

ANALYZING HEDGE FREQUENCY OF ART HISTORICAL UNDERGRADUATE RESEARCH ESSAYS FOR WRITER DEVELOPMENT

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Hedges are a form of modality that act to distance writers from certainty in their discourse. In keeping with Ken Hyland's view of humanities as a "soft" knowledge domain, art history discourse is susceptible to varying opinions and criticism because of its "interpretive" nature (361). Thus, hedges can be understood as useful in conveying stance in this discipline's literature in a way that allows writers to offer concepts and ideas while still acknowledging previous literature, other voices, and other points of view. However, studies on hedge usage in art history are scarce. To rectify this gap, this research attempts to identify if, when, and how I learned hedging techniques as an undergraduate art history student. To accomplish this, a list of relevant hedging words, categorized by hedge type was compiled from various sources and checked against each text I wrote. This method provided tangible data to confirm the prevalence of hedging and to help understand how hedges are implemented in undergraduate art historical texts. This study ultimately provides insight into the usefulness of teaching hedging techniques to undergraduate humanities students.

INTRODUCTION

The research discussed here considers the use of various types of academic hedging in undergraduate art historical research essays, hereafter referred to as texts. In an earlier discussion of hedging, Robin Lakoff argued that certain words made meaning either more or less "fuzzy" (qtd. in Takimoto 95). Essentially, hedging is a rhetorical device by which authors distance themselves from certainty. Reasons for implementing hedges include indicating where knowledge gaps are in current research or "help[ing] control

the level of [an author's] personality in a text" (Hyland, "Metadiscourse" 128). My intention with this project is to identify my own use of hedging throughout a selected corpus of writing in my own discipline as an "interactional" feature (Hyland, "Metadiscourse" 127) that many scholars in discourse studies have identified as an intrinsic feature of professional academic writing (Aull and Lancaster; Aull et al.; Hyland, "Boosting"; Hyland, "Metadiscourse"; Lingard; Salichah et al.; Takimoto). Therefore, through this study, I can perhaps gauge my induction into the field of art history.

Literature focused on hedging is quite diverse due to the variations in corpora (e.g., sciences, humanities) and types of hedges (e.g., lexical verbs, modal verbs). Much of the literature considered here cites Hyland as the base upon which their studies expand. One study found modality to be more common in “soft” domain corpora, with hedging at a 50% increase in the humanities texts compared to the natural sciences (Hyland, “Boosting” 366). In a more recent discussion, Katelyn Guichelaar explores the differences in how knowledge is presented across writing levels (i.e., student versus professional writing) through a range of features of metadiscourse, including hedging, to find that professional writers in *College Communication and Composition* do not employ more hedging devices than prospective university students (9).

In keeping with Hyland’s ‘hard’ and ‘soft’ domains (“Boosting” 360), art history is typically understood to be opinion-based in its research and, therefore, interpretive by nature, which may be attributed to the need for observation and individual perception in analyzing artworks. Paul Tucker also explains art historical discourse as “critical–expositive and interpretive” (293). Their understanding of art historical discourse as a unique blend of affective judgment (whether something is good or bad) and propositional content (what is true and what is false), in which meanings of artworks are “activated through subjective appraisal” (Tucker 292), not only suggests that hedging may be prevalent in art historical texts but also why. While Tucker’s study considers evaluation in art historical discourse, there remains a

general lack of research and data on the use of hedging in some humanities disciplines, specifically in art history.

For a more in-depth analysis of hedging, we can turn to Hyland, who highlights the difference between “interactive” and “interactional” models of metadiscourse (“Metadiscourse”). Hedging techniques fall under the latter category, which Hyland identifies as “the writer’s efforts to control the level of personality in a text and establish a suitable relationship to his or her data, arguments and audience, marking the degree of intimacy, the expression of attitude, the communication of commitments, and the extent of reader involvement” (“Metadiscourse” 128). Like most other research, Hyland concludes that hedges were among the most used interactional resources in their corpus that spans a variety of disciplines, including applied linguistics, public administration, business studies, computer science, electronic engineering, and biology (“Metadiscourse” 132).

