



TECHNISCHE UNIVERSITÄT
CHEMNITZ

Philosophische Fakultät

Institut für Anglis-
tik/Amerikanistik

Englische Sprachwissen-
schaft

Herr Prof. Dr. Josef
Schmied

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*Gender and Hedging in Academic
Writing:*

*A Comparison of Gender-preferential
Usage of Hedges in ESL Learners'
Magister Theses*



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1 Introduction

The differences between women and men have not only become very popular in the media, but are also widely discussed in the humanities. Especially language differences and the resulting miscommunication between the genders seem likely to be discussed in public. Several studies (e.g. Coates and Tannen) have shown that women and men apply distinct language characteristics to express themselves. One particular feature that women and men are said to use differently are hedges. The research on hedges has already begun in the 1970s when George Lakoff mentioned this linguistic phenomenon in his paper “Hedges: A Study in Meaning Criteria and the Logic of Fuzzy Concepts” in which he explains that hedges help to blur the author’s standpoint towards a claim or that hedges can also clarify the opinion of the author. Owing to the “fuzziness” concept, hedges cannot be properly defined. Many linguists have established their own definitions, which will be discussed in detail in the subsequent chapters. The “fuzzy” characteristic of a hedge illustrates that the definitions and the identification of hedges in a text are subjective and mainly depend on the person who reads or analyzes texts. Therefore, it was necessary to create my own definition for the analysis, which can also be found in the next chapter. Furthermore, chapter 2 will look at some theoretical aspects of hedges, such as types and functions.

The aim of the paper was to find out if female ESL students hedge more than male ESL students and if females apply distinct types of hedges more frequently or less frequently than males in their texts. In order to answer both research questions, ten Magister theses by five female and five male students were investigated. The texts were analyzed according to four types of hedges, namely epistemic lexical verbs, epistemic adverbs and adjectives and epistemic modal verbs. The following epistemic lexical verbs were taken into consideration for the analysis: *indicate*, *assume*, *seem*, *appear*, *suggest* and *propose*. *Apparently*, *relatively*, *rather*, *slightly*, *probably* and *possibly* were the chosen epistemic adverbs. The third group of epistemic adjectives comprised the words *apparent*, *probable*, *possible*, *likely*, *improbable* and *unlikely*. The last group of hedges to be investigated in this study was the group of the epistemic modal verbs *would*, *could*, *should*, *may*, *might* and *must*. All these hedge expressions were analyzed according to their frequency in the theses separated by gender with the help of the concordance program AntConc. Moreover, the most frequent collocations of all hedging expressions were investigated, in order to find out if females and males used the chosen types of hedges differently in their texts. The results and the discussion of the investigation can be found in chapters 4 and 5.

2 Literature Review

2.1 Defining Hedges, Hedging and its Functions

Due to the relatively high popularity of English for Academic Purposes (EAP) during the last years, hedges, being a part of EAP, have become a main subject of research among linguists all over the world. Although, many scholars have studied and discussed hedges in academic writing, it still seems to be difficult to find a consistent definition for this phenomenon.

The chapter heading distinguishes between hedges and hedging, which simply means that hedges are the linguistic devices and hedging is the act of using these devices in spoken and written discourse. Lakoff (1973) was the first scholar to introduce the concept of hedges in 1973. He defines hedges as “words whose job it is to make things fuzzy or less fuzzy” (Lakoff, 1973, p. 471) which means that words are used to ‘weaken’ or to clarify a proposition. Nevertheless, this definition does not only refer to the fuzziness of hedges, it also points out that there are no clear-cut linguistic concepts of hedges which becomes obvious when taking the numerous distinct definitions into account. Hyland notices hedges as a necessary tool for writers of academic texts (Hyland, 1998, p. 1). In contrast to Lakoff (1973), Hinkel (2002) presents a more specific definition of hedging:

“it [hedges] represents the use of linguistic devices to decrease the writer’s responsibility for the extent of the truth value of propositions/claims to show hesitation or uncertainty, and/or to display politeness and indirectness in order to reduce the imposition on the writer or the reader” (Hinkel, 2002, p. 148).

Hinkel (2002) refers to the function of tentativeness of hedges only which raises the question if hedges/hedging are actually applied to make things “less fuzzy” (Lakoff, 1973, p. 471). Crompton (1997) argues that the commitment of the writer to their proposition would be rather extended than decreased, which leads to a contradiction in the general definition of hedges (Crompton, 1997, p. 272). However, hedges that have a less tentative/or a very certain character, for example *definitely*, make the standpoint of the writer towards the proposition, indeed, less “fuzzy”. To what extent these less tentative markers express the writer’s uncertainty, remains questionable and will be further discussed in this chapter. Huebler states that hedges are linguistic devices used to diminish the writer’s “degree of liability” (Huebler, 1983, p. 18). Furthermore, he claims that “the smaller the liability commitment on the part of the speaker, the less likely it is that the sentence will be negated by the hearer” (ibid.). This means that a “fuzzier” language results in a higher credibility of the writer’s claims and a diminished degree of rejection of the claims by the reader. Hyland (1994) confirms that hedges

increase and strengthen the credibility of the propositions made by the writer (Hyland, 1994, p. 241). More precisely, Hyland refers to hedges as:

“any linguistic means used to indicate either a) a lack of complete commitment to the truth of an accompanying proposition or b) a desire not to express that commitment categorically. Hedges are therefore the means by which a writer can present a proposition as an opinion rather than a fact” (Hyland, 1996, p. 478).

Both definitions by Hyland and Hinkel are split up into two parts: the first parts deal with the writer’s diminished obligation towards their statements in which hedges work as “face-saving devices” (Hinkel, 2002, p. 149) for the author, especially if the knowledge about the subject, discussed in the text, is rather vague. In case, the findings of the writer are proved to be wrong, the author will not lose the acceptance of their peers because hedges tone down the writer’s commitment. However, the second parts of each definition differ from one another. Whereas Hinkel aims at a positive reader-writer-relationship, Hyland aligns with Huebler’s theory of liability without mentioning the impact on the reader. But is it feasible to leave out the writer-reader component? Salager-Meyer argues that hedging is omnipresent in language to reduce the risk of conflicts between people, especially when criticizing fellow scholars (Salager-Meyer, 2000, p. 176).

As the several definitions already showed, hedges are not exactly determinable. Clemen (1998) states that hedges fully depend on the context and cannot be easily classified, which means that there are still no set criteria for the identification of hedges (Clemen, 1998, p. 237). Crompton expands this thought even further by saying that it is useless to teach the usage of hedges in English for Specific Purposes (ESP) until an absolute definition exists (Crompton, 1997, p. 271). However, this view seems to be exaggerated because unknown or new scientific phenomena are first investigated and then obtain a suitable definition (Salager-Meyer, 2000, p. 178). Although it is difficult to clearly determine hedges in a text, some scholars differentiate hedges according to their word class and degree of tentativeness (e.g. Hyland, 1998). Due to the fact that this paper is in need of a definition of hedges to analyze the Magister theses, I suggest my own definition:

Hedges are any linguistic devices that a) express a writer’s uncertainty of/tentativeness towards a proposition/claim, in which this proposition/claim is transformed into an opinion rather than a fact, and/or b) increase the politeness and the social acceptability of propositions/claims to avoid conflicts between the writer and the reader.

Although it might be viable to ignore the interpersonal relationship between the writer and the reader in the hard sciences (mathematics or physics), it is not in the social sciences where definitions, claims and propositions rely more on subjectivity than objectivity. Moreover, academic writing is considered as a process that requires constant collective agreement and support which illustrates that hedges are important rhetorical devices to convince readers of the validity of statements (Hyland, 1998, p. 7). Additionally, hedges show “the writer’s anticipation of the negatability of his/her propositions” (ibid.). The suggested definition merely refers to the writer’s uncertainty about a claim/proposition which means that I excluded markers of certainty, e.g. *definitely*, *obviously*, etc., on purpose because I think that they do not have a mitigating function, but rather an emphasizing one. These certainty markers could be compared to “boosters” or “intensifiers” which actually enhance or emphasize the writer’s high degree of commitment to the truth value of a proposition (Salager-Meyer, 1994, p. 154).

Hedges are polypragmatic which implies that their meaning can be interpreted in many different ways (Hyland, 1998, p. 157) and this also means that hedges have various functions. Hedges in written discourse contribute to the writer-reader-relationship by informing the reader of the writer’s standpoint towards their statements and the readers themselves (Hyland, 1998, p. 1). Skelton (1998) calls this “an approximation of the truth” of the claim, which indicates that the proposition is true to a certain extent (Skelton, 1998, p. 43). This shows that authors of scientific texts are able to “project themselves into their work” (Hyland, 1998, p. 7) and that they clarify their opinion towards the subject. In addition, “the expression of doubt and tentativeness in science” (Hyland 1998, p. 7) can help to convince the readers of the writer’s argumentation, as has already been mentioned above. Here, hedges tone down the language used to make claims, which establishes again an interpersonal relationship between the writer and the reader. Furthermore, it increases the reader’s acceptance of the propositions because the cautious language signals deference and politeness towards the reader, which can also be found in spoken discourse (Hyland, 1996, p. 479). The feature of toning down not only the language, but also the findings of a study might also be used to distinguish more important research results from less important ones. This would indicate that significant findings are less hedged than minor important results. The next function of hedges is connected to Swales’ argument about the strength of propositions: “high-level claims are likely to be important but risky, whilst low-level claims are likely to be trivial but safe” (Swales, 1991, p. 117). One could say that hedges help the writer to “anticipate possible negative consequences” (Hyland, 1996, p. 479). Presumably, the writer’s hypothesis is proved to be wrong by other scholars, but the writer applied hedges to ‘weaken’ their claim, then hedges have a

face-saving function. This phenomenon is also called “shields” which represent the author’s degree of commitment to the truth value of the proposition (Prince et al., 1982, p. 85). If the claims would be expressed in a direct manner this would lead to the loss of the writer’s and the addressee’s face (Varttala, 1999, p. 181). These “shields” are divided into plausibility and attribution shields (Prince et al., 1982, p. 89). Plausibility shields merely show the writer’s lacking certainty about an assertion and distance them from it. Moreover, these shields suggest that “a belief is based on plausible reasoning”, but excludes that the claim is derived from empirical data and logical inference (Hyland, 1998, p. 73). This becomes obvious in the following example sentence:

“*It appears that* the transformation of active reaction centres into quenching centres is partly reversible if...” (ibid.).

The hedge *it appears that* emphasizes the writer’s tentativeness towards the claim made about the transformation of active and quenching centers. In contrast to plausibility shields, attribution shields, as the name already reveals, attribute the belief in the truth of a proposition to another scholar, who made the claim before (ibid.). This clearly demonstrates that claims made by other scholars are accepted by their peers and that these statements are further used as references. The subsequent sentences will illustrate the purpose of attribution shields:

...presumably the result of differences in the position of integration of the chimeric genes
(Dean et al., 1998)

Henninger et al. speculated that the tuber size is correlated with extent of necrosis in field-grown potato

Jofuku and Goldberg (1989) showed the expression of several Kunitz protease inhibitors in soybean tissue. (Hyland, 1998, pp. 75/76)

All three sentences elucidate that the writer of the academic text cited other scientists in order to strengthen their argumentation. The usage of the reporting verb reveals the degree of the writer’s commitment to the findings of the peers. The verb *showed* in the third sentence indicates a more positive stance towards the finding than the verb *speculated* in the second sentence (ibid.).

