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# **Hedges and Boosters in Academic Writing**

**A Study of Gender Differences in Essays Written by Swedish  
Advanced Learners of English.**

**Sofia Serholt**

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Handledare:  
Jennifer Herriman  
Examinator:  
Joe Trotta

# Abstract

## Linguistic C-essay in English at advanced undergraduate level for general purpose course (EN1C03)

**Title:** Hedges and Boosters in Academic Writing:  
A Study of Gender Differences in Essays Written by Swedish Advanced Learners of English.

**Author:** Sofia Serholt

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**Department:** Department of languages and literatures

**Supervisor:** Professor Jennifer Herriman

**Examiner:** Joe Trotta

**Keywords:** Hedges, boosters, Swedish L2 students, academic writing, epistemic modality.

**Summary:** The primary aim of this study was to investigate the overall frequency in which Swedish advanced learners of English use epistemic modality to express doubt (hedges) and certainty (boosters) in their academic writing; and if there seem to be gender-related differences. The secondary aim was to study how these modifiers were structurally distributed in the essays according to the *IMRAD* model. A comparative analysis of 20 randomly selected C-essays written by Swedish students of English at several universities was therefore conducted. Slight indications were found suggesting that females were more inclined than males to offer stronger commitments to the propositional information they supplied, but both males and females displayed a substantially higher use of hedges than boosters. Also, both hedges and boosters appeared more frequently in the *Introduction* and *Discussion* than the remaining sections of the academic essays.

# Table of Contents

<b>1</b>	<b>INTRODUCTION .....</b>	<b>2</b>
1.1	AIM OF THE PRESENT STUDY.....	3
1.2	PREVIOUS RESEARCH .....	3
1.2.1	<i>Studies with L2 students</i> .....	4
1.2.2	<i>Hedges and gender</i> .....	5
<b>2</b>	<b>METHOD AND MATERIAL.....</b>	<b>7</b>
2.1	MATERIAL.....	8
2.2	METHOD.....	9
<b>3</b>	<b>RESULTS AND DISCUSSION.....</b>	<b>11</b>
3.1	HEDGES AND BOOSTERS .....	11
3.1.1	<i>Hedges</i> .....	11
3.1.2	<i>Boosters</i> .....	14
3.2	IMRAD SECTIONS .....	16
3.3	GENDER DIFFERENCES AND SIMILARITIES.....	17
3.4	SUMMARY OF FINDINGS .....	17
<b>4</b>	<b>CONCLUSIONS .....</b>	<b>19</b>
<b>5</b>	<b>REFERENCES .....</b>	<b>20</b>
5.1	PRIMARY SOURCES .....	20
5.2	SECONDARY SOURCES .....	20

# 1 Introduction

Professional academic writing often gives the impression of being objective and impersonal due to its linguistic discourse, which lacks direct references to the interpretations and judgments of its author. One way of achieving this is by avoiding the use of *I* to express an opinion or belief. Compare the following two examples:

1. *I think the results of my study mean that...*
2. *The results of the study indicate that...*

Example 2 immediately seems like the more objective statement of the two, and perhaps more likely found in professional academic writing, yet they seem to be expressing roughly the same message. However, whereas example 1 sounds more subjective due to the direct reference to the author, example 2 could be interpreted as if the *results* speak for themselves. Although the style of writing demonstrated in example 2 may give the impression of being rather objective, academic discourse is written with a particular audience in mind and will, like any other text, contain the author's interpretations of the research results. It may require certain skill and experience to notice when authors actually interpret results or data, and assign them significance.

Hyland writes that “effective academic writing actually depends on interactional elements which supplement propositional information in the text and alert readers to the writer's opinion” (1994: 240), i.e. what marks a “good” article is the author's ability to supply the reader with a tentative analysis of the collected data, thus leaving the door open for alternative interpretations. Within linguistics, this is referred to as epistemic modality, which is described as an indication of a speaker's confidence or lack of confidence in the propositional information that he/she supplies (Coates, 1987: 112). One significant way in which the author's degree of confidence can be expressed in academic writing is through the use of hedges and boosters (Hyland, 1994, 2000). Whereas hedges such as *seem*, *suggest*, and *indicate* are expressions of doubt in relation to the propositional information provided, boosters such as *clearly* and *obviously* are expressions of the author's certainty (2000: 179).

Moreover, it is interesting to note that by differentiating propositional information such as facts and data, from interactional elements such as hedges, it becomes evident that academic writing will have to contain both of these parts in order to make any sense. Skelton describes and stresses this necessity:

It is by means of the hedging system of a language that a user distinguishes between what s/he says and what s/he thinks about what s/he says. Without hedging, the world is purely propositional, a rigid (and rather dull) place where things either are the case or are not. With a hedging system, language is rendered more flexible and the world more subtle. (Skelton, 1988: 38)

Unlike spoken discourse where frequent use of hedges may be viewed as features of powerless language (Holtgraves & Lasky, 1999), hedges in academic writing convey a cautious approach to the material or research results being presented, which in turn helps “academics gain acceptance for their work” (Hyland, 2000: 179). Thus, the ability to use hedges properly seem to be of great importance for all academic writers, including second language learners of English. Yet, Hyland (1996) concludes in his study of hedging devices used in scientific research articles that foreign learners of English find it “extremely troublesome” to use hedges correctly, and their participation in a research world dominated by English may therefore be hindered (1996: 278).