On the other hand, Cüneyt Demir’s research provides a thorough scope of the diverse types of hedging (and boosters) employed in journal articles in the field of English Language Teaching by native writers (NW) and non-native writers (NNW) of English. Demir considers the differences in the usage of epistemic modals, verbal hedges, adjectival hedges, adverbial hedges, quantifiers and determiners, and nouns between the two groups. Demir found epistemic verbal hedges were the most common terms used as hedges amongst native English writers (79), which is similar to Imraat Salichah and colleagues, who consider a

diverse range of hedges to conclude that modal verbs were by far the most frequently observed hedges in their corpus of NW and NNW of English.

Meanwhile, Masahiro Takimoto analyzes articles spanning a wide range of disciplines: linguistics, philosophy, marketing, sociology, physics, electrical engineering, mechanical engineering, and chemistry, particularly looking at texts by NW of English (97). Like Salichah and colleagues, Takimoto found that verbs were the most common form of hedging amongst their corpus (97). Takimoto also concluded that “there were not many differences in the types of hedges and boosters used among humanities, social sciences, and natural sciences” (99). Notably, these findings indicated that humanities and social sciences disciplines exhibited almost 70% of all hedges (and boosters) in their corpora, with philosophy displaying the highest frequency of hedging techniques (103).

Adopting a method similar to my own, Laura L. Aull and colleagues observe a large corpus composed of texts spanning from first-year students to advanced students to published academic writing in 16 different disciplines to find patterns in the usage of rhetorical strategies, specifically generalization markers. Their findings saw a large decrease in these markers across their corpora of first-year, advanced, and published writers, as expected, although they do not compare the data across disciplines. In a previous study, Aull and Zak Lancaster found a trend of “developing academic writers using more boosters and fewer hedges, whereas the opposite is the case with use of hedging,

which are used more frequently by the more advanced writers” (162). This study from 2014 includes corpora from humanities disciplines such as English, philosophy (also see Hyland “Boosting”), classics, religion, and, most relevant here, art history (158). This earlier study also considers the context of hedging devices in the corpora (159), a similar strategy in the current research.

Finally, Lorelei Lingard’s discussion, written as a guide to writers in medical fields, is useful in identifying a diverse range of hedge words and “types” in the current research. Lingard focuses specifically on the use of auxiliary verbs, lexical verbs, and modal adverbs as hedges, ranging from weak, to moderate, to strong in the writer’s certainty. For the consistency of the current research, only words labeled under Lingard’s categories of weak and moderate certainty are considered to better pinpoint the nature of hedging within the corpus, and because strong certainty words like the auxiliary verbs *must*, *cannot*, and *will* would pertain more to boosters than hedging. The current research therefore removed *cannot* as a hedge, as it seems to denote a strong certainty, and instead included only *can*.

A similar discrepancy occurred in the work of Salichah and colleagues, in that they categorize *will (not)* and *must (not)* as hedging devices (156) with no explanation or examples as to how this term can be a hedge, which is in direct contrast to Takimoto and Hyland (“Booster” 356) who list *will* as a booster. This is also corroborated by Lingard, who, although she uses the term “hedge” sparingly, lists *will* as an auxiliary verb of strong certainty (108)

or, in other words, as a booster. Ultimately, terms gathered from the literature were only considered for the current research if they were of moderate or weak certainty (see Lingard for a detailed list).¹

With the above review of literature in mind, I take the rare opportunity to analyze hedging techniques in a corpus of my own undergraduate research texts written in the field of art history, using the results of research conducted by Demir, Takimoto, Aull and Lancaster, and Hyland (“Booster”) to act as comparisons. Indeed, the current study seems to be the first to include a detailed contextual analysis of this discourse feature in art history as part of a reflection of a writer’s development, an approach not found in the previous literature. Specifically, it aims to answer the following questions:

- Are there differences in my use of hedging between my upper- and lower-level art history texts?
- Are there differences in my use of hedging depending on the professor?
- Are there pedagogical implications for any findings of this study?

The current research confirms that hedging techniques are present in art history undergraduate texts, a stepping stone in what could potentially form a new line of research.

METHODOLOGY

This study examines a corpus composed of nine of my own art historical undergraduate texts produced between September 2015 and December 2019 for two specific professors, labeled Professor A and Professor B throughout. Of the ten possible texts to examine between these two professors, one was excluded due to its focus on a topic that was not primarily art history-based (i.e., it did not discuss an artist, an artwork, or a concept specific to art history). The select corpus includes texts written for Art History 100 (AH100), Art History 101 (AH101), Art History 102 (AH102), Art History 204 (AH204), Art History 310 (AH310), Art History 311 (AH311), Art History 315 (AH315), Art History 321 (AH321) and Art History 401 (AH401). This corpus will be organized in two distinct ways: 1) by professor (see table 1) and 2) chronologically (see table 2).