Though Crompton and Clemen are still in doubt of clearly defined characteristics for hedges, it is obvious that they can, at least to a certain extent, be determined according to their word classes and functions.

2.2 Types of Hedges

In view of the wide range of and oftentimes rather vague definitions of the term ‘hedge’, it appears to be plausible that there exists more than one form of a hedge. It is obvious that hedges cannot be regarded as a single linguistic phenomenon in a text without taking the context into consideration in which hedges occur. Markkanen & Schroeder (1997) emphasize that a “text does not contain hedges per se but gets them through the author-reader interaction” (Markkanen & Schroeder, 1997, p. 9). The author either uses hedges to downplay his/her findings, to decrease the commitment to the proposition and therefore to convince the reader of his/her claims. To express these intentions, authors of texts use different kinds of hedges, which will be discussed in the subsequent chapter.

2.2.1 Epistemic Modality

The largest class under which hedges are subsumed is epistemic modality. ‘Modality’ reflects the subjective characteristics of a sentence or is “the grammaticalization of speakers’ (subjective) attitudes and opinions” (Palmer, 1993, p. 16). The semantic domains of modality are possibility, probability and necessity. Additionally, there are three important and distinctive forms of modality, namely epistemic, deontic and dynamic. The term ‘epistemic’ refers “to any modal system that indicates the degree of commitment by the speaker to what he says” (Palmer, 1993, p. 51). Deontic modality relates to the influence of actions, states or events (Palmer, 1990, p. 6). Deontic modal verbs are concerned with permission, obligation and prohibition. These perceptions are usually subjective because the speaker decides what is permitted, obligated or prohibited. Dynamic modality refers to the “properties and dispositions of persons” (Huddleston & Pullum, 2002, p. 178) meaning the abilities of a person to do something. Due to the fact that deontic and dynamic modality are not considered as hedging (Hyland, 1998, p. 105), these phenomena will not be discussed any further in this paper.

2.2.2 Lexical Epistemic Verbs

According to Hyland, there are four forms of hedges that are most commonly used in academic writing and that are relatively easy to determine: epistemic lexical verbs A (1)-(5), epistemic adverbs B (1)-(12), epistemic adjectives C (1)-(4) and epistemic modal verbs D (1)-(4) (Hyland, 1996, p. 480).

- | | | |
|---|-----|--|
| A | (1) | I <i>suggest</i> the following interpretation... |
| | (2) | I <i>believe</i> this is a viable reason for... |
| | (3) | We <i>conclude</i> that it is impossible to see any differences between... |
| | (4) | <i>Prince et al</i> showed that the previous propositions were... |
| | (5) | This claim <i>appeared</i> to be insufficiently discussed by... |

The lexical verbs in A can be divided into three groups of verbs: *suggest* (1), *conclude* (3) and *show* (4) are performative verbs, *believe* (2) is classified as a cognitive verb and *appear* (5) belongs to the group of sensory verbs (Hyland, 1996, p. 481). These verbs are generally employed to indicate commitment or assertiveness about a proposition. Palmer established four additional categories to express the (lack of) commitment to the truth of a proposition: speculative, deductive, quotative and sensory categories (Palmer, 1993, p. 51). Therefore, the speculative class presents the claim as the author's subjective opinion, the deductive category is a logical conclusion, the quotative class expresses cited information and the sensory verbs refer to the author's evidence of senses (Hyland, 1998, p. 121). Another distinction can be made between the epistemic lexical verbs in A: *suggest*, *believe* and *conclude* are epistemic judgment verbs which include Palmer's speculative and deductive function. *Suggest* and *believe* clearly show the author's tentativeness and speculation on the subject being discussed, whereas *conclude*, in this example, is identified as a plausible deduction from propositions made before in the text. *Show* and *appear* pertain to the epistemic evidential verbs which "refer to evidentiary justification" and are either based on information by others or on "the evidence of the writer's senses" (ibid.). Consequently, *Prince et al showed* belongs to the quotative part that cites evidential literature of other scholars/scientists and illustrates at the same time that the author is certain about the truth value of the claims made by *Prince et al*. *Appear* on the other hand, clearly relies on the perception of the writer, but also proves that the author is not entirely confident about his/her statement. Due to my definition of hedges as a basis for the analysis, this paper takes uncertainty markers into account only which means that certainty markers, such as *show*, are excluded from the analysis and are merely used as examples to illustrate the differences between tentativeness and certainty.

2.2.3 Epistemic Adverbs

The second group comprises epistemic adverbs. They do not have a fixed position in a sentence which means that they "are not syntactically integrated" (Hyland, 1998, p. 134) and that they can occur at the beginning of a sentence or they are inserted in between the clauses. Although epistemic adverbs have alternating positions in a sentence, they do not influence the meaning relation between the clause and the adverb (ibid.). This also implies that these modal adverbs "tend to occur where something other than the modality (e.g. negativity, aspect, quantification, [...]) is salient in the discourse" (Butler, 2003, p. 475). Epistemic adverbs are divided into adjuncts and disjuncts. Adjuncts used as hedges are also called "downtoners" that "have a lowering effect on the force of the verb" (Quirk et al, 1972, p. 452). Downtoners are

again distinguished into four groups: compromisers, diminishers, minimizers and approximators (ibid.):

- B
- (1) The findings illustrated a *rather* small frequency of...
 - (2) The results *slightly* deviated from the expected values.
 - (3) There were *barely* any indicators for...
 - (4) *Virtually*, no scholar has confirmed this...
 - (5) *Strictly speaking*, this is...
 - (6) Statistics *definitely* proof the described phenomenon.
 - (7) *Presumably*, the results will give an insight into...
 - (8) *Evidently*, the acceptance among peers is...
 - (9) This field has not received much attention yet, *apparently* because...
 - (10) *Actually*, no researcher confirmed what was said.
 - (11) Although others disapprove of that, the procedure is *theoretically* possible.
 - (12) *Basically*, the assertion, made by other scholars before, is right.

Compromisers only slightly lower the force of the verb which is clarified by *rather* in B (1). The diminisher and minimizer in B (2) and (3), in contrast, scale the force of the verb significantly downwards. The approximators in B (4) “express[es] an approximation to the force of the verb, while indicating its non-application” (ibid.). This implies that approximators not only negate the truth of the verb, but the entire meaning of the predicate (Hyland, 1998, p. 136) and thus have the greatest downgrading impact on the strength of verbs.

Quirk et al. (1972) divide disjuncts into two main classes: style disjuncts, which comment on the form of the said/written and also define the speaker’s/writer’s conditions under which they are speaking/writing, and attitudinal/content disjuncts that comment on the truth value of what is said/written (Quirk et al, 1972, p. 509). In B (5) the style disjunct *strictly speaking* demonstrates the strength of the commitment and how the author comments on the content of the utterance. Apart from that, attitudinal or content disjuncts have several functions. *Definitely* in B (6) shows the writer’s certainty to the proposition, but *presumably* in B (7) expresses a certain degree of doubt. That is why the first group of disjuncts can be summarized under the category certainty and doubt. The second class is concerned with the author’s mental perception of the truth (ibid.). This is exemplified in B (8) where the writer is convinced of their claim. In B (9) similarly to B (7), *apparently* reveals some doubt. The last category presents the author’s sense of judgment of the truth of their claims (Quirk et al, 1972, p. 511). In B (10) *actually* refers to the reality of what was written, whereas *theoretically* in B (11) shows a contrast with reality. *Basically* in B (12) indicates that the proposition is true in principle, but not in practice (ibid.).

2.2.4 Epistemic Adjectives

Epistemic adjectives are another category of hedging devices that are, however, not as frequently used as modal adverbs. Although both classes overlap, adjectives and adverbs are not identical (Nuyts, 2001, p. 55). According to Hengeveld, epistemic adverbs “always express subjective epistemological modality” and epistemic adjectives express objective modality (Hengeveld in: Butler, 2003, p. 465). Nevertheless, Butler contrasts these claims with a study conducted by Nuyts on the usage of *waarschijnlijk* (Dutch), *wahrscheinlich* (German) and *probable* which are all used as adjectives. This study shows that modal adverbs and adjectives are not always used subjectively and objectively or intersubjectively as Nuyts prefers to call it (Butler, 2003, p. 474). Furthermore, Nuyts states that other factors have to be taken into consideration when examining modality. Modal adjectives express evidence which cannot only be attributed to the adjective, but rather to the impersonal construction the adjective occurs in (Butler, 2003, p. 475). Thus, the adjective’s evidential meaning is not always intersubjectively expressed because double negations, such as in C (1) have a more subjective character than clauses without negation (*ibid.*). Another factor is the distinction of performative and descriptive usages, meaning that the speaker/writer reports on their own view or describes someone else’s view. Taking again Hengeveld’s (2003) theory into account, this would imply that adverbs are used performatively only and adjectives descriptively only. However, Nuyts argues that adjectives can be either used performatively or descriptively because performative uses can be both, subjective and intersubjective (*ibid.*). A further characteristic of epistemic adjectives is that they are applied when the modality stands at the center of the discourse. Nuyts (2003) expands this thought even further by saying that these adjective constructions, such as in C (2), can be compared to the cleft sentence structure.

- | | |
|---|--|
| C | <ul style="list-style-type: none"> (1) It is <i>presumable</i> that these findings reflect... (2) It is <i>possible</i> that this significant result has an impact on... (3) One <i>probable</i> determiner of this linguistic phenomenon could be that... (4) Is it <i>likely</i> that these occurrences are linked to ...? |
|---|--|

Cleft sentences give “thematic and focal prominence to a particular element of a clause” (Quirk et al, 1972, p. 951) because they divide one clause into two sections in which each has its own verb. Most cleft sentences begin with the pronoun *it* followed by the verb *be* which is then accompanied by the element which is emphasized in the clause. In C (2), this element is the epistemic adjective *possible* which is the focal of the utterance. This sentence can then be regarded as a “cleft variant” (Nuyts, 2003, p. 76) of *Possibly, this significant result has an impact on....*

The use of modal adverbs and adjectives also differ with regard to syntax. Whereas epistemic adjectives are likely to be applied in noun phrases, e.g. C (3), in which long verb phrases are transformed into one complex element in a sentence, which is not feasible with adverbs. Similar to noun-phrase-constructions is the behavior of epistemic adjectives in questions. Nuyts (2003) and Hengeveld (2003) argue that epistemic adjectives can solely be used in questions. Some linguists (e.g. Perkins) have contrasting opinions and claim that also adverbs can be applied in questions:

Did/Have they *perhaps* run out of fuel?
(Nuyts, 2003, p. 58)

Nuyts (2003) opposes that these adverbs, which are used in very rare cases, do not express any epistemic modality at all (Nuyts, 2003, p. 58). Furthermore, he explains that in this utterance not the adverb *perhaps* is questioned, but rather the state of affairs meaning that *they have run out of fuel* and not whether it is likely that they have.