### 1.1 Aim of the present study

As a Swedish student of English, I find it interesting to study how Swedish students make use of the hedges and boosters available in the English language. In addition, there seem to be some conflicting views on whether or not epistemic modality is used differently depending on a person’s gender, which will be discussed in section 1.2.2. The primary aim of this study is therefore to investigate the overall frequency in which Swedish advanced learners of English use epistemic modality to express doubt (hedges) and certainty (boosters) in their academic writing; and if there seem to be gender-related differences. In addition to the overall frequency, the secondary aim is to study if the frequency of hedges and boosters occur in varying degrees in the different sections of their academic essays (*Abstract, Introduction, Method, Results, Discussion, and Conclusions*).

While previous studies of L2 students have focused on how students *should* use hedges and boosters in their academic writing, this study does not claim to analyze whether or not Swedish students are proficient in their use of modifiers. If this was the case, the study would have to compare L2 students with L1 students or professional researchers. Instead, the comparison in this study focuses on differences between male and female students.

### 1.2 Previous research

A tremendous amount of previous research has been done on hedges and boosters with different approaches. Some researchers have focused on gender differences concerning the use of different politeness strategies in spoken and/or written discourse (Coates, 1987; Holmes, 1990). Another approach has been to investigate the effect that powerful versus powerless language styles have on a listener (Holtgraves & Lasky, 1999; Hosman, Huebner & Siltanen, 2002; Hosman & Siltanen, 2006). Unlike the present study, these two areas share the common view that hedges rarely contribute to a positive outcome for the speaker, since they tend to indicate a lack of assertiveness. Finally, there have been studies done concerning hedges and boosters in academic writing for both professional researchers, as well as second language students of English (Holmes, 1988; Hyland, 1994, 1996, 2000; Hyland & Milton, 1997).

### 1.2.1 Studies with L2 students

An interesting area of research closely related to this study is the proficiency in which second language learners of English understand and express hedges and boosters in their studies. As mentioned above, it has been suggested that foreign learners of English may have trouble participating in a research world dominated by English, since they find it difficult to use hedges correctly (Hyland, 1996: 278). Previous research within this area has also focused on the possibilities given to students of English by ESL textbooks to learn and understand the different tools in which one can express doubt and certainty in academic writing.

A study of four different ESL textbooks done by Holmes (1988) suggests that the quality and quantity, in which hedges and boosters are presented to learners, varies between different books (1988: 38). In some cases, too much focus seems to be placed on modal verbs, resulting in a disregard for alternative ways of expressing doubt and certainty. She stresses the importance of providing second language learners with the authenticity of syntactic and lexical devices actually used by native speakers of English “selected from those occurring most frequently in relevant spoken and written texts” (Holmes, 1988: 40). In addition, a more recent study of 22 textbooks intended for second language students arrived at a similar conclusion, namely, that pedagogical materials for second language learners of English seemingly neglect to include academic hedging based on an analysis of authentic usage (Hyland, 1994: 253). If these research results also apply to textbooks intended for Swedish learners, it may suggest that the academic essays used in the present study will contain limited use of the various hedges and boosters available in the English language.

Furthermore, some studies have focused on how students from different nationalities studying English understand and use hedges and boosters in their academic writing. A rather recent study of how 14 Cantonese students of English at the University of Hong Kong responded to hedges and boosters in an academic text, indicated that boosters tended to be more visible to these students than hedges (Hyland, 2000). Further, Hyland suggests that second language students of English may not notice attempts made by authors of academic texts to weaken their commitment to the propositional information provided (2000: 192), thus causing them to draw incorrect conclusions (2000: 184). Hyland subsequently discusses the possibility that these findings only apply to Cantonese students, but arrives at the following conclusion:

More likely however is the possibility that these results are the effect of proficiency rather than first language, a view which receives support from a number of studies which suggest that competence in this area is extremely difficult to achieve in a foreign language (e.g. Bloor & Bloor, 1991; Clyne, 1987). A failure to mitigate statements appropriately has been noted as a feature of the work of students writing in English from a variety of language backgrounds, suggesting that the findings of this study are potentially relevant for students beyond Hong Kong (Hyland, 2000: 192).

Consequently, it may be difficult to distinguish between the effects that the students' first language may have on their English writing versus their individual proficiency level if this is not investigated. Yet, there seem to be noted differences between native and non-native speakers of English, although their nationalities are not specified.

Furthermore, a study of students' writing samples at the same university by Allison indicated an unwarranted use of linguistic devices expressing certainty (i.e. boosters), since the necessary evidence to do so was lacking (1995: 10). In addition, a comparative analysis with texts written by native (British) and non-native (Hong Kong) speakers of English showed that the "Hong Kong learners employed syntactically simpler constructions, relied on a more limited range of devices, offered stronger commitments to statements and exhibited greater problems in conveying a precise degree of certainty" (Hyland & Milton, 1997: 201).

### 1.2.2 Hedges and gender

There have been some contradictory findings concerning whether gender plays a role in how people choose to communicate and express themselves in both spoken and written discourse. A recent, extensive analysis of 14,000 various text samples written by both men and women was conducted in order to explore several linguistic differences depending on gender, where hedging devices counted as one such linguistic feature (Newman, Groom, Handelman & Pennebaker, 2008). The study, which was done using two different computer programs, suggested that women tended to combine *I* with verbs such as *guess* and *reckon* more frequently than men, but a similar tendency was not found in other types of hedging (e.g. *maybe*, *perhaps*) (2008: 232). Since *I guess* is unlikely to be found in academic writing, these results are perhaps irrelevant to the present study. Nevertheless, the results did indicate that there was no difference between how men and women express doubt in their writing, which may suggest that the use of hedges in my study will not be affected by the author's gender either. However, it is important to note the method used by Newman et al. in order to define what words were to be counted as hedges. Instead of following a specific model, the authors chose to let 12 graduate students decide "whether each of 43 candidate phrases was commonly used as a hedge, intended to qualify a statement and reduce its force" (2008: 222). Since these hedges are not specified in the article, there will certainly be discrepancies in our different models.

