand, Quan RA authors were not as inclined to establishing a writer-reader relationship as they were to stance-taking.

## 6. Conclusion and implications

This study was designed to compare the use of stance and engagement markers in the discussion section of Quan and Qual RAs published in three reputable applied linguistics journals. Hyland's (2005) model of interactional metadiscourse markers formed the basis of this comparison. Based on the results of the study, it could be claimed that epistemological underpinnings of research reported in academic writing are the main determinants of the nature and deployment frequency of discursive features, including interactional metadiscourse markers (i.e., stance and engagement markers). In other words, the paradigmatic differences between Quan and Qual research approaches have a bearing on discourse that reports them.

Overall, authors of Qual RA discussions make a greater use of (a) interactional markers in general, (b) stance markers (except for boosters), and (c) engagement markers (except for appeals to shared knowledge and personal asides). In other words, they are more concerned with the expression of their stance, and establishment of relationship with readers. They use more attitude markers, self-mentions, reader pronouns, questions, and directives. On the other hand, boosters are more frequently deployed by Quan RA authors in their discussions, owing to the inherent objectivity of such research. This said, hedges were most frequent in both Quan and Qual RA discussions, which can be attributed to the analyzed RAs' belongingness to the humanities.

The implications of the study are two-fold. Firstly, the research on metadiscourse has been mainly descriptive in nature, addressing differences across disciplines and languages. Instead, the present study adopted an explanatory problematizing approach

in that it sketched discourse features with an eye to epistemological and paradigmatic differences in the two investigated corpora (Quan and Qual RA discussions). Secondly, the study implies the significance of raising academic writing students' awareness of interactional metadiscourse markers in Quan and Qual RAs, including their discussions sections. Sample Quan and Qual RA discussions can form part of the instructional content for student analysis of interactional metadiscourse. This can contribute to furthering students' understanding of academic discourse genres as dynamic, context-dependent, and paradigm-contingent.

Last, but not least, the limitations of the study need to be admitted. The corpus did not control for authors' nationality, language, gender, and culture, which have been shown to influence the use of metadiscourse markers (see Literature review). Moreover, only 20 RA discussions within each of the Quan and Qual categories were investigated. A larger corpus can potentially yield more robust findings in terms of the use frequency of interactional metadiscourse markers. In addition, a qualitative investigation of such markers, besides their frequency distribution analysis, can provide the indication of the various functions for which they are used.

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