All the above made distinctions illustrate that modal adjectives and adverbs can indeed not be identically applied when a speaker/writer expresses modality.

2.2.5 Epistemic Modal Verbs

Probably, the most popular category of modality is the group of modal verbs, which have been extensively researched and analyzed in the past years. Due to their popularity among linguists (e.g. Coates), there exist plenty of studies about uses of modal verbs in spoken and written discourse.

Although modal verbs are easily to identify in a text, this does not imply that verbs, such as *should* or *could*, have only one meaning. Modal verbs are polysemous which means that they can have more than one meaning in a sentence (Hyland, 1998, p. 105). For instance, Coates (1998) found out that *should* has five distinct meanings and *could* has seven (Coates in: Hyland, 1998, p. 105). She also argues that modal verbs do not have meanings themselves, but receive their meanings through the utterance they occur in (ibid.). Epistemic modals avoid commitment to categorical assertion and modal forms range from confidence to doubt and from inference to non-inference (Hyland, 1998, p. 107). Perkins (1983) divides modal auxiliaries into two groups: primary modals (*must, can, shall, will, may*) and secondary modals (*could, would, ought to, should, might*). Modals of the first category can either have “root meanings” (Hyland, 1998, p. 105) or epistemic meanings. The term root meaning refers to deontic and dynamic modality which are concerned with volition, obligation, permission and ability. In view of the ambiguity of primary modals, it seems complicated to clearly determine

them as hedges. Secondary modals merely express “the modality of reasoning and belief” (ibid.) which makes them easier to identify as hedges. The following examples will serve as a basis for discussing the different meanings and uses:

- D
- (1) This *must* be true because the data shows a significant rise in population.
This *may* be true because the data shows a significant rise in population.
This *might* be true because the data shows a significant rise in population.
This *should* be true because the data shows a significant rise in population.
This *ought to* be true because the data shows a significant rise in population.
 - (2) This *can* be an indicator of malnutrition.
This *could* be an indicator of malnutrition.
 - (3) Increasing production costs *will* result in higher product prices.
Increasing costs *would* result in higher product prices.
 - (4) This *shall* give an insight into the topic.
This *ought to* give an insight into the topic.
This *should* give an insight into the topic.

According to Hyland (1998) the epistemic modals *must*, *should* and *ought to* relate to logical assumptions. *Will*, *may*, *might*, *can* and *could* imply possibility, whereas *shall* and *would* are applied in hypothetical situations. The difference between these three types is that some modals are more tentative (*could*, *would*, *should*, *can*, etc.) than others (*must*). *Must* in (1) reflects a stronger commitment to the proposition than *may* or *might*. *Must* leaves almost no doubt that the author judges the claim to be true, whereas *may* and *might* imply that the propositions can also be wrong. The same is true for *can* and *will*, though both are more tentative than *must*, they express more certainty than *could* and *would*. *Should* and *ought to* in D (1) link subjectivity, the author’s opinion, to logical deduction, inference from known facts. In D (4) *should* and *ought to* have a more tentative meaning and refer to the future that something will give insight into a certain topic. *Shall* in (4) also expresses a relation to the future similar to *should* and *ought to*. *May* and *might* in (1) seem to have the same meaning, but Hyland (1998) argues that *might* has a more tentative meaning than *may* (Hyland, 1998, p. 117). Additionally, *may* has both a root and an epistemic meaning¹, which means that in (1) the data shows that a rise occurs and that the author thinks that the rise occurs because of the data. However, both meanings do not interfere with each other and only neutralize this difference of root and epistemic meanings (ibid.). The epistemic modal *will* in (3), like *shall* and *should*, not only has a future reference that something is about to happen in the near future, but it also indicates a judgment that the prices rise when the production costs increase.

¹ *may* is mainly used in its epistemic meaning and rarely in its root meaning

The meaning of modals in written and spoken discourse always depends on the author's intention, commitment and knowledge. Moreover, their meaning is also affected by readers/listeners and how they perceive and interpret the meaning of the modals in context.

2.3 Hedging and Second Language Learners of English

Writing in a suitable academic style and using hedges to commit to the truth of their claims and to establish a relation to their audience, still seems to be challenging for non-native speakers of English. Although the phenomenon of hedges has been extensively discussed in recent years, the uncertainty among ESL learners, how to use hedges correctly, remains.

Due to the fact that this area of hedging has not been sufficiently researched yet, this chapter will only give a brief overview of the problems of ESL students and their usage of hedges. Hyland (1998) points out several issues, why second language learners (SLL) still hesitate to write in English and contribute their texts to the English speaking community (Hyland, 1998, p. 218). Firstly, he refers to the variety of meanings that are conveyed through hedges. They do not only help to adopt a stance towards a proposition, but hedges also contribute to the writer-reader relationship. Secondly, epistemic meanings in English and also other languages can be expressed in many distinct ways with the help of many distinct devices. With regard to the epistemic devices, a non-native speaker might have a completely different understanding of the usage of hedges in his/her mother tongue which could lead to confusion about the correct use of these epistemic devices in English academic writing. This fact is also connected to distinct cultures and their language use. The usage of modality markers and the amount of hedging devices in an academic text can differ from country to country. For instance, German and Czech writing is said to be more direct than English writing (Hyland & Milton, 1997, p. 186). In addition, a direct manner of writing is more characteristic of ESL students than of native speakers (*ibid.*). Thirdly, Hyland (1998) criticizes the lack of adequate literature on hedging for ESL students and the persisting standpoint that academic writing needs to be impersonal and objective, which is only viable without applying hedges (Hyland, 1998, p. 218). Although this criticism is justified, for ESL learners it is even more important to select the right amount of hedging devices to remain credible, modest and deferential towards the reader and experts of the subject (Hyland & Milton, 1997, p. 183).

In sum, ESL students and non-native speakers find it challenging to present their propositions neither understated nor overstated in academic writing.

2.4 Hedging and Gender

Hedging with regard to men and women has been a widely discussed topic area for many years.² The research on gender-preferential usage of hedges has, however, mostly concentrated on spoken discourse. Therefore, the overview that is presented in this chapter mainly concentrates on spoken communication.

As early as in the 1920s, Otto Jespersen (1928) remarks language differences between the sexes. He argues that men have a larger vocabulary and that they are “the chief renovators of language” (Jespersen, 1928, p. 246). Women, on the other hand, are restricted in vocabulary and have a “preference for refined, and (in certain spheres) veiled and indirect expressions” (ibid.). This archaic view was criticized by R. Lakoff who also examined language differences of men and women (Lakoff in: Bradac et al., 1995, p. 93).³ She found out that women do indeed use a more indirect language than men, which is characterized by hedges, tag questions, empty adjectives and intensifiers. Nevertheless, she interprets these findings by saying that women were educated to have an inferior and more indirect language to sound more powerless than men. In contrast to women, men interrupt more and also use more directives and commands which make them naturally appear more powerful (Lakoff in: Goddard & Meân Patterson, 2000, p. 95). Women were not expected to talk like men because they were not regarded as taking part in the ‘outside life’ as men did. Furthermore, women were assigned to fulfill their social role of being a mother and a wife, whereas men were dominant and in charge of the relations outside the social sphere of women. Unlike Jespersen, who attributed these language differences to the nature of women, Lakoff justifies language differences with the distinct education of women. Based on Lakoff’s theory, Tannen (1994) makes a crucial distinction between indirect and direct speech styles. She claims that women use more hedges, tag questions, etc. to show rapport and solidarity for the other speaker (Tannen, 1994, p. 32). Therefore, she proves that a weaker conversation style of women does not always indicate inferiority, but rather shows support and understanding for the speaker’s standpoint. Tannen (1994) even suggests that women control or lead the conversation when applying these features of indirect speech (ibid.). In addition, uncertainty and politeness are factors that have to be taken into consideration, particularly with regard to hedging. All the above named indirect speech characteristics could also be applied for academic writing, e.g. a writer who quotes another scholar may either accept, reject or show a certain degree of uncertainty

² cf. Cameron (2007), Coates (2004), Tannen (1994)

³ The original study can be found in R. Lakoff ‘s *Language and Woman’s Place* (1975)

about a claim. Nevertheless, it is crucial to bear in mind that spoken discourse is different from written discourse (Frances et al., 2001, p. 316), which implies that it is rather difficult to compare the usage of hedges in speaking and writing. Despite that, linguists (Frances et al., 2001) hold the view that women write distinctly from men in academic context: “women tend to be affiliative rather than competitive or objectifying” (Frances et al., 2001, p. 317). It is further argued that this affiliative style makes women’s writing less confrontational and more likely to accept other opinions by scholars (ibid.). In the hard sciences, where an objective and impersonal way of writing is still favored, the female and less assertive writing style could cause criticism of being “insufficiently argumentative” (ibid.). In contrast, men are said to have an aggressive and competitive way of writing which may leave not enough space for differing points of view. Due to the fact that male writing is more convincing in comparison to female writing, males might have an advantage over females in hard science writing.⁴ However, Frances et al. (2001) do not refer to the interpersonal relationship between author and reader and the acceptance among peer academics. A too assertive writing style and the rejection of claims, made by others, could harm this relationship because the reader and the peers might feel offended. Furthermore, if the claims are formulated without hedges, which imply doubtless author commitment to the truth value of the statement, and the propositions are proved to be wrong, then the author may be openly criticized by other peers and cannot rely on the face-saving function of hedges.

As previous studies have examined, there are differences in spoken and in written discourse between men and women. If this is also applicable for the Magister theses of female and male ESL students, will be examined in the analysis of these texts.

3 Methodology

3.1 Sample

The corpus consisted of ten Magister theses written at Chemnitz University of Technology. In order to ensure that all papers were written in English and in an academic style, ten theses were chosen from the Department of English and American Studies of Chemnitz University of Technology. Five theses (four female writers and one male writer) were taken from the corpus of English Language and Linguistics and four theses (four male writers) from the corpus of British & American Cultural/Social Studies. Nine students (5 females and 4 males) had a German background, whereas one male student had an Iranian background. All papers were written according to the IMRD structure, namely consisting of introduction, methodology and materials, results, discussion and conclusion sections.

⁴ The study also showed that males were more successful with their competitive writing style than females.

3.2 Data Collection

The entire corpus consisted of 304,282 words in which each text had a mean size of 30428.2 words. The theses were selected according to their length of the full text to assure a nearly equal number of words for the analysis. The topics of the papers were not of interest for the analysis. In order to control the intervening effects of gender on hedging, an equal distribution of five Magister theses of each gender were chosen from two corpora of Chemnitz University of Technology.