Another study which examined gender differences in spoken discourse concerning the frequency and contextual use of the hedges *sort of*, *you know*, and *I think* (which are referred to as pragmatic particles) discusses the misleading effect that many studies within the field have when they only focus on frequency "in a social and textual vacuum" (Holmes, 1990: 186). However, when also taking into account the various contextual factors, Holmes found that women use these pragmatic particles "to assert their views with confidence, or as positive politeness devices signalling solidarity with the addressee, rather than as devices for expressing uncertainty" (1990: 202). These findings stand in clear contradiction to much of

S. Serholt

the previous research that she refers to, and rather specifically to a pioneer within gender-related linguistic research, namely Robin Lakoff (Holmes, 1990: 202). Furthermore, Holmes points out some problems with only looking at the frequency of occurrence of certain words with complete disregard to context, since words can function in several different ways (Holmes, 1990). Therefore, it is important in this current study of academic student essays to look at the surrounding text and not just count isolated words.

## 2 Method and Material

The aim of this study was to investigate the overall frequency in which Swedish advanced learners of English used epistemic modality to express doubt (hedges) and certainty (boosters) in their academic writing; and if there are gender-related differences. In addition to the overall frequency, the secondary aim was to study if the frequency of hedges and boosters occurred in varying degrees in the different sections of their academic essays (*Abstract, Introduction, Method, Results, Discussion, and Conclusions*).

The linguistic model used in the study was borrowed from Hyland's study mentioned in section 1.2.1 above, which consisted of the most common hedges and boosters "found in a 500,000 word corpus of academic research articles from eight disciplines" (Hyland, 2000: 182-183). However, the modal verb *will* included in Hyland's study was omitted due to the fact that it can function in different ways, and it may be difficult to distinguish between these cases (Toolan, 1996: 49). On the one hand, *will* could function as a booster expressing certainty; but on the other hand, it could just as likely express future meaning. With this in mind, it was predicted that the analysis needed in order to differentiate between the cases where *will* was used as boosters versus future meaning would take too much time for a study of this size, which one should bear in mind when interpreting the results.

Since the linguistic devices used in the study were counted manually (see section 2.2), some limitations had to be made beforehand. It was therefore decided to exclude the verb *hypothesise* functioning as a hedge in Hyland's study, since it seemed to be quite rare in academic writing. Also, the spelling could differ depending on the dialect of the writer, resulting in an additional hedge having to be used in the present study (i.e. *hypothesize*), since they would not simply differ in their suffix as was the case with some of the other hedges and boosters used in the study. Table 1 specifies the hedges and boosters finally used in the study:

**Table 1** – Table specifying the linguistic devices used in the study.

Hedges	Boosters
suggest	show that
may	always
seem	demonstrate
appear	substantially
could	fact that
might	obviously show
assume	clear/clearly
likely	definite/definitely
possible/possibly	certain/certainly
speculate	
believe	
indicate	
probable/probably	

## 2.1 Material

When conducting quantitative research, one must always decide what research material will be used in order to provide as accurate results as possible in relationship to the aim of the study, i.e. what one seeks to investigate. With this in mind, the study was carried out as a comparative analysis of academic essays written by Swedish learners of English at an undergraduate level from the following Swedish universities: University of Gothenburg, University of Stockholm, University of Karlstad, and Linnaeus University. In order to study differences in how the students distributed their hedges and boosters structurally in their academic writing, the essays had to follow a similar form and style of writing. Thus, only linguistic C-essays (also called bachelor theses) that follow the *IMRAD* model were included in the study. The *IMRAD* model, which is used in scientific writing, usually contains the following sections: *Introduction*, *Method*, *Results* and *Discussion*. Although it is permitted to deviate somewhat from this layout, scientific articles following the *IMRAD* model will have in common that some sort of theoretical framework has been established followed by some sort of scientific study.

The material consisted of a total of 20 essays: 10 essays written by female students and 10 essays written by male students, respectively, which in turn consisted of approximately 20 pages each and contained between 8,000 and 9,000 words. The essays were retrieved by random selection using the GUPEA service at the Gothenburg University Library (UB), as well as the national archive LIBRIS (LIBRIS). Further, the strategy used to distinguish between genders was based on the names of the authors, which resulted in ambiguous names having to be omitted. Also worth specifying is the fact that all essays had either passed (G) or passed with distinction (VG) in order to be published in the public databases. Thus, they had achieved the official expectations at that particular level of study. However, one cannot know the specific grade given to a particular essay, or the social, personal, and educational background of each writing student. It is therefore important to acknowledge the fact that differences in expressions of epistemic modality may be due to factors other than the ones studied here.

## 2.2 Method

With the linguistic model established, each essay was analyzed individually. First, the instances of occurrences of each hedge and booster were counted manually throughout the document using the built-in search function in Adobe Acrobat Professional. Secondly, the section (e.g. *method*, *results*, etc.) in which the hedge or booster occurred was documented. Thirdly, each modifier was contextually analyzed by reading the surrounding text, which was a crucial step since “linguistic forms are complex and the functions they express cannot be identified in a social and textual vacuum” (Holmes, 1990: 186). The need for contextual analysis was also why the devices were counted manually in Adobe Acrobat Professional, since it was predicted that an automatic computer program would not have saved a considerable amount of time. Finally, only devices which qualified as hedges or boosters were included in the data presentation. For example, note the difference in the following two sentences:

3. *It is certain that these results show...*
4. *Certain items were analyzed...*

Whereas *certain* in example 3 functions as a booster in relation to the propositional information supplied, the same word in example 4 functions as an adjective specifying *which items* were analyzed. Similar differences can be seen in the majority of these modifiers, thus signaling the importance of contextual analysis. Where occurrences of these words did not function as hedges or boosters, they were simply ignored in this study. Moreover, consideration was also made to references and quotes, so when another work was quoted, the devices used within that quote were always omitted. On the other hand, when there was a paraphrased reference to a previous study, the surrounding text was analyzed in order to identify whether or not the expression of doubt or certainty was conveyed by the referenced author or the student writing the essay.