1. For an in-depth survey detailing the use of vague nouns as hedges, see Gisle Andersen.

Table 1
Corpus Organized by Professor, then Chronologically

Professor A	Professor B
AH100	AH101
AH315	AH102
AH321	AH311
AH204	AH310
AH401	

Table 2
Corpus Organized Chronologically

Courses texts were written for	Date each text completed
AH100	December 2015
AH101	December 2016
AH102	December 2016
AH315	April 2017
AH321	November 2017
AH311	November 2018
AH401	December 2018
AH204	April 2019
AH310	December 2019

Furthermore, the project considers the disparities in hedging presented in these courses, classified as lower-level (100- and 200-level) versus upper-level (300- and 400-level). I also consider the differences in hedging between texts written for Professor A and those written for Professor B. This allowed me to characterize my development of hedging techniques over the course of my undergraduate degree, potentially marking my active participation in the discipline of art history through discourse.

The texts were analyzed according to the hedge words identified in previous research, most notably the terms *may*, *would*, *might*, *suggest*, and *seem*, in addition to others. (The complete list, along with the secondary sources in

which they are mentioned, is presented in the Appendix).

Each essay in the corpus was completed and graded before the current research commenced, ensuring data was not susceptible to manipulation. Furthermore, the usage of any of these hedges identified in the corpus was only considered as part of the data for the current research if they were present in the main body of text (i.e., not part of a title, endnote/ footnote, or bibliography). Each text in the corpus was analyzed manually six times to prevent the inclusion of words being considered in the data that were not in the context of hedging. This occurs, for instance, with the multivalent use of the word *appear** (Note: *

= includes variations of the root word (i.e., *s/ed/y/ly/ing/ingly/ion/ation.*). To mediate this discrepancy, *appear** was included in the data only if paired with an “it,” such as “it appears that,” or when preceded by a noun. Consider the following use of this word in my Art History 100 paper: “What is exceedingly important to note about Guanyin is that he/she also has an intricate identity: that of both male and female. She can be characterized as originating as a man and developing into a woman, or as being able to simultaneously *appear* as both” (emphasis added). Now compare this with the use of *appear* in an example from my paper from Art History 401 that can be deemed a form of hedging: “Belmore and the viewers *appear* haunted by the sudden realization and reminder of the other currently present beings who may be vulnerable to dangerous situations similar to those abducted” (emphasis added). The use of *appear* in the former example was not coded as an instance of hedging despite the word’s presence in the list devised for this research because it has the meaning of coming into sight, whereas the second has the meaning of seeming. This points to the value of looking at context when counting terms in corpus analysis.

I also noted an issue in previous research concerning the term *can*, which is completely absent from research conducted by Hyland

(“Booster”; “Metadiscourse”) and Takimoto. While it is included by Demir (81), Aull and Lancaster (176), Salichah and colleagues (156), and Lingard (108), Aull and Lancaster specify certain situations in which *can* is implemented as a booster (for instance, the phrase “can actually”), Salichah and colleagues questionably categorize *cannot* as a hedge when the other literature deems it a booster, and Lingard classifies the term as an auxiliary verb expressing moderate certainty as opposed to weak certainty (or, a hedge). I do, however, somewhat contest Aull and Lancaster’s examples of “can” as a booster because, in a sentence including “can actually,” the *can* replaces *does* as in “does actually,” which expresses more certainty. This, in my interpretation, would mean that *can* is still a form of hedging, although a moderate one (see Lingard), and was therefore included in the current data.

RESULTS

Results from the analysis indicate that the most used hedge in the current research’s select corpus was the use of *can*, totaling at 38 (see table 3). The least used hedges were the modal adverbs listed by Lingard to be of weak certainty (108), although many words gathered from the secondary sources did not appear in the corpus (see Appendix).