3.3 Data Analysis

All papers were analyzed with the help of the 2007 version of the concordance program Antconc 3.2.1w. The theses were uploaded to the program and parsed for hedging expressions to determine differences in the usage of these expressions between both genders. The program scanned all texts according to the chosen epistemic markers, named below, and ascertained the frequencies of the selected items. To ensure that all the above named words, especially lexical epistemic and epistemic modal verbs, were used to express the writer's uncertainty and/or tentativeness, all verbs were studied in context. The frequencies of the selected tentative expressions are listed in tables 1 to 13 in the results section. In order to avoid biased results, the selected theses consisted of the full running text, but excluded tables of contents, direct quotations, notes, tables, figures, references and appendices. The following hedges were examined according to their frequency in the female and male students' theses and to what extent females applied distinct types of hedges more/less frequently than males in their papers. Moreover, frequent collocations of the epistemic markers were also investigated to find out if females and males used different hedge constructions in their papers. The first group comprised lexical epistemic verbs, consisting of the performative verbs *suggest*, *propose* and *indicate*. Moreover, the sensory verbs *appear* and *seem* and the cognitive verb *assume*. The analysis also included the progressive, present, past participle and frequent collocations of the verbs, for instance lexical epistemic verb + *that*. The second group consisted of epistemic adverbs, such as *apparently*, *relatively*, *rather*, *slightly*, *probably* and *possibly*. The epistemic adjectives *unlikely*, *possible*, *likely*, *probable*, *apparent* and *improbable* comprised the third group that was observed. The last category included the epistemic modal verbs *could*, *may*, *might*, *should*, *would* and *must*. All epistemic modal verbs were regarded as independent modals, i.e. that *would*, *should*, *might* and *could* as past participles of *will*, *shall*, *may* and *can* with reference to the past were analyzed separately to be certain that only epistemic meanings, here especially the case of *could*, were included in the investigation.

3.4 Classification of the Occurrences into Non-epistemic and Epistemic Meanings

Due to the fact that some of the lexical verbs have polysemous meanings and therefore do not always express epistemic meanings, I decided to separate them according to their meanings in the respective sentences because the suggested definition of hedges in chapter 2.1 refers to the writer's uncertainty, but not to their certainty about propositions. I chose a classification model by Thue Vold which she applied in her study on epistemic modal markers (Thue Vold, 2006, p. 70).

The lexical verbs *indicate*, *assume* and *appear* have several meanings (ibid.). Those meanings that do not have an epistemic character had to be separated from the epistemic meanings to avoid biased results. *Indicate* in the sense of *suggest* clearly has a tentative/epistemic character, whereas *indicate* can also mean *show* or *denote* which does not represent the desired meaning for my analysis of the theses. The following sentences will show the distinct meanings of *indicate*.

- (1) "Contrastive sentence connectors like 'but', 'in contrast', 'whereas' and 'while' basically *indicate* that the ideas connected are incompatible with each other [...]" (female02 p. 31)
- (2) "This might *indicate* a future change towards an increase of syllable-timing in NZE in general." (female05 p. 29)

In the first sentence *indicate* is clearly used in the meaning of *denote* or *show*. The second utterance, in contrast, illustrates that *indicate* is used in the more tentative sense of *suggest*. Furthermore, the modal epistemic verb *might* emphasizes the tentativeness of *indicate*. In these cases in which an expression of uncertainty, such as an epistemic adverb or modal verb, preceded the lexical verb, it was classified as a lexical epistemic verb because these markers emphasized the tentativeness of the utterance. However, there were also cases in which the distinctive meanings of *indicate* were not as clear as in the examples above.

- (3) "Most findings *indicate* that non-native speakers of English tend to overuse conjunctive devices and have a limited variety of connectives at their disposal." (female02 p. 20)

When comparing this sentence to the others above, it becomes obvious that both meanings, i.e. *show/denote* and *suggest*, can be inserted. Findings, as the above, were then classified according to the most plausible meaning of the verb. This means when other epistemic markers were found in the sentence, the verb was classified as an epistemic lexical verb.

As already mentioned above, *assume* has also several meanings that had to be taken into consideration for the investigation. *Assume* can either mean *suppose*, which is the tentative expression I needed for my analysis, or *adopt*, which could not be included because it simply expresses a fact without a degree of tentativeness or uncertainty. It has to be noted that constructions, such as *as assume(s/ed) that* and *be assumed to* always have an epistemic meaning, whereas *assume + noun* does not have an epistemic meaning (Thue Vold, 2006, p. 73).

- (4) “On the contrary they *assume* that the integral function of language is to convey meaning.” (female03, p. 22)
- (5) “[...] America had already *assumed* a role in Iran as champion of that country’s interests both against the Kremlin and more quietly against the Whitehall.” (male05, p. 26)

Both sentences show that *assume* is used differently. *Assume* in the first sentence is used in the meaning of *suppose* and in the second utterance in the meaning of *adopt*.

The third verb that has polysemous meanings is *appear*. In this case, it is also necessary to look for syntactic criteria, such as *it appears that* and *appear(s/ed) to be* which both represent epistemic meanings, while *appear + preposition* does not express epistemic sense (ibid.). This becomes clear when looking at the sentences below, in which *appear* in the first sentence is applied in its epistemic sense and in the second sentence in its non-epistemic sense.

- (6) “When going through the data with this assumption in mind, many responses, which might have seemed like coincidental guesses before, *appear* to be rather commonsense.” (female03, p. 57)
- (7) “The majority of features in Table 3.2 *appear* in colloquial American English, other standard varieties, and in creoles.” (male01, p. 32)

The remaining verbs *seem*, *suggest* and *propose* already express a tentative standpoint therefore, they did not have to be differentiated according to their meanings.

Not only verbs can have ambiguous meanings, but adverbs and adjectives can also transfer distinct senses. One adverb and one adjective had to be analyzed differently from the other epistemic adverbs and adjectives, namely *apparently* and *apparent*. Both can be distinguished into their non-epistemic and epistemic meanings. *Apparently/apparent* in the sense of *evidently* or *obvious* convey a very certain writer commitment to the truth value of the claim,

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whereas a low degree of commitment is expressed by the adverb/adjective in the sense of *seemingly* or *seeming*. Sometimes these different usages become only clear when the sentence, they occur in, is regarded in context. Due to the fact that *apparent* is similarly used, the examples will only illustrate the usage of the adverb.

- (8) “Yet, some participants *apparently* used the modal verbs rather randomly than consciously[...]” (female01, p. 44)
- (9) “*Apparently*, sentence 5, containing the modal ‘would’, was considered more polite, whereas sentence 6, containing the modal ‘will’, was considered the least polite [...]” (female02, p. 61)

In (8), *apparently* is clearly used as an epistemic marker of low writer commitment which is emphasized by the other hedge *rather* and the possibility that *apparently* can be substituted by *probably/possibly*. Utterance (9) demonstrates that *apparently* functions as a non-hedged marker leaving no doubt that the result is true.

As already stated above, modal verbs can have either epistemic, deontic or dynamic meanings, the two latter meanings had to be regarded separately.

It can be said that the modal verb *could* applied as an independent word and not as a past participle of *can* carries epistemic meaning. This means “*could* as a past form and *could* motivated by synchrony with a related event in the past do not allow inferences to be drawn as to the speaker’s attitude” and does therefore not represent an epistemic sense (Huebler, 1983, p. 136). This is due to fact that *can* has no epistemic sense (Coates, 1983, p. 19).

- (10) “They *could* not have been former slaves, because they have stated Philadelphia, New Jersey and Baltimore are their origins.” (male01, p. 19)
- (11) “[...] on the other hand, one *could* argue that, being an NRI he cultivates his Indianness explicitly by speaking Hindi only [...]” (female04, p. 72)

The usage of *could* in the first sentence excludes an epistemic sense because the modal verb is used as a past participle of *can*. The second sentence, in contrast, shows that *could* is used in its epistemic meaning, saying that it is possible to argue about something.

Would and *should* are markers of prediction and hypothetical meaning which already illustrates that both represent epistemic meaning. Nevertheless, they can also have root meanings in the sense of obligation, permission and necessity. However, a prediction or hypotheti-

cal statement demonstrates that it is possible that a certain event occurs or comes true, but it is also possible that this event does not occur or come true. Therefore, both modal verbs already represent a degree of uncertainty or tentativeness when uttering a prediction or hypothetical statement. The deontic meanings of *should* and *would* expressing permission, obligation and necessity were treated separately from the epistemic meanings.

(12) “Preconditioned that it is possible to convert implicit knowledge into explicit knowledge, the bilingual educated pupils *should* be at a higher level of English proficiency [...] and further, the pupils of CGG *should* also be at a higher level of proficiency than the normal educated pupils of CWG [...]” (female01, p. 18)

(13) “It *should* be noted that the earliest stereotypes about African-Americans served the purpose of legitimating the subjugation and enslavement of blacks by the Southern slave owners [...]” (male02, p. 17)

The first utterance above shows that *should* is used in its epistemic meaning by expressing a prediction what the results of the study, carried out in schools, could be. In the second utterance *should* could also be replaced by *it is necessary to note that* which illustrates the deontic meaning of necessity of *should*.

(14) “The establishment of such an institution *would* automatically lead to stability and security and prevent mankind from passing away.” (male04, p. 17)

The example above demonstrates the epistemic sense by stating that if X occurs then Y occurs. As Hyland states, the sentence with *would* expresses “the conditions required to fulfill the hypothesis” (Hyland, 1996, p. 263). Furthermore, *would* in this sentence also displays a degree of uncertainty of the writer because the possibility that the conditions to fulfill the hypothesis do not occur, remains.

The modal verb *must* can also have two meanings, either a deontic meaning of necessity or obligation or an epistemic meaning of logical necessity or confident inference (Coates, 1983, p. 71). The first sentence below shows that *must* is used in its deontic meaning because it exists a necessity to apply modal auxiliaries. In the latter utterance *must* is applied in its epistemic sense to draw a confident inference.

(15) “This task comprises three different initial situations, according to which the proposed modals *must* be applied.” (female01, p. 3)

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- (16) “Therefore, it *must* be concluded that, apart from the primitives the naturalness resides within the accessibility and intelligibility of the definitions through which the explanatory effectiveness of the definitions can be tested.” (female03, p. 34)

According to Coates (1983), *may* and *might* both have an epistemic core meaning which means that both verbs are primarily used in their epistemic sense and rarely in their root meanings (Coates, 1983, p. 103). Due to this fact, the verbs were not distinguished according to their meanings.

4 Results

4.1 Overall Usages of Lexical Epistemic Verbs

The examined lexical epistemic verbs in ten Magister theses were the following: *suggest*, *seem*, *indicate*, *assume*, *appear* and *propose*. The overall usages of all lexical verbs by both genders can be found in Table 1 and 2. From these results, one can already see that the sensory verb *seem* was most used in the theses. The verbs *suggest* and *indicate*, which belong to the group of performative verbs, and the cognitive verb *assume* were less represented in the theses, but still had relatively high frequencies. *Propose* and *appear* had low frequencies compared to the verb and *seem*.