As mentioned in section 2.1 above, the essays used in this study followed the *IMRAD* model generally consisting of the following sections: *Abstract*, *Introduction*, *Method*, *Results* and *Discussion*, as well as *Conclusions* depending on the preferences of the writer. Since both the *Abstract* and the *Conclusions* are used to summarize the entire essay, these sections were not treated separately. Instead, the sum of the potential modifiers used in these sections were added and presented together. Moreover, where an essay contained a separate section for *Previous research* or *Background*, these were categorized as belonging to the *Introduction*. Also, when the *Results* and *Discussion* were presented beneath a single title, these were treated separately for two reasons. First, it was done in order to allow for a comparison between the essays in the study, i.e. they had to follow the same format and consist of similar sections. Secondly, in essays following the *IMRAD* model, the *Results* generally tends to be an objective section, whereas the *Discussion* usually contains arguments and subjective

reasoning. Whether a hedge or booster belonged in the *Results* or *Discussion* was subsequently concluded based on where the statement seemed more appropriate. This was usually specified by the author through a subheading to the main title. Furthermore, the total frequency of hedges and boosters is shown in total regardless of the essays' length.

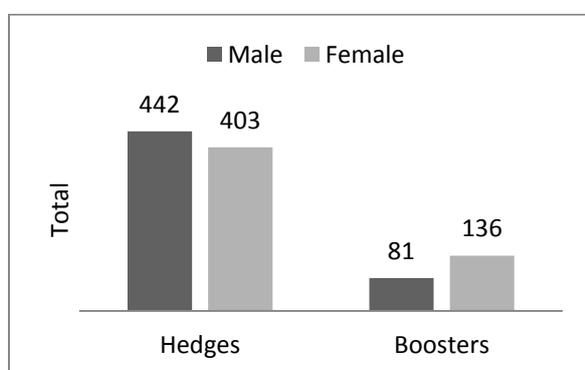
Since it was a quantitative study, the data found are displayed using numeric values in tables and graphs (Denscombe, 2007). The instances in which the hedges and boosters specified in Table 1 were used are displayed both individually as well as collectively in the results section. It is important for the validity of the study to clearly express the fact that because this was a quantitative study of 20 essays, certain limitations had to be decided beforehand. Thus, one should note that there are far more ways of expressing epistemic modality than the words chosen to be included in this study. Although some of the most common hedges and boosters used in academic writing have been selected, it is possible that some of the essays contain alternative means of "hedging" or "boosting" statements that have gone unnoticed in this study. Consequently, the modifiers studied here may provide a general picture to a phenomenon that in reality requires further study. Finally, the fact that the essays vary in length may also have influenced the number of modifiers used by each student, which should be considered when analyzing the results.

### 3 Results and Discussion

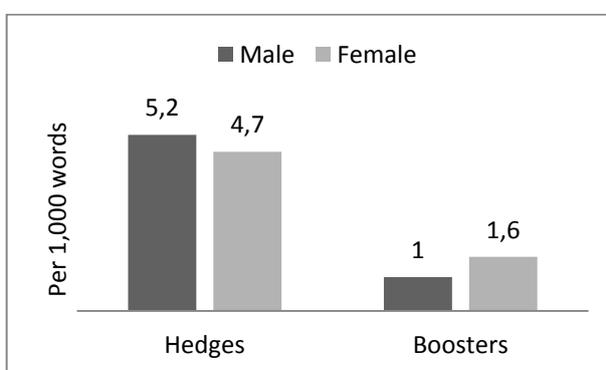
In this section, the data obtained from the study are presented in separate subsections, beginning with the total frequency of both hedges and boosters found in the research material (3.1). Thereafter, focus is placed on how the frequency in the *IMRAD* sections of the essays differed (3.2); after which the findings are discussed in regards to gender (3.3). Finally, the results are summarized (3.4).

#### 3.1 Hedges and boosters

The following two graphs illustrate the total number of occurrences in which hedges and boosters were found in the research material. While Figure 1 displays the total number of occurrences in all of the essays, Figure 2 displays the estimated number of occurrences per 1,000 words based on an average total of 8,500 words per essay:



**Figure 1** – Graph indicating gender differences in the total number of occurrences of hedges and boosters, respectively.



**Figure 2** – Graph indicating gender differences in the number of occurrences of hedges and boosters, respectively, per estimated 1,000 words.

##### 3.1.1 Hedges

The data illustrated above suggest that Swedish L2 students use hedges more frequently than boosters regardless of gender. Although the aim of this study has not been to analyze if these hedges are used correctly, it is interesting to study *how* they are used, as well as what they might contribute to the text. The following extracts are examples of the contexts in which some of the hedges occurred. The essay section as well as the author's gender is specified within parentheses:

5. *The spelling itself suggests a rushed and frantic response.* (Male/Results)
6. *My findings suggest that irony occurs in up to...* (Female/Abstract)
7. *Therefore, these claims may only be valid to some extent...* (Male/Introduction)
8. *...which may be associated with the perception of the...* (Female/Results)
9. *They seem quite confident about their listening and speaking skills.* (Male/Abstract)
10. *The lyrics seem to advocate for...* (Female/Discussion)

11. *Others, however, does not appear to be as good at English.* (Male/Conclusions)
12. *It appears that the lexical development...* (Female/Introduction)
  