Table 3
Total Hedges Found in the Corpus

Word count
can = 38
would = 24
consider* = 22
often = 21
suggest* = 17
could = 16
may = 14
attempt* = 13
should = 13
rather = 12
typical* = 12
possible* = 10
almost = 8
seem* = 7
general* = 6
perhaps = 6
appear* = 4
claim* = 4
conclude* = 4
thought to/it is thought = 4
uncertain* = 4
evidently = 5
apparent* = 3
around = 3
essentially = 3
frequent* = 3
largely = 3
less = 3
potential* = 3
primarily = 3
reveal* = 3
somewhat = 3
assume* = 2
currently = 2
few = 2
indicate* = 2
in many ways = 2
partial* = 2
probable* = 2
quite = 2
seek* = 2
about = 1
anticipate* = 1
approximate* = 1
I believe = 1
might = 1
predict* = 1
sometimes = 1
theory = 1
usually = 1

On the other hand, the four most frequent hedges (see table 4) are those deemed by Lingard to be of moderate certainty (108). From table 3, the four most common hedges used

in the entire corpus were *can*, *would*, *consider**, and *often* (see table 4).

Table 4
The Four Most Frequent Hedges Found in the Corpus and Their Frequency

Hedge	Total number
Can	38
Would	24
Consider*	22
Often	21

As one would expect, the longest text, totaling at 2,880 words for AH310, was found to contain the most instances of hedging at 57 instances. While it did exhibit the most instances of hedging, its use per 10,000 words (197.92) was challenged by the texts written for AH101 and AH102 (see table 5). Totaling at 1,417 words, the AH101 text displayed an astonishing 232.89 instances per 10,000 words (see table 5). While this result may circumvent preliminary expectations, it is noteworthy that both texts were completed under the tutelage of Professor B. On the other hand, the shortest text, totaling at 1,323 words for AH102, did not conform to expectations and did not display the fewest uses of hedging, instead possessing the *second* most instances of hedging as indicated by its instances per 10,000 words (see table 5). Likewise, the fewest uses totaled at 112.27 per 10,000 words for AH204 (see table 5), even though it was the second last text to be written. In fact, hedging usage does not rise with each progressing text written for Professor A (see table 5), and the four texts written for Professor A exhibit the fewest uses of hedging in the entire corpus (AH204, AH100, AH315, AH401: in order of uses of hedging, least to most) (see table 5).

Table 5
Frequency of Hedges per 10,000 Words, in Chronological Order

Sample text from course	Total hedges	Total words per text	Instances per 10,000 words	Professor
AH100	30	1,959	153.14	Professor A
AH101	33	1,417	232.89	Professor B
AH102	29	1,323	219.20	Professor B
AH315	44	2,690	163.57	Professor A
AH321	58	3,097	187.28	Professor A
AH311	47	2,788	168.58	Professor B
AH401	43	2,626	163.75	Professor A
AH204	28	2,494	112.27	Professor A
AH310	57	2,880	197.92	Professor B

Table 6
Total Frequency of Hedging and Instances per 10,000 Words in Upper-level Courses in Chronological Order

Text sample from course	Total hedges	Instances per 10,000 words
AH315	40	163.57
AH321	54	187.28
AH311	38	168.58
AH401	41	163.75
AH310	50	197.92

Table 7
Total Frequency of Hedging and Instances per 10,000 Words in Lower-level Courses in Chronological Order

Text sample from course	Total hedges	Instances per 10,000 words
AH100	27	153.14
AH101	30	232.89
AH102	27	219.20
AH204	25	112.27

Instances of hedging in courses taken with Professor A total at 157.78 instances per 10,000 words, while those with Professor B total at 197.43, indicating that I used hedging over 22.33% more with Professor B.

While the data this study demonstrates that I do not continuously increase my employment

of hedging techniques with each progressing text written in the corpus, my results overall show that I intermittently employed this modality in each progressing upper-level text but not in each progressing lower-level text (see tables 6 and 7).

DISCUSSION

*Consider** was the third-most used hedge in the corpus, aligning with Takimoto's data that found *consider* to be one of the highest used hedges in their varied corpus that included texts from humanities disciplines (linguistics and philosophy) and social sciences (103). The frequent use of *could*, *would*, and *may* that Hyland ("Metadiscourse") recorded were terms found to be in the top 10 most frequent hedges in the current study (see table 3). Takimoto's data discovered a frequent use of *may*, like Hyland, but then found this to be followed by *can*, an inversion of what the current research found, with *can* taking the lead with 38 instances (see table 4). This was an interesting discovery as Takimoto's corpus included texts in the humanities and social sciences, "soft" disciplines that are more closely tied to art history than the natural sciences. While the current study, like Demir (81), found *suggest** to be the fifth most frequent hedge, Demir's research found that the verbal hedges *suggest*, *tend to*, *reveal*, *appear*, and *show* were the most common hedges in NW of English. This finding was not observed in the current research, since *suggest** was the only somewhat common verbal hedge from Demir's data throughout the entire corpus.