Table 1: Total and Mean Number of Words of Texts and Total and Mean Frequencies of the selected Lexical Verbs

Total Number of Words	304,282
Mean of Words per Text	30428,2
Total Number of Lexical Verbs	730
Mean of Lexical Verbs per Text	70.3
Frequency of Lexical Verbs per 10,000 Words	24

Table 2: Frequencies and Relative Frequencies of Lexical Verbs divided into Total Frequencies and Epistemic Meanings

Verbs	Total Frequencies	Frequency per 10,000 Words	Epistemic meaning	Frequency per 10,000 Words
seem	224	7.4	224	7.4
indicate	109	3.6	18	0.6
assume	113	3.7	99	3.3
appear	93	3.1	65	2.1
propose	62	2.0	62	2.0
suggest	129	4.2	129	4.2
Total	730	24	597	19.6

4.1.1 Usages of Lexical Epistemic Verbs by Female and Male ESL Students

The theses for the investigation of lexical epistemic verbs were separated according to female and male writers to elicit the differences in the usage of these verbs. The occurrences of the verbs, divided by gender, can be found in tables 3 and 4 in this chapter.

The analysis of the texts showed that female students tend to use more lexical epistemic verbs than male students. This finding was supported by the usage of the verbs *assume* and *indicate* (including their 3rd person singular, progressive and past forms). Female ESL learners applied these verbs twice as much in their texts as male ESL learners. Furthermore, female writers used the verbs *assume* and *indicate* more often with the conjunction *that* than male writers. The usage of *assume* and *indicate* with reference to other scholars showed only a slight preference of female writers to apply these lexical verbs in this context. Furthermore, both genders used *indicate* more often in its non-epistemic sense than its epistemic sense. The subsequent examples, taken from the theses corpus, illustrate the usage of *assume* and *indicate* by both genders.

- (1) “Hence Pienemann *assumed* that only sufficient prerequisites of one specific stage resulted in the proceeding of acquisition, and thus, the achievement of the subsequent stage.” (female01, p. 97)
- (2) “Thus one can *assume* that as long as racism and racial discrimination do not impede the generation of big profits they are likely to remain a common characteristic of US society [...]” (male02, p. 61)
- (3) “However, as has been *indicated*, such analyses do not stand scrutiny when intragroup and intergroup variation in biological traits is taken into account.” – non-epistemic usage (male03, p. 59)

The verb *seem* occurred equally frequent in the females’ and males’ texts, but females used the infinitive and 3rd person singular of the verb more often than males in their theses. Female students were more likely to connect *seem(s)* with *to be*, whereas male students used the conjunction *that* together with *seems* more often.

- (4) “Although a narrative would *seem* to be a classic context for the use of the HRT, hardly any occurrences can be found.” (female05, p. 40)

Results

- (5) “It *seems that* the nuclear standoff has been a zero-sum game between the United States and the Islamic Republic right from the outset.” (male05, p. 6)

Propose had a higher occurrence in female texts, but male students applied *propose* more often than females when referring to other sources.

- (6) “Bailey (2001: 75-77) *proposes* a few more features, including phonological items only shared with SWVE, and some item which are present in SWVE only.” (male01, p. 30)

In contrast to the findings above, the verb *appear* was not as often used as the other lexical verbs. Nevertheless, male students tended to use the verb more frequent than female students. Furthermore, *appears* was mostly followed by *to be* in the theses by males. In the females’ theses *appear* occurred only twenty times.

- (7) “The sentence-initial use of conjunctions, i.e. of the coordinator but, *appears to be* especially distinctive for German writers.” (female02, p. 68)

- (8) “The present situation *appears to be* a part of a long-term purification.” (male04, p. 98)

The usage of the verb *suggest* showed no significant difference between female and male writers. All 3rd person singular, progressive and past forms of *suggest* were equally distributed among both genders. Only one female and one male writer applied *I suggest* once in their theses, which is not significant at all.

- (9) “However, *I suggest* two restrictions to that statement.” (female03, p. 74)

- (10) “These findings *suggest* that the American ideology has lost the power to attract the whole US population with all its ethnic and religious differences.” (male04, p. 5)

Table 3: Total Number and Mean Number of Words of the Theses divided into Gender

Total Number of Words by Female Writers	134,199
Mean of Words per Text by Female Writers	26839,8
Total number of Words by Male Writers	170,083
Mean of Words per Text by Male Writers	34016,6

Results

Table 4: Occurrences of Lexical Epistemic Verbs divided into Gender

Lexical epistemic verb (including infinitive, 3 rd pers. Sing., pro- gressive, past forms)	Occurrences in Texts by Females	Occurrences in Texts by Males	Total
suggest	63	66	129
propose	36	26	62
appear	20	45	65
seem	112	112	224
indicate	16	2	18
assume	69	30	99
Total	316	281	597

4.1.2 Summary of the Results

The results in 4.1.1 indicated that females used more lexical epistemic verbs than males in their Magister theses. The verb *appear* was more used by the male ESL students, whereas the verb *suggest* showed only a slight difference between males and females. Female ESL learners also tended to use the lexical epistemic verbs *assume* and *indicate* with the conjunction *that*, whereas male students seemed not to have a preference to connect these verbs either with conjunctions or other verbs.

4.2 Overall Usages of Epistemic Adverbs

When comparing the previous results in chapter 4.1 and the findings of the epistemic adverbs (cf. Table 5 and 6), it becomes obvious that adverbs are not represented with the same frequency as lexical verbs in the theses. In general, the adverb *rather* was applied most in the texts by both genders, followed by *relatively* and *probably*. Adverbs, such as *apparently*, *slightly* and *possibly* were not used as frequent as expected.

Table 5: Overall Frequencies of Epistemic Adverbs

Total Number of Epistemic Adverbs	439
Mean of Epistemic Adverbs per Text	43.9
Frequency of Epistemic Adverbs per 10,000 Words	14.4

Results

Table 6: Frequencies and Relative Frequencies of Adverbs divided into Overall Frequencies, Non-epistemic and Epistemic Meanings

Adverb	Total Frequencies	Frequency per 10,000 Words	Non-epistemic Usage	Epistemic Usage
apparently	38	1.3	29	9
relatively	51	1.7	----	----
rather	297	9.7	----	----
slightly	26	0.9	----	----
probably	43	1.4	----	----
possibly	13	0.4	----	----

4.2.1 Usages of Epistemic Adverbs by Female and Male ESL Students

As can be seen from Tables 5 and 6, epistemic adverbs in the Magister theses comprised half of the number of the lexical epistemic verbs. However, it can be said that again female students applied more adverbs than male students to hedge their expressions (cf. table 7). One of the most frequent used adverbs of both genders was *rather*. It was not only applied more than any other adverb in the texts, but it was also significantly more employed by female writers than by male writers. Especially three female ESL learners used *rather* more than 50 times each in their entire papers. The usage of *rather* among the male students was almost normally distributed. One student applied *rather* less than 10 times in his thesis, whereas one male writer used it 30 times.

- (1) “This analysis explicitly extends the scope of CS choices beyond these two elements, including rational considerations, *rather than* formal markers when discussing the increase of social distance.” (female04, p. 52)
- (2) “Moreover, contacts between the two states such as in the hostages-for-arms deal in the Iran-Contra Affair, were *rather* determined by pragmatic and opportunistic considerations on both sides.” (male05, p. 148)

In two of the four sentences the collocation *rather than* can be identified which had a very high frequency (93 occurrences) in all texts by both genders. This collocation occurred twice as much in the female ESL learners’ theses as in the male students’ theses. No other collocations were as significant as *rather than*.

In comparison to the numerous occurrences of *rather*, the adverbs *relatively*, *probably* and *apparently* had low frequencies in the theses by both genders. Nevertheless, the male students

Results

used *relatively* three times as much and *probably* and *apparently* twice as much as the female students. The following sentences illustrate how these adverbs were used in the theses.

- (3) “Consequently, with NZE being a *relatively* young variety of English – changes in this field need more time to develop to become more obvious.” (female05, p. 21)
- (4) “These *relatively* rapid changes in the nature of the labour market have left many urban spaces and many of their inhabitants behind.” (male03, p. 13)
- (5) “Since the publication *Semantic Primitives* (1972) the set has increased to a number of sixty-three which is *probably* due to the cross-cultural research.” (female03, p. 26)
- (6) “These two symptoms are *probably* the most important and longest-lasting elements of Large Group Identity formation as well as regression.” (male04, p. 78)
- (7) “Yet some participants *apparently* used the modal verbs rather randomly than consciously, an observation which was especially visible in both classes of CWG (groups I and II).” (female01, p. 44)
- (8) “*Apparently*, most of the genetic research conducted about black athletic superiority is marked by relatively narrow operationalizations.” (male02, p. 59)

The adverb *slightly* was more often applied by female students than by male students of whom two did not use the adverbs at all in their papers.

- (9) “Dubey’s language skills, only *slightly* more fluent than the officers are met with considerably more concessions from Lalit’s side than Vikram was willing to extend towards the officers.” (female04, p. 78)
- (10) “In the political sphere, the existence of decline is *slightly* more difficult to prove.” (male03, p. 11)

The epistemic adverb with the least frequency was *possibly*. In all ten theses it was used by four males and by two females only.

- (11) “*Possibly*, the informant’s motivation was too low, but as the responses indicate effort, this is not a likely explanation.” (female03, p. 26)

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- (12) “This undertaking could *possibly* lead to the following socio-political effects.”
(male04, p. 104)

Table 7: Frequencies of Adverbs divided into Gender and Non-epistemic and Epistemic Usage

Adverb	Occurrences in Texts by Females	Occurrences in Texts by Males	Total Non-epistemic Usage	Total Epistemic Usage
apparently	Non-epistemic: 8 Epistemic: 4	Non-epistemic: 21 Epistemic: 5	29	---- 9
rather	203	94	0	297
relatively	11	40	0	51
possibly	2	11	0	13
probably	15	28	0	43
slightly	19	7	0	26
Total	262	206	29	439

4.2.2 Summary of the Results

The data illustrated that epistemic adverbs were used less than lexical epistemic verbs in the investigated theses by both genders. When comparing the total numbers of occurrences of adverbs by gender, female students applied more adverbs as hedges than male students. This was due to the fact that the epistemic adverb *rather* was used significantly more by females than by males. Yet, the majority of the analyzed adverbs, which did not occur as frequent as *rather*, were employed more by male students than by female students.

4.3 Overall Usages of Epistemic Adjectives

The investigation of epistemic adjectives in the Magister theses of ESL learners indicated that adjectives had fewer occurrences than epistemic adverbs. Overall frequencies and relative frequencies of epistemic adjectives can be found in table 8 and 9. Similarly to the frequent occurrence of the adverb *rather*, the adjective *possible* was also applied very often in the texts. Adjectives, such as *likely* and *apparent*, had fewer notable frequencies. *Unlikely*, *probable* and *improbable* appeared less than the other two adjectives in the papers. The results for *probable* and *improbable* do not represent any significant findings for the analysis.

Table 8: Overall Frequencies of Epistemic Adjectives

Total Number of Epistemic Adjectives	262
Mean of Epistemic Adjectives per Text	26.2
Frequency of Epistemic Adjectives per 10,000 Words	8.6

Results

Table 9: Overall Frequencies and Relative Frequencies of Adjectives divided into Non-epistemic and Epistemic Meanings

Epistemic Adjective	Occurrences in all Texts	Frequency per 10,000 Words	Non-epistemic Usage	Epistemic Usage
unlikely	12	0.4	----	
possible	180	5.9	----	
likely	65	2.1	----	
probable	3	0.09	----	
apparent	25	0.5	25	0
improbable	2	0.06	----	

4.3.1 Usages of Epistemic Adjectives by Female and Male ESL Students

Although the findings in chapters 4.1 and 4.2 implied that females employed more tentative expressions than males, the results in this chapter indicate a different trend at least for epistemic adjectives as can be seen in table 10. Adjectives, used as tentative markers, were more frequently applied by male students than by female students. The single findings in numbers for each gender can be found in table 10 at the end of this chapter.