13. *However, most of the abbreviations could theoretically be used...* (Male/Results)
14. *...could in theory be identified using this approach.* (Female,/Introduction)
  
15. *This might indicate that the test was too easy...* (Male/Introduction)
16. *...seemingly neutral words might be perceived as sexist...* (Female/Discussion)

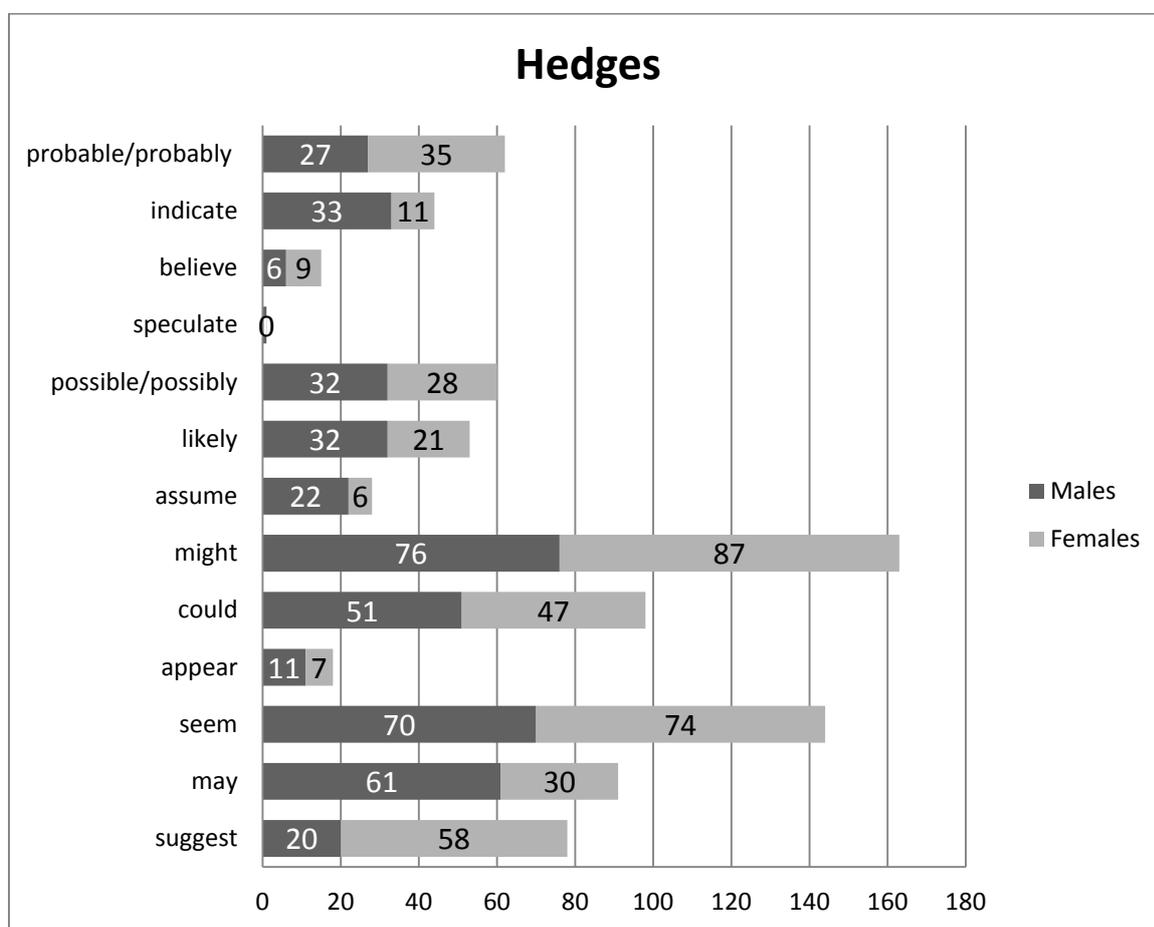
In all of these examples, the hedges function as means of conveying a cautious approach to the statements being made, which might be a strategy used by the students to “gain acceptance for their work” (Hyland, 2000: 179), since hedges provide the author with the opportunity of withdrawing the statement at a later time. Also, it suggests that the author is open for discussion or even open to being proven wrong. At the very least, it reduces the personal responsibility involved in making a statement, since it is impossible to be one hundred percent scientifically sure of something. Claiming to be too certain of a statement could cause a reader to become suspicious about a potential lack of objectivity behind the statement, or that the statement was made based on preconceived ideas or false grounds. For instance, in example 5, a male student analyzes the possible reasons behind a communicative development on the Internet. Compare the effect that example 5 could have if the hedge *suggests* was replaced by alternative wordings:

17. *The spelling itself suggests a rushed and frantic response.* (original hedge)
18. *The spelling itself obviously shows a rushed and frantic response.* (booster)
19. *The spelling itself is due to/is the result of a rushed and frantic response.* (neutral)

The original example 17 indicates that the author made an observation about a particular *spelling* of a word or phrase, which *he believed* was a circumstance of *a rushed and frantic response*. In example 18, the hedge is replaced by the booster *obviously shows*, which almost makes the statement sound arrogant and dismissive towards alternative explanations as to why this particular *spelling* occurred. This way of expressing certainty may give the impression of sounding unreliable, since the moment one perceives something to be *obvious*, there may be little need for further investigation or questioning of these assumptions. Both options in example 19, on the other hand, are rather neutral. They are basically indicating that one event (*a rushed and frantic response*) leads to another event (*the spelling*). Here, the impression may be given that the author was either physically present at the scene where these events took place; or perhaps that these observations were made based on some sort of tangible records of the events, such as video recordings. This wording would therefore require an appropriate background explanation to avoid sounding arbitrary.