Often was the fourth most frequent hedge in the corpus (see table 4). This term is cited as an approximate hedge in Aull and Lancaster, who also found it to be one of the most frequent hedges in their corpus (162). Notably, there's a consistent increase in its usage across first-year, upper-level, and published writing in their study (162). This finding is similar to

the general increase in hedge frequency across these three levels of writing in their research. Interestingly, while the courses in the current study were not taken in numerical order (lower-level classes were not necessarily taken before upper-level classes but rather were taken as they became available at the university), the data does somewhat reflect an increase in my use of modality in upper-level courses following each other (see table 6). However, this increase is not the same for texts composed in lower-level courses (see table 7), which demonstrate fluctuations in my use of hedging instead of an increase. This data is, therefore, somewhat in keeping with Aull and Lancaster and may represent a transition in my awareness of hedge-using from tacit to purposeful.

In keeping with Salichah and colleagues' top verbal hedges, *can* was the most frequently used hedge in this research's select corpus. Their results concluded that *can(not)* was the most frequent (156) in their corpus consisting of NNW of English. While the current study also found *can* to be the most frequent hedge, the texts included in the present corpus were written by a NW of English. A comparison between Salichah et al. and the current data is, therefore, difficult to execute, although this does indicate that *can* is a frequent hedge across both NW and NNW of English. On the other hand, the current study found *often* to be in the top four most frequent hedges, a finding similarly documented by Aull and Lancaster (163), whose corpora is heavily composed of humanities texts (including art history).

It is also important to acknowledge the variation in the terms searched in previous

studies cited. Such an ambiguous definition stems from diverse components of language being labeled as hedges by various authors, hence the inconsistencies. For instance, Sali-chah and colleagues code *will (not)* and *must (not)* as hedges when these terms, according to other researchers, are actually boosters (see Lingard, Takimoto, and Hyland “Booster”). If we consider these terms as hedges, they would express more certainty than, say, *may* or *could*. Compare, for instance, this phrase from my Art History 311 paper: “...as we will see with Fra Filippo Lippi’s *Madonna and Child with Angels*.” This could have more directly been stated as “...as seen with Fra Filippo Lippi’s *Madonna and Child with Angels*.” While discussing hedges, Demir takes note of one of Hyland’s many observations that is particularly relevant here: “what makes hedges so necessary is the power of ‘speculative means’ of them” (Demir 76). We typically see the word *will* referencing something that has not happened yet, as in the above example “as we will see with,” meaning the act of seeing Fra Filippo Lippi’s artwork *Madonna and Child with Angels* depriving the Madonna of individual specifications will occur later. Because it has not happened yet, it could be considered speculative and, therefore, a (albeit inferior) hedge. This comparison and the diverse literature expose the discrepancies in how *will* is interpreted and understood amongst scholars who do corpus research of this kind. Because of these disparate understandings of *will*, and with a stronger emphasis in the literature on its use as a booster, the term was removed from the current research. The current study raises the

issue of the definition of a hedge. The lack of consistent methods across studies (including what defines a hedge) has made it difficult to compare the current study’s results.

Other possible limitations of the research emerged with the lack of additional researchers gathering data to increase the corpus size and crosscheck hedging frequencies. Text analysis software could have mitigated the problems of corpus size, but the current study’s small corpus did allow for the ability to more closely consider the terms in context.

CONCLUSION

As presented in the current research, hedging is certainly present in undergraduate art history research texts. Because of its undeniable presence, students are either learning through absorption from seeing it implemented in their readings and are therefore mirroring such behavior (whether consciously or not), or they are specifically being taught hedging techniques, although the latter is unlikely. Aull and Lancaster assert that, in many cases, NW English students are expected to transition into university-level discourse without instruction (153). Based on my experience transitioning from tacit to cognizant uses of hedging in writing this very project, I presume that, had I learned earlier about modality, my rhetorical skills would be more advanced and well-practiced in my current written works.