The most significant result of the analysis was the adjective *possible* that was used by all female and male writers, but more by males than by females. Furthermore, the usage of collocations with *possible* was also investigated to determine potential gender-preferential usages. The most frequent collocation that occurred in 8 out of 10 (4 texts by females, 4 texts by males) texts was *possible to* which, however, did not indicate any gender distinctive usages.

- (1) “The underlying assumption is that it is *possible to* prove that an element is indefinable, and thus, a primitive.” (female03, p. 15)
- (2) “Accordingly, it is *possible to* give an additional point of view on the War Against Terror and its impact on the USA.” (male04, p. 4)

When comparing both sentences, one would expect that the collocations *it is possible to/that* also occur very often, but that was not the case. *It is possible to* was applied by only two female students and one male student and obtained merely 10 hits. *It is possible that* was found only twice in all papers and was employed by one female and one male student. The collocation *possible to* showed no notable distinction between the genders.

The epistemic adjective *likely* was almost equally used by males and females. Collocations, occurring together with *likely*, were also analyzed and showed that *likely* mostly occurs

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in front of *to* (38 occurrences). Here again, no gender-preferential use of this collocation could be recognized. The adjective *unlikely* was more often used by males than by females.

- (3) “It seems more *likely*, however, that the greater use of informal connectors in the German RAs resulted from a lack of sensitivity to register as already noted above.” (female02, p. 65)
- (4) “Third, cooperation with a hegemony can only function when the hegemony is trustworthy, otherwise cooperation appears to be *unlikely*.” (male04, p. 25)

The adjective *apparent* was used more by male students. However, it has to be noted that the adjective was solely used in its non-epistemic sense and had to be excluded and analyzed distinctly from the epistemic adjectives which can be seen in chapter 5.1.

The epistemic adjectives *probable* and *improbable* obtained less than five occurrences each and therefore do not represent perceptible findings to be noted in this chapter.

Table 10: Frequencies of Non-epistemic and Epistemic Adjectives divided into Gender

Adjective	Frequencies in Texts by Females	Frequencies in Texts by Males	Total Non-epistemic Frequencies	Total Epistemic Frequencies
unlikely	1	11	0	1
possible	80	100	0	180
likely	31	34	0	65
probable	2	1	0	3
apparent	Non-epistemic 8 Epistemic 0	Non-epistemic 17 Epistemic 0	25	0
improbable	0	2	0	2
Total non-epistemic	8	17	25	
Total epistemic	114	148		262

4.3.2 Summary of the Results

In contrast to the previous results in 4.1 and 4.2, males used more epistemic adjectives as hedge expressions in their papers than females did. The number of frequencies of adjectives was lower than the number of lexical verbs and adverbs. This resulted in insignificant findings for half of the adjectives. Despite that, the adjectives *possible* and *likely* demonstrated that males used these adjectives more often than females. When comparing the use of collocations with these adjectives, it became clear that both adjectives were more frequently used with *to* than *that* by both genders.

4.4 Overall Results of Epistemic Modal Verbs

The analysis showed that modal verbs were applied most by both genders in their theses. Due to the fact that most of the modal verbs are polysemous, the number of verbs decreased after classifying their meanings, but they were still used more frequent than for example, lexical epistemic verbs, which is shown in table 11.

The epistemic *would* had the most occurrences in the papers followed by *might* and *may*, whereas *could*, *should* and *must* had fewer occurrences (cf. table 12).

Table 11: Overall Frequencies of Epistemic Modal Verbs

Total Number of Modal Verbs	897
Mean of Modal Verbs per Text	89.7
Frequency of Lexical Verbs per 10,000 Words	29.3

Table 12: Overall Occurrences and Relative Frequencies of the selected Modal Verbs divided into Non-epistemic and Epistemic Meanings

Modal Verbs	Overall Frequencies	Frequency per 10,000 Words	Epistemic meaning	Frequency per 10,000 Words
could	232	7.6	109	3.6
may	131	4.3	131	4.3
might	142	4.6	142	4.6
should	174	5.7	56	1.8
would	403	13.2	389	12.6
must	116	3.8	70	2.3
Total	1189	39.2	897	29.2

4.4.1 Usages of Epistemic Modal Verbs by Female Students and Male Students

The most significant result, showing a clear gender difference in frequency, was the usage of epistemic *would*, which was most used by both genders, but males applied the verb twice as much in their research papers as females (cf. table 13). Here has to be mentioned that one male student hedged notably more (147 occurrences) than the other males and females. The analysis on *would* + collocations illustrated that both genders equally employed *would be* as the most frequent construction in their theses.

- (1) “A possible explanation *would be* the absence of religious belief, that way ‘thank god’ is merely a standardized expression, lacking any actual religious content [...]” (female04, p. 48)

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- (2) “One solution *would be* the development of programs which integrate the ghetto-culture and are geared towards shaping a distinct personality of the affected youth, [...]” (male02, p. 44)

The epistemic modals *might* and *may* were both used more by females than males, but the gap between the female and male usage of *might* was more significant than the usage of *may* which only slightly differed. *Might be* and *might have* were the most prominent collocations among the female students. The male students also applied both of the constructions, but to a less notable extent. In contrast, the construction *may have* was more often used by males than by females, but the collocation *may be* showed no difference in usage at all.

- (3) “First, scientists *might have* already *gained* a higher proficiency level in English and *might be* more familiar and experienced with conventions of English academic writing than EFL students.” (female02, p. 39)
- (4) “Though the writers *may have* acquired a second and/or third language through formal instruction later in life, the native language is supposed to be the language still being used predominantly by its speakers.” (male01, p. 42)

The usage of *could* and *should* was almost equally distributed among both genders. Nevertheless, *could* was used slightly more by males and *should* slightly more by females. The collocation *could be* was also evenly spread among the genders. *Could have* was more likely to be used by males than by females. Due to the fact that *could* in this case was the past participle of *can* without an epistemic sense, these results were ignored for the investigation.

- (5) “This *could* implicate that advanced non-native writers might pay more attention to connectors as explicit cohesive devices than native writers [...]” (female02, p. 39)
- (6) “A ‘community’ *could* be defined as a group of people who share certain common experiences, a certain system of beliefs, a certain ideology.” (male03, p. 33)
- (7) “Assuming that the Monitor Hypothesis is correct, education *should* focus on acquisition.” (female01, p. 13)

The epistemic modal with the least occurrences was *must* which was employed more by female ESL students than by male ESL students. The application of the most frequent collocation *must be* displayed only a slight difference in the usage between males and females.

Results

- (8) “Thus, it *must be* concluded, that, although the explication of ‘happy’ highlights the similarities with contented ‘fairly well’, it fails to bring out the subtle differences, as it does for ‘joy’ and ‘pleased’, as well.” (female03, p. 54)

Table 13: Occurrences of Epistemic Modal Verbs divided into Gender

Epistemic Modal Verb	Frequencies in Texts by Females	Frequencies in Texts by Males	Total
could	51	58	109
may	68	63	131
might	98	44	142
should	31	25	56
would	160	229	389
must	42	28	70
Total	450	447	897

4.4.2 Summary of the Results

The most significant findings for epistemic modals were that males applied *would* more often than females in their papers. All remaining modals were employed more by female students than by male students, but the differences were not as prominent as in the case of *would*. *Might be* and *might have* were two constructions mainly used by females, whereas *may have* was more popular among males.

4.4.3 Summary of all Results

The figures below summarize the entire findings for the conducted analysis. Overall, epistemic modal verbs occurred most often in all ten Magister theses, whereas epistemic adjectives had the lowest frequency of all investigated epistemic markers. Figures 1 and 2 show the overall frequencies of epistemic markers and the overall frequencies of epistemic markers divided into female and male usages. Additional figures and tables that illustrate all single findings can be found in the appendix.

Results

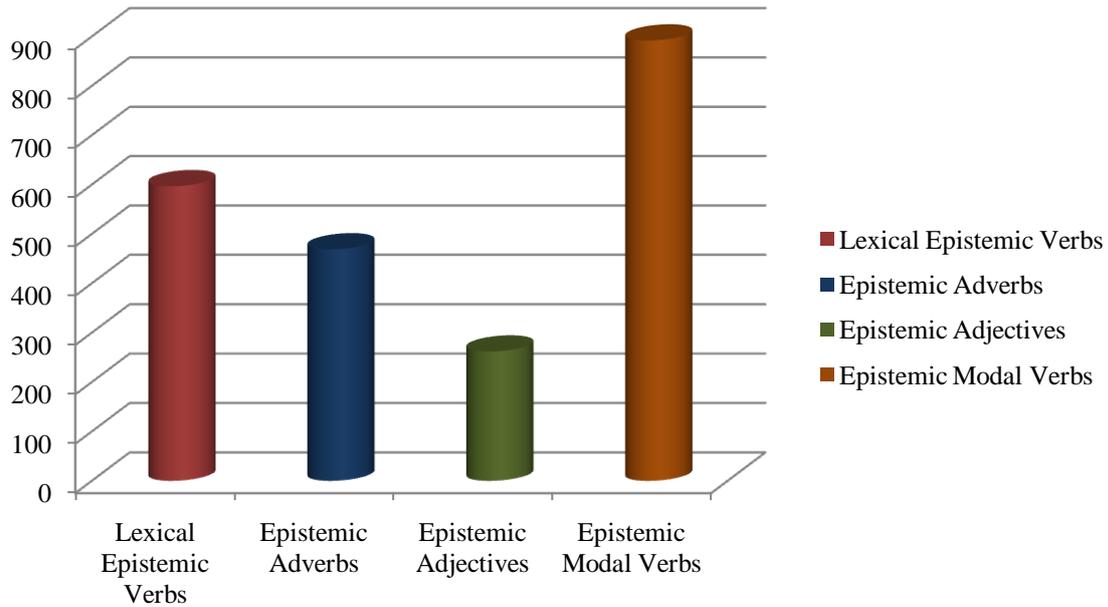


Figure 1: Overall Frequencies of Epistemic Markers

Furthermore, the single results showed that females tended to hedge slightly more than males, but these tendencies cannot be considered significant. However, one exception remained, namely that males applied more epistemic adjectives than females in their papers. When adding up all findings for each gender, no significant differences in the usage of epistemic markers could be found.