Returning to the original statement in example 17, it is by means of using a hedge such as *suggests* that he is basically expressing that he cannot be certain that *a rushed and frantic response* resulted in the particular *spelling*, yet it seems possible or probable based on his experience. One might even call it an educated guess. Consequently, he is implicitly alerting the readers to his own personal opinion or belief without sounding subjective, which may be an example of “effective academic writing” (Hyland, 1994: 240).

Furthermore, the results of the study indicated that some hedges were used more often than others. In Figure 3 below, this distribution is illustrated using a bar graph, where the values indicate the total number of occurrences found in the research material for each hedge, respectively:



**Figure 3** – Graph indicating the total frequency in which specific hedges were found in the research material depending on gender.

Apparently, certain hedges were more commonly used than others. The modal verbs *might*, *could*, and *may*, in addition to the lexical verbs *seem* and *suggest* appeared to be the most frequently used hedges for both groups. Previous research has indicated that ESL textbooks seem to place a higher emphasis on teaching modal verbs as ways of expressing doubt or certainty to foreign learners (Holmes, 1988). Perhaps this focus in ESL textbooks might be

one of the underlying reasons why the research material in this study contained a large number of modal verbs functioning as hedges.

It is further expressed by Holmes that modal verbs dominate the grammatical classes used to express epistemic modality in writing by 36.8 %, whereas lexical verbs come in second with 35.9 %, and the third most frequently used grammatical class is adverbials by 12.8 % (1988: 27). Hence, the fact that the three modal verbs *might*, *could*, and *may*, as well as the two lexical verbs *seem* and *suggest* dominated the hedges found in the research material, stands in accordance with the percentages mentioned by Holmes. Perhaps this indicates that these Swedish L2 students have adapted a style of academic writing that they are often exposed to when reading research articles in their advanced studies.

### 3.1.2 Boosters

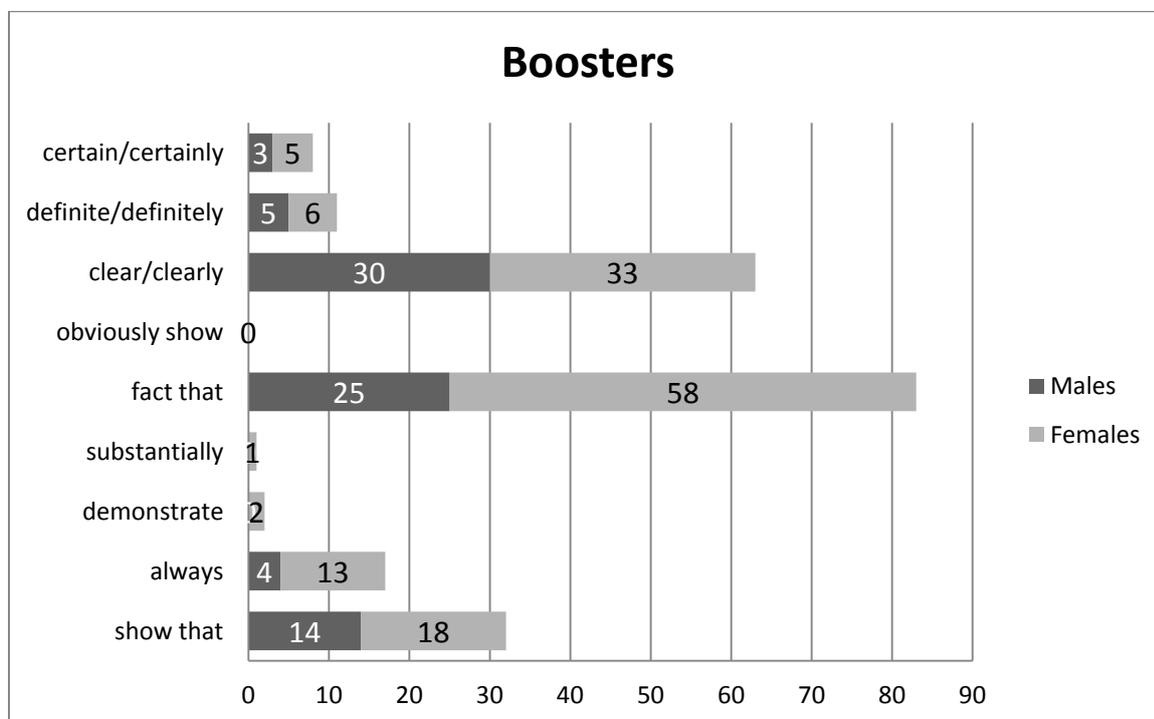
The fact that hedges were used in such a higher degree than boosters may stand in contradiction to the observations made in some of the previous studies discussed in section 1.2.1, which indicated that foreign students of English have demonstrated a tendency to express too much unwarranted certainty (i.e. boosters) in their academic writing (Allison, 1995; Hyland, 2000; Hyland & Milton, 1997). The students in this study did not seem to use boosters excessively, since they occurred merely once or twice per 1,000 words (Figure 2). However, it probably cannot be speculated whether or not these uses were warranted without a more extensive study of the context in which they occurred. In addition to analyzing the immediate context, one would have to assess the entire essay in order to determine whether the boosters used were warranted, which would be too time consuming for a study of this size. Yet, in order to study *how* they were used, as well as what they may contribute to the text, the following extracts exemplify some of the cases where boosters were found in the research material. Again, the essay section as well as the author's gender is specified within parentheses:

20. ...which can clearly be interpreted as a colonial imposition... (Male/Results)
21. When analysing the questionnaires it became clear that... (Female/Results)
  
22. I would argue that this selection shows that there is definite potential... (Male/Discussion)
23. Yet, it can definitely be argued that... (Female/Discussion)
  