Hedging techniques allow for the acknowledgment of other voices in one’s discourse, which in turn establishes a stronger argument. It thus follows that hedging techniques should be taught to undergraduate students in art

history and other humanities disciplines. Adding this to curricula would benefit students in shaping their written voice, learning when and how modality is valuable to their work, and helping them adjust and be received into their chosen academic field(s). I hope this research ultimately functions to benefit both students and instructors alike. For students in art history or other humanities, it acts as a tool for reviewing examples and explanations of how modality functions so that they may implement hedging themselves. For instructors, it provides a resource that may assist in forming programs or coursework centered on teaching modality to their students. It may also prevent instructors from tacitly responding negatively to students' lack of these interactional features as they grade, and it acts as a stepping stone for academics in advancing research that would undoubtedly further support students and instructors.

Indeed, the possibilities for future research on this topic are ample. Most beneficial, however, would be extensive research reporting on a control group and experimental group of

students declaring extended minors, minors, and majors in art history or other disciplines, following them throughout their development and documenting their usage of hedging. The control group would not explicitly be taught hedging techniques, whereas the experimental group would be. A study this advanced, while time-consuming, would not only bring more clarity to the current data, it could also determine whether students' conscious understanding of rhetorical strategies enhances success in their discipline(s).

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WORKS CITED

- Andersen, Gisle. "A Contrastive Approach to Vague Nouns." *New Approaches to Hedging*, edited by Gunther Kaltenböck et al., Emerald Group Publishing Limited, 2010, pp. 35–48, https://doi.org/10.1163/9789004253247_004
- Aull, Laura L. and Zak Lancaster. "Linguistic Markers of Stance in Early and Advanced Academic Writing: A Corpus-based Comparison." *Written Communication*, vol. 31, no. 2, 2014, pp. 151-183, <http://doi.org/10.1177/0741088314527055>
- Aull, Laura L., et al. "Generality in Student and Expert Epistemic Stance: A Corpus Analysis of First Year, Upper-Level, and Published Academic Writing." *Journal of English for Academic Purposes*, vol. 26, 2017, pp. 29–41, <https://doi.org/10.1016/j.jeap.2017.01.005>

- Demir, Cüneyt. "Hedging and Academic Writing: An Analysis of Lexical Hedges." *Journal of Language and Linguistic Studies*, vol. 14, no. 4, 2018, pp. 74–92, <http://www.jlls.org/index.php/jlls/article/view/812>
- Guichelaar, Katelyn. "Metadiscourse in Professional and Student Writing: A Corpus Study." *Young Scholars in Writing*, vol. 14, 2017, pp. 6–16, <https://youngscholarsinwriting.org/index.php/ysiw/article/view/237>
- Hyland, Ken. "Boosting, Hedging and the Negotiation of Academic Knowledge." *Interdisciplinary Journal for the Study of Discourse*, vol. 18, no. 3, 1998, pp. 349–382, <https://doi.org/10.1515/text.1.1998.18.3.349>
- Hyland, Ken. "Metadiscourse: Mapping Interactions in Academic Writing." *Nordic Journal of English Studies*, vol. 9, no. 2, 2010, pp. 125–143, <https://doi.org/10.35360/njes.220>
- Lingard, Lorelei. "The Academic Hedge Part I: Modal Tuning in Your Research Writing." *Perspectives on Medical Education*, vol. 9, 2020, pp. 107–110, <http://doi.org/10.1007/s40037-019-00559-y>
- Salichah, Imraatu, et al. "Hedges and Boosters in Undergraduate Students' Research Articles." *Jurnal Pendidikan Humaniora*, vol. 3, no. 2, 2015, pp. 154–160, <http://journal.um.ac.id/index.php/jph/article/view/4855>
- Takimoto, Masahiro. "A Corpus-Based Analysis of Hedges and Boosters in English Academic Articles." *Indonesian Journal of Applied Linguistics*, vol. 5, no. 1, 2015, pp. 95–105, <https://doi.org/10.17509/ijal.v5i1.836>
- Tucker, Paul. "Evaluation in the art-historical research article." *Journal of English for Academic Purposes*, vol. 2, 2003, pp. 291–312, [https://doi.org/10.1016/S1475-1585\(03\)00047-X](https://doi.org/10.1016/S1475-1585(03)00047-X)

APPENDIX

Full list of hedging devices and secondary sources they originate from. (NW = native writer of English, NNW = non-native writer of English).