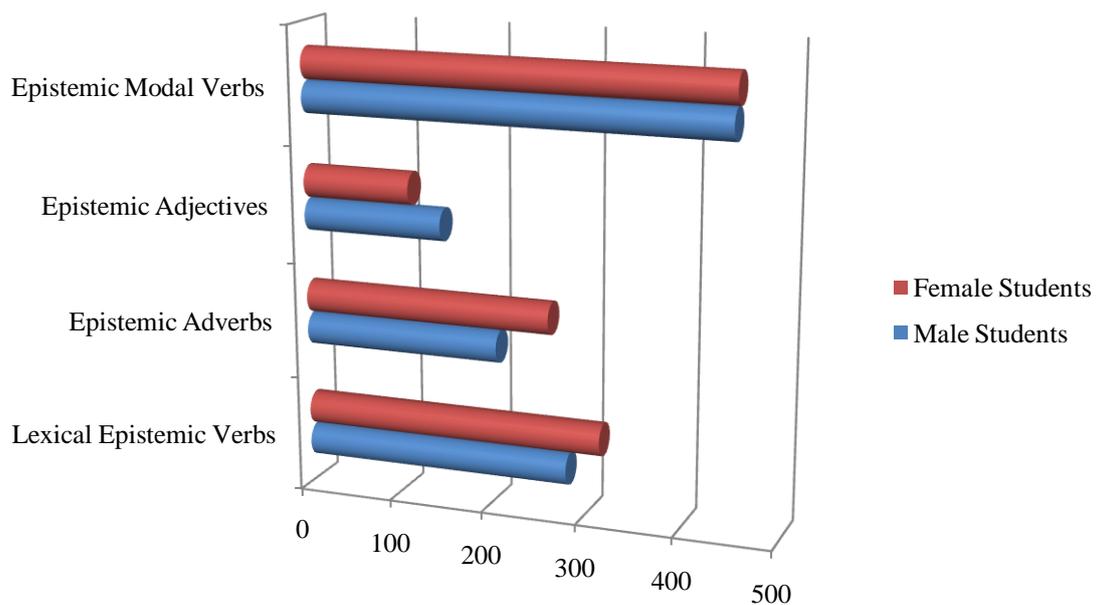


Figure 2: Frequencies of Epistemic Markers divided by Gender

5 Discussion

5.1 Interpretation of the Results

The aim of the analysis was to find out if female ESL students hedge more than male ESL students and if females used distinct types of epistemic markers more/less frequently than males in their papers to hedge their statements.

Lexical verbs in their epistemic sense, expressing the writer's uncertainty about a statement, were slightly more often used by females (316 occurrences) than males (281 occurrences). This implies that the gender differences in hedging are not as obvious as they were expected to be. Although the differences in usage of hedges were not as significant, individual examples illustrate that some verbs were applied in distinct senses by both genders.

- (1) "Hence Pienemann *assumed* that only sufficient prerequisites of one specific stage resulted in the proceeding of acquisition, and thus, the achievement of the subsequent stage." (female01, p. 97)
- (2) "[...] America had already *assumed* a role in Iran as champion of that country's interests both against the Kremlin and more quietly against the Whitehall." (male05, p. 26)

As already referred to in chapter 3.4, some lexical verbs have several meanings that do not express uncertainty only. In the first example sentence above, it becomes clear that the female student uses *assumed* in its epistemic sense to refer to a claim made by Pienemann. The second sentence by a male student shows that *assumed* is applied in its non-epistemic sense of *adopt*. The results illustrated that males tended to use *assume* more often in its non-epistemic sense, whereas females employed the verb more often as a tentative expression. The non-epistemic uses of the verbs were naturally treated separately from the epistemic uses of the verbs.

- (3) "This might *indicate* a future change towards an increase of syllable-timing in NZE in general." (female05, p. 29)
- (4) "However, as has been *indicated*, such analyses do not stand scrutiny when intragroup and intergroup variation in biological traits is taken into account." (male02, p. 59)

The same is true for sentences (3) and (4). The female student clearly uses *indicate* as a tentative marker which is even more emphasized by the epistemic modal *might* in front of the verb. Both *assume* and *indicate* in the sentences by females are used to tone down the claims and

especially in (3) to save the face of the writer in case the event does not occur as predicted. In (4) the male applied *indicated* in its sense of *show*, which does not convey any uncertainty about the proposition. Here again, males tended to use the non-epistemic form of *indicate* more often than the epistemic form.

In contrast to the findings above, the verb *appear*, which also has distinct meanings, in its epistemic sense was more often employed by males than by females. Females applied *appear* more often in the non-epistemic sense of *turn up*. Moreover, males were more likely to connect *appear* with the conjunction *that* and the infinitive *to be*, which are both only applied with epistemic meanings.

(5) “This requisition *appears* to be an exciting, but serious challenge.” (male05, p. 30)

(6) “[...] all cases where lexical items and grammatical features from two languages *appear* in one sentence [...]” (female04, p. 16)

One can therefore not assume that males tend to use non-epistemic meanings of lexical verbs more often than females. This suggests that the differences in hedging between the genders are not as obvious as has often been claimed (Coates, 2004; Tannen, 1994). The verb *propose* was again more used by females than by males, but it cannot be said that females and males used distinct verbs to express their tentativeness because the verbs *seem*, which can be a synonym for *appear*, and the verb *suggest*, which can be regarded as a synonym for *propose*, were not distinctly applied by males and females. The results might indicate that males tend to use sensory verbs more often and females employ performative and cognitive verbs more often, but this is merely a hypothetical claim since the results are not significant to fully proof this assumption.

The findings for epistemic adverbs were similar to those of lexical epistemic verbs. Here again, the higher number of modal adverbs was ascribed to females rather than males. Nevertheless, when looking at the single occurrences, it was obvious that females used only *rather* and *slightly* more than males and that males applied *relatively*, *probably*, *possibly* and *apparently* more often than females. The adverb *rather* showed the most significant gap of occurrences between the genders. The adverb has a very subjective character because it adds the writer’s own perception to the sentence.

Discussion

- (7) “Concerning all the observations, it is once more assumed that group I applied more modals randomly *rather than* consciously.” (female01, p. 40)
- (8) “Its impact on the city centre, in contrast, has been *rather* negative.” (male03, p. 98)

In (7), the female student uses the compromiser adverb *rather* to hedge her own opinion. Additionally, she presents her “claims in ways that are deferent to the views of others”, meaning that readers of her paper might not share her view that group I used modals randomly (Hinkel, 2002, p. 149). In (8), the epistemic adverb *rather* is also used to express the writer’s opinion and to convey a certain politeness towards the readers who could perceive the impact on the city center not as negative. Furthermore, *rather* in sentence (8) is also applied to weaken the adjective *negative*. The purpose is to transform a direct formulation without *rather*, which could sound rather harsh, into a more indirect and tentative expression. Apart from the similarities of the usage of *rather* between the genders, there is also one difference that can be noticed from the examples. Female ESL students were prone to use the collocation *rather than*, for instance in sentence (7), to express that one fact occurs more likely than another one, more frequent than male ESL students. In addition, this fact is conveyed in a mitigated manner to characterize it as an opinion instead of a fact.

As has already been mentioned in chapter 4.2.1, the investigated modal adverbs *apparently* and *probably* were more often applied by males than by females which again shows that hedging differences between males and females are not as significant as they were expected to be.

- (9) “*Apparently*, this must not be the case, as L2 learners may produce utterances which they only understand at a later stage of acquisition.” (female01, p. 22)
- (10) “*Apparently*, most of the genetic research conducted about black athletic superiority is marked by relatively narrow operationalizations.” (male02, p. 59)
- (11) “Or rather, it would *probably* not include a conflict as grave as this.” (female04, p. 69)
- (12) “Pursuing this policy was *probably* a recipe for disaster [...]” (male05, p. 60)

In (9) and (10), the application of *apparently* seems to be ambiguous. In both sentences the modal adverb can either be used in the non-hedged form of *obviously*, which sounds very certain and committed to the truth value of the proposition, but it could also be employed in the hedged form of *seemingly*, which changes a direct statement into a more uncertain and miti-

gated claim. When taking the context into consideration, in which both sentences occurred, it became obvious that in (9) *apparently* was used by the female writer to express a lower degree of commitment to the truth value. In (10), the male writer expresses a high degree of commitment to the truth value of the claim meaning that the adverb was applied in its non-epistemic sense. However, both genders used *apparently* more often in the sense of *obviously*, namely its non-epistemic form, which would confirm the findings by Hyland & Milton (1997) that German ESL learners tend to write more direct than native speakers (Hyland & Milton, 1997, p. 186). Since *apparently* in its non-hedged form does not express any uncertainty, it had to be excluded from this analysis of epistemic markers. In contrast to the ambiguous meanings of *apparently*, the usage of *probably* in (11) and (12) was easier to determine. Both writers employed *probably* to express the probability that something could happen and to weaken their claims in order to save their faces. Both genders chose the less tentative *probably* to mitigate their proposition over the more tentative *possibly* (cf. figure 3).

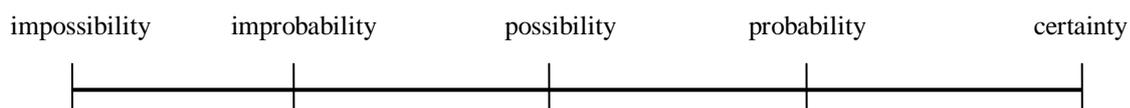


Figure 3: Scale of the Likelihood of the Occurrence of an Event (Nuyts, 2005, p. 11)

The application of *relatively* and *slightly* differed between males and females. *Relatively* was significantly more used by males, whereas *slightly* was employed more by females. Both words differ in their usage in the sentences. *Relatively*, on the one hand, seems to be more tentative because it is not compared with facts, but rather with subjective imaginations. *Slightly*, on the other hand, appears to be less uncertain because the adverb mostly compares one fact to another one.

- (13) “However, all through the 1980’s the SCC had maintained a *relatively* high level of public spending to ensure a continued provision of good public services, [...]” (male03, p. 103)
- (14) “With regard to connector variety, the German EFL writers employed *slightly* more different connective expressions than the native English writers.” (female02, p. 69)

In (15) and (16), the above made assumption becomes clear. The male writer compares “a *relatively* high level of spending” to his personal assessment of the word *high*. The female writer, in opposition to that, uses *slightly* to compare the quantity of “connective expressions”

used by native and non-native speakers of English. The more uncertain application of *relatively* by males contradicts the above made suggestion that German ESL learners favor a less tentative writing. Due to the fact that *possibly*, being more tentative than *probable*, was also used more by males than females would support the supposition even more. When adding up all numbers of occurrences of more tentative modal adverbs, including *rather*, *possibly*, *apparently* and *relatively*, it becomes obvious that females tend to employ more hesitant markers than less tentative ones. These findings merely occur because *rather* had a very high frequency among the texts by females which means that if one would exclude *rather*, the results would be different, meaning that males used a higher number of more tentative markers than less tentative ones.

The results of the analysis of epistemic adjectives were slightly different than those of the modal adverbs. Almost all modal adjectives, except *probable*, were used more often by male students than by female students. Overall, modal adjectives were less used than modal adverbs which according to Nuyts (2002) results from the adverb class being larger than the adjective class (Nuyts, 2002, p. 55). In contrast to the infrequent application of *possibly* above, the adjective *possible* was favored by both genders to convey that something is possible. In comparison to *probable*, which had three occurrences in all texts only, it becomes explicit that both genders preferred the more tentative form of *possible* instead of the more certain *probable* (illustration 55.1.1). This could be due to the fact that *possible* is more common to be used as a hedge than *probable*. It has to be mentioned that *likely*, which can be considered a synonym for *probable*, had a significant higher recurrence than *probable*, but also a considerably lower frequency than *possible*.