24. ...whatever the context is, it always presupposes a certain knowledge. (Male/Results)
25. I claim that irony is always used to reveal opinions rather than fact. (Female/Introduction)
  
26. ...image 2 certainly achieves its preferred reading... (Male/Discussion)
27. ...it most certainly is widespread and popular with certain groups of people... (Female/Introduction)
  
28. However, the study emphasises the fact that more research is necessary... (Male/Discussion)
29. This could be seen as a result of the fact that the stress factor is more and more salient in our society throughout. (Female, Discussion)

In examples 21, 22, and 26 the boosters seem to be used in order to express a high degree of confidence in the indications provided by the results acquired through the study. In other cases, the boosters seem to function as rhetorical devices used to convey the author's interpretation as self-evident or as a generally accepted idea or fact (e.g. examples 20, 24, 27, and 29). Although example 29 may need a phrase such as *fact that* for grammatical reasons, the way in which it precedes the idea or hypothesis that *the stress factor is more and more salient in our society* suggests that it is used as a booster; since one could argue the contrary, namely, that *the stress factor is less salient in our society*.

Finally, examples 23, 25, and 28 are used to express the author's personal opinion in a distinct way. Example 25 is the most obvious illustration of this; since it contains a personal reference to the author (*I*) followed by the verb *claim*, which shows that the author is presenting her hypothesis. The statements made in examples 23 and 28, on the other hand, are both initiated by adverbial conjunctions (*yet* and *however*) indicating that the statements are being made in contrast to something previously mentioned. Since neither of these statements contains references to other sources, it can be assumed that this is the personal opinion of the authors.

Furthermore, the results of the study indicated a distinct preference for certain boosters. In Figure 4 below, this distribution is illustrated using a bar graph, where the values indicate the total amount of occurrences found in the research material for each booster, respectively:

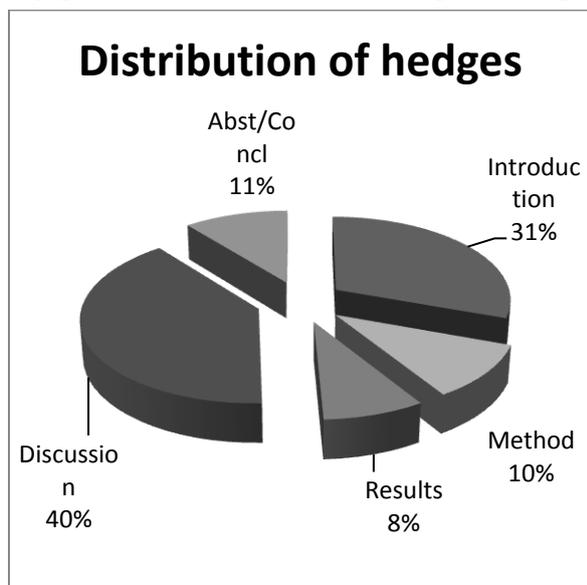


**Figure 4** – Graph indicating the total frequency in which specific boosters were found in the research material depending on gender.

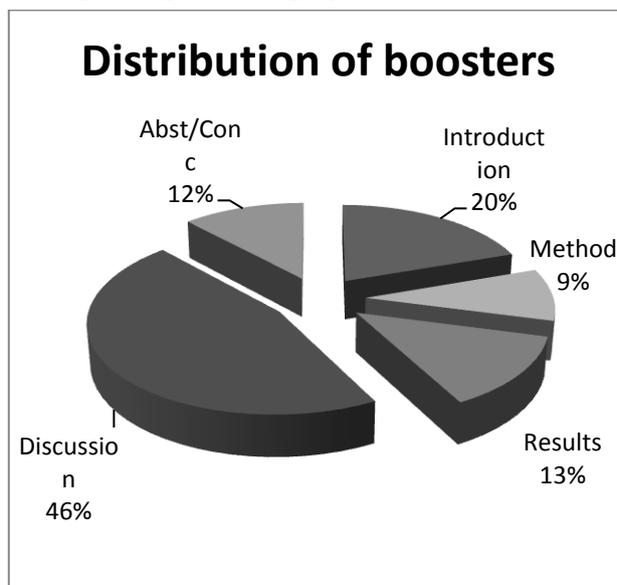
These results suggest that boosters such as *substantially* and *demonstrate* were rather infrequently used among these Swedish L2 students. *Show that* appeared 32 times in the research material, but *obviously show* was never used, although they are fairly similar. Perhaps this indicates that the students were willing to boost their statements to a certain degree, but not to use a confidence marker as strong as *obviously*. In example 22 above, it is clearly expressed that *shows that* is used in a way to enhance the fact that the author is arguing or making a claim about something. Using a hedge such as *indicate* in such a context would probably weaken his claim too much.

### 3.2 IMRAD sections

The following two graphs illustrate the percentage frequency in which hedges and boosters were found in the different sections of the essays based on the *IMRAD* model (i.e. *Introduction, Method, Results* and *Discussion + Abstract/Conclusions*). This distribution turned out to be fairly similar for both gender groups. As a result, this section does not contain any gender distinctions. While Figure 5 displays hedges, Figure 6 displays boosters:



**Figure 5** – Graph indicating the total distribution of hedges in IMRAD sections regardless of gender.



**Figure 6** – Graph indicating the total distribution of boosters in IMRAD sections regardless of gender.

These results indicate that both hedges and boosters were more commonly used in the *Introduction* containing the background to the issue at hand, aim and scope, and the previous research; as well as in the *Discussion* where the results or findings are then reconnected to the previously discussed literature and research. Also, the *Discussion* is where the significance of the author's research results are interpreted and perhaps argued for, which may provide an indication as to why the percentage of boosters was slightly higher in this section. In contrast, the remaining sections (*Abstract/Conclusions, Method, and Results*) comprised significantly fewer hedges and boosters, and the percentages among these only differed to a minor degree. One explanation as to why hedges and boosters were infrequently used in the *Methodology*

and *Results* sections may be due to the fact that firstly, the *Method* section is intended to present a descriptive procedure which a reader should be able to replicate. Secondly, the *Results* should provide objective information or data regarding the study.