Secondary source	Most common hedge words identified by author(s)	NW or NNW of English corpus
“Boosting, hedging and the negotiation of academic knowledge” by Ken Hyland (1998).	may, would, possible(ly), could, might, suggest, indicate, seem, assume	Not indicated
“Metadiscourse: Mapping Interactions in Academic Writing” by Ken Hyland (2010).	<u>Interactional</u> : might, perhaps, possible, about	NNW
“Linguistic Markers of Stance in Early and Advanced Academic Writing: A Corpus-based Comparison” by Laura L. Aull and Zak Lancaster (2014).	<u>Approximative hedges</u> : about, almost, apparent/ly, approximately, around, broadly, certain amount, certain extent, certain level, doubt that, doubtful, essentially, fairly, frequently, generally, in most cases, in most instances, in this view, largely, likely, mainly, maybe, mostly, often, on the whole, perhaps, plausible, plausibly, possibility, possible, possibly, presumable/y, probable/y, quite, rather, relatively, roughly, sometimes, somewhat, typical/ly, uncertain/ly, unclear/ly, unlikely, usually <u>Self-mention hedges</u> : from my/our experience/perspective, I believe, I imagine, I think, in my/our experience/opinion/view, to my knowledge	Not indicated
“Hedges and Boosters in Undergraduate Students’ Research Articles” by Imraatu Salichah et al. (2015).	<u>Modal verbs</u> : can (not), should (not), could (not), may (not), would (not), might (not) <u>Epistemic adjectives</u> : possible, potential, likely, apparent <u>Epistemic lexical verbs</u> : appear, seem, suggest, conclude, attempt, infer, seek <u>Epistemic adverbs</u> : probably, possibly, potentially, apparently, quite, fairly <u>Epistemic nouns</u> : possibility, probability	NNW
“A Corpus-Based Analysis of Hedges and Boosters in English Academic Articles” by Masahiro Takimoto (2015).	<u>Most common</u> : may, would, suggest, could, consider, possible, indicate, theory, might, rather <u>Adjectives</u> : probable, possible, likely, frequent, general, regular, modest, moderate, reasonable, approximate, rough <u>Adverbs</u> : perhaps, possibly, probably, frequently, often, sometimes, mainly, primarily, relatively, approximately, roughly <u>Nouns</u> : claim, prediction, suggestion, assumption, hypothesis, inference, likelihood, tendency, uncertain <u>Verbs</u> : claim, indicate, predict, anticipate, assess, assume, appear, seem, tend	NW

<p>“Metadiscourse in Professional and Student Writing: A Corpus Study” by Katelyn Guichelaar (2017).</p>	<p><u>Adjectives</u>: most, many, some</p> <p><u>Adverbs</u>: usually, perhaps, possibly, probably, almost</p> <p><u>Modal verbs</u>: might, may, could</p> <p><u>Lexical verbs</u>: seem(-s, -ed), tend(-s, -ed), suggest(-s, -ed), indicate (-s, -ed), I think, I believe, I doubt</p>	<p>Not indicated</p>
<p>“Hedging and academic writing: an analysis of lexical hedges” by Cüneyt Demir (2018).</p>	<p><u>Epistemic modals</u>: may</p> <p><u>Verbal hedges</u>: suggest, tend to, reveal, appear, show</p>	<p>NW</p>
	<p><u>Adjectival hedges</u>: possible, potential, partial</p> <p><u>Adverbial hedges</u>: about, generally, seemingly, mostly, largely, usually</p> <p><u>Diminutives/determiners</u>: little, few</p> <p><u>Nouns</u>: majority, assumption, suggestion, tendency</p>	
<p>“The academic hedge Part I: Modal tuning in your research writing” by Lorelei Lingard (2020).</p>	<p>Moderate certainty:</p> <p><u>Auxiliary verbs</u>: should, would, can, ought to, tends to</p> <p><u>Modal adverbs</u>: usually, likely, probably, regularly, generally, often, frequently, rarely, over the past decade</p> <p>Weak certainty:</p> <p><u>Auxiliary verbs</u>: may, might, could</p> <p><u>Modal adverbs</u>: possibly, conceivably, occasionally, tentatively, perhaps, maybe, recently, less, currently, apparently, reportedly</p>	<p>Not indicated</p>