The low frequency of hedges and boosters occurring in the summarizing parts of the essays may be more surprising, since on the one hand, the *Abstract* presents an opportunity to awake interest and invite readers. On the other hand, the *Conclusions* usually contain a summary of the main findings, where the author's opinions are relevant. It may be speculated that the low percentages illustrated in the graphs above could be due to the fact that both of these sections tend to be short and concise, and might therefore only contain a few occurrences of hedges and boosters. However, the occurrences may be regarded as many when compared to the total number of words in the individual sections, which was not investigated during this particular study due to its time limitations.

### 3.3 Gender differences and similarities

The results indicated that the male students were more likely to use hedges and less likely to use boosters than the female students. The difference between the total amount of hedges and total amount of boosters for the male group was 361, or an estimated average of 4.2 per 1,000 words. The same difference for the female group was only 267 more hedges than boosters in total, or an estimated average of 3.1 per 1,000 words. This was the only area of the study that revealed any actual gender difference, apart from the observation that the male group used the hedge *may* correspondingly to the frequency in which the female group used *suggest* (Figure 3). More specifically, while the male group used *may* 61 times, and *suggest* 20 times; the female group used *may* 30 times and *suggest* 58 times. Yet, this minor discrepancy is probably coincidental and not considerable enough to be assigned any significance.

Aside from this, there did not seem to be any substantial differences between the two groups that seemed to be associated with gender. Rather, the data indicated that Swedish L2 students prefer using the same hedges and boosters as their peers regardless of gender. Also, the way in which they distribute hedges and boosters within the structure of their academic essays appears to be similar, which consequently leads me to conclude that gender is not a determining factor when it comes to softening or asserting a statement in academic writing.

### 3.4 Summary of findings

To summarize the results of the study, the numbers suggested that the male group used hedges more frequently than the female group, while the female group used boosters more frequently than the male group, which may suggest that females are more inclined than males to offer stronger commitments to the propositional information they supply. Yet, both groups displayed a substantially higher use of hedges than boosters (3.1). Furthermore, the specific hedges most commonly used were the modal verbs *might*, *could*, and *may*, as well as the lexical verbs *seem* and *suggest* regardless of gender. Extracts from the essays showed that the

hedges function as means of conveying a cautious approach to the statements being made (3.1.1).

Moreover, the most commonly used boosters were *fact that*, *clear/clearly* and *show that*. By means of analyses of selected extracts, it was found that boosters were either used to express a high degree of confidence in the significance of specific results. In other cases, boosters seemed to function as rhetorical devices used to convey the author's interpretation as self-evident or as a generally accepted idea or fact. Also, they were used to distinctively convey a personal opinion; or finally, in order to provide contrastive ideas to something previously mentioned (3.1.2).

Further, it was found that both hedges and boosters were most frequently used in the *Introduction* and *Discussion* sections of the essays following the *IMRAD* model (3.2). Lastly, no additional gender differences were found (3.3).

## 4 Conclusions

This study has aimed to investigate the overall frequency in which Swedish advanced learners of English use epistemic modality to express doubt (hedges) and certainty (boosters) in their academic writing; and if there seem to be gender-related differences by means of a comparative analysis of academic C-essays written by Swedish learners of English at an undergraduate level from several Swedish universities. In addition to the overall frequency, the secondary aim has been to study if the frequency of hedges and boosters occur in varying degrees in the different sections of the academic essays following the *IMRAD* model (*Introduction, Method, Results, Discussion, and Abstract + Conclusions*).

Previous research investigating spoken discourse of native speakers has provided conflicting results regarding gender differences in this linguistic area (Coates, 1987; Holmes, 1990; Newman et al., 2008). Moreover, previous research studying written discourse by L2 students with different nationalities has suggested that L2 students are inclined to express unwarranted amounts of certainty or confidence, i.e. boosters; while a tentative use of hedging devices seems to be troublesome (Allison, 1995; Hyland, 1994, 2000; Hyland & Milton, 1997). The results of the study indicated that the male group used hedges more frequently than the female group, while the female group used boosters more frequently than the male group. Yet, both groups displayed a substantially higher use of hedges than boosters, suggesting that Swedish L2 students of English understand the importance of a tentative approach within academic writing.

Furthermore, the specific hedges most commonly used were the modal verbs *might*, *could*, and *may*, as well as the lexical verbs *seem* and *suggest* regardless of gender. Extracts from the essays showed that the hedges function as means of conveying a cautious approach to the statements being made. The most commonly used boosters were *fact that*, *clear/clearly* and *show that*. By means of analyses of selected extracts, it was indicated that boosters were either used to express a high degree of confidence in the significance of specific results. In other cases, boosters seemed to function as rhetorical devices used to convey the author's interpretation as self-evident or as a generally accepted idea or fact. Also, they were used to distinctively convey a personal opinion; or finally, in order to provide contrastive ideas to something previously mentioned. Also, both hedges and boosters appeared more frequently in the *Introduction* and *Discussion* sections than in the *Abstract/Conclusions*, *Methodology* and *Results* sections, which is unsurprising since the latter two sections are intended to be objective.

In conclusion, aside from the slight indication that females were more inclined than males to offer stronger commitments to the propositional information they supplied, no additional gender differences could be found in the study; which consequently leads me to conclude that gender does not seem to be a determining factor for Swedish L2 students of English when it comes to softening or asserting a statement in academic writing.

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