- (15) “Accordingly, it is *possible* to give an additional point of view on the War Against Terror and its impact on the USA.” (male03, p. 4)
- (16) “It is *probable* that I perceive phonological features concerning consonants more frequently than the ones concerning vowels.” (male01, p. 41)
- (17) “Such words are *likely* to be ranked rather high.” (female03, p. 47)
- (18) “The high percentage favors a condition in which pidgins and creoles are *likely* to develop.” (male01, p. 23)

The most evident difference between *possible/probable* and *likely* was that *possible* and *probable* were most often used in the constructions *it is possible/probable to* and *it is possible/probable that*. *Likely* occurred more frequent in mid- and end-positions in a sentence

and was rarely applied with the collocation *it is likely that*. In (17) and (18), *likely* could also be replaced by *probable*, but this would sound rather awkward. This could be the reason why ESL learners tend to apply *likely* more often than *probable* in their texts.

The usage of the negative forms *improbable* and *unlikely*, which can be used as synonyms for one another, showed that *unlikely* was more often used by males than females and that it was more often used than *improbable*.

- (19) “Moreover, the isolation of the community makes externally-motivated linguistic change *improbable* and rather suggests a preservation of archaic features [...]” (male01, p. 19)
- (20) “Since the selection of memes is biased it is *unlikely* that changes will occur.” (male04, p. 28)

In (19), the adjective does not exclude the chance that an externally-motivated linguistic change could still happen which signals a lower degree of commitment to the truth value of the proposition. This is also true for (20) in which the probability that changes could occur also still exists. One could conclude that ESL students, especially males, chose to apply *unlikely* over its synonym *improbable* which might also be due to the fact that it is more common to use *unlikely* to convey something that may not happen.

The use of *apparent* was similarly to the usage of *apparently* in the texts. The adjective was solely used in its non-epistemic form which had to be excluded from the epistemic adjectives.

However, it can be deduced that both genders tend to apply positive sentence adjectives, expressing more uncertainty, more often than less tentative ones. Moreover, they also use more uncertain adjectives more frequent than more tentative adverbs. When taking the negated modal adjectives into consideration, it became clear that modal adjectives conveying more certainty were preferred over less certain adjectives by the both genders.

The group of epistemic modal verbs comprised the highest frequency of analyzed words in the corpus. *Would* in its epistemic sense was twice as much used by males than by females. It has to be noted that one male student with an Iranian background used *would* significantly more than any other female and male student. A reason for that might be his culturally distinct background in comparison to the German ESL students. As referred to in chapter 2.3, hedging expressions and the amount of hedging differs notably from culture to culture, which would mean that Iranian ESL students tend to apply more hedging expressions than

German ESL students. Due to the fact that *would* was the only hedge that was perceptibly more used by the Iranian student, the above made claim is only speculative.

- (21) “Since no further restrictions or standardization necessarily have to be made, the metalanguage *would* be as close as possible to ordinary language.” (female03, p. 17)
- (22) “This approach *would* require the establishment of a third party comprising figures from both societies [...]” (male05, p. 148)

Would in its epistemic sense is used as a hypothetical prediction marker which expresses an assumption/hypothesis and the results that could be achieved by putting this hypothetical claim into practice. In (21) and (22), both students applied *would* in this context. The female student talks about the hypothetical situation if metalanguage does not have to be changed and that standardized metalanguage and ordinary language then would be considered as a very close language. The male student predicts that a certain approach needs the establishment of a third party to be fulfilled.

The usage of the second hypothetical marker *should* did not differ as much in frequency as *would*. The “epistemic *should* refers typically to the future and consequently has a more tentative meaning than *would*” which means that it expresses “a less confident assumption of probability based on known facts” (Hyland, 1996, p. 263).

- (23) “Assuming that the Monitor Hypothesis is correct, education *should* focus on acquisition.” (female01, p. 13)
- (24) “This proposal *should* lead to a moderately higher frequency of occurrence of this feature than for ES, [...]” (male01, p. 53)

Both writers refer to a future event by using *should* as an epistemic marker to mitigate their prediction in case it is proved to be wrong. Furthermore, sentence (23) uses *should* highly hypothetical because the writer applies *assuming* rather than *knowing* that the Monitor Hypothesis is correct.

May and *might*, which “primarily express epistemic modality”, showed differing results in the frequency in the texts by both genders (Nuyts, 2002, p. 173). Whereas *may* was only slightly more employed by females than by males, *might* was twice as much used by females than by males.

Discussion

- (25) “This *may* be a valid argument in many instances, because many definitions still have to be improved, [...]” (female03, p. 22)
- (26) “The US Secretary of State George Marshall refrained from pledging US aid to Iran since this *may* have constituted a provocation against the USSR [...]” (male05, p. 29)
- (27) “Thus, one *might* get confused when hearing a New Zealander speaking, [...]” (female04, p. 18)
- (28) “This *might* explain why the George H. W. Bush administration, whose relations with the Islamic Republic are the focal point of chapter 7, started with hopes for a ‘constructive relationship’ after the President’s inaugural ‘goodwill begets goodwill’ speech.” (male04, p. 37)

According to Hyland (1996), *may* can be considered as having a less tentative meaning than *might* (Hyland, 2002, p. 262). Taking up the assumption by Hyland (1996), *may* expresses that the probability of a claim being true is higher, but *might* conveys that the probability of a claim being true is lower. Sentences (25) and (26) show the more certain usage of *may* and in contrast to (27) and (28) that illustrate a less certain application of *might*. Furthermore, the results showed that females employed the more tentative collocation *might have*, whereas males used the less tentative *may have* more often. This indicates that the female students preferred to apply *might have* when referring to the past and that the male students favored *may have* to express past reference.

The frequency of *could* hinted at a slight preference of males to apply the modal verb in their texts, including epistemic and non-epistemic meanings. *Could* in its epistemic sense expresses a more tentative possibility than the non-epistemic *can*. Furthermore, Coates (1983) argues that *may* can be replaced by *could* which would mean that *may* and *could* have the same degree of tentativeness (ibid.).

- (29) “This *could* be done by presenting participants with the components (which are, of course, formulated in the NSM), instead of the whole explication.” (female03, p. 75)
- (30) “[...] they are at the same time issues that *could* have a deep impact on Britain’s political future.” (male03, p. 6)

Both examples above demonstrate that *could* is used in its epistemic sense because it can be replaced by the phrase *it is possible that*. Moreover, *could* in these two sentences refers to events in the future.

The modal epistemic verb *must* was again used more by females than by males, but had a perceptibly lower frequency than the other modal verbs. *Must* is a marker for “inferential confidence” which would also explain why the modal is less used in the texts (Hyland, 1996, p. 264).

- (31) “Therefore it *must* be concluded that, apart from the primitives the naturalness resides within the accessibility and intelligibility of the definitions through which the explanatory effectiveness of the definitions can be tested.” (female03, p. 34)
- (32) “The whole process *must* be started with non-committal and non-binding contacts, in which the participants are not officials [...]” (male05, p. 148)

Both writers drew their own conclusions in the sentences above which sound more certain in comparison to the examples (29) and (30). Hyland (1996) states that *must* in most scientific texts is replaced by *could* which expresses more tentative possibility (ibid.). This is also possible for (31) and (32).

Overall, taking the frequencies of *might* and *should*, as more tentative forms of *may* and *would*, into consideration, one could conclude that females tended to use more uncertain markers more often than males. Additionally, the findings in the texts by males implied that they were likely to use the less tentative modal verbs *may*, *would*, and *could*. This would confirm Coates’ (2004) findings that women tend to apply more indirect language than men.

The findings showed that females tended to apply more lexical epistemic verbs and epistemic adverbs than males, whereas males employed more epistemic adjectives. The frequencies of epistemic modal verbs in texts by males and females did not differ significantly. Moreover, both genders used modal verbs most in their research papers, followed by lexical epistemic verbs, epistemic adverbs and adjectives.

On the one hand, females were more likely to apply verbs, such as *propose* and *assume*. On the other hand, males favored the verb *appear* to express tentativeness. The application of epistemic adverbs demonstrated that females used more hesitant markers more frequently than males. The same can be said for epistemic modal verbs which were also applied more in their more indirect meanings than more direct meanings by females. Epistemic adjectives that convey more tentativeness were more likely to be employed than less tentative epistemic adjectives and adverbs by both genders.

The first research question, which stated if females apply more hedges than males, has to be answered the following: the analyzed hedging differences between female and male ESL students were not as significant as expected to be. Although females tended to employ slightly

more lexical verbs and epistemic adverbs than males, males employed more epistemic adjectives and the application of modal verbs did not show any difference between the genders. Therefore, it cannot be concluded that females hedged notably more than males. The second research question asked if females employed different types of hedges more/less frequently than males in their papers. The results lead to the inference that females employed more lexical verbs and epistemic adverbs and males applied more epistemic adjectives. Here again, the findings were not as perceptible and are therefore not truly representative.

All in all, the conducted analysis indicated that female ESL students did not hedge more than male ESL students. In addition, both genders did not use distinct types of hedges to mitigate their claims.

5.2 Limitations of Research

At this point, it is important to note that the present study and the results are limited in several aspects.

The data collection was a comparison of ten Magister theses by female and male ESL students which reveals that this study was not representative.

Due to the limited availability of Magister theses by male students written in English, it was impossible to comprise a larger corpus. Therefore, I would suggest that a larger sample size might have resulted in more reliable data. Furthermore, the sample included one student from Iran who might have biased the results because hedging practices differ between distinct cultures. The number of investigated hedges was too small to obtain any significant findings and would need to be extended for further research on this particular topic.

For further investigations it may be helpful to distinguish between distinct nationalities, which would also involve a larger sample size. In addition, future research on this particular topic should concentrate on merely one type of hedges to ensure that more than five items of one form of hedges can be analyzed which might lead to more reliable results.

6 Conclusion

Hedging, as a part of academic writing, is an essential skill for students and professionals of English and other disciplines. Due to the fact that non-native speakers are mostly not able to fully acquire a native-like competence in writing, it is necessary that the phenomenon of hedges in the English language is understood and taught to them.

Since the 1970s, studies about hedges and their forms and functions in texts have been widely researched by linguists. Several studies showed that hedges can have several functions, such as toning down or mitigating claims made by a writer, distinguish between important and less important information in a text, to save the author's face in case their claims are proved to be wrong, etc. Not only do hedges have various functions, but they can also have numerous forms in which they appear in a text, for instance as lexical epistemic verbs, epistemic adjectives, epistemic adverbs and modal verbs.

Some sociolinguists, such as Deborah Tannen, Jennifer Coates and Deborah Cameron, have begun to investigate gender differences in language and which characteristics male and female language could have. Tannen (1994) and Coates (2004) analyzed especially spoken discourse between males and females in distinct communication situations and found out that women talk differently in comparison to men. Both claim that women tend to use more indirect and socializing language, whereas men are more likely to speak in very direct and competitive manner. However, Cameron (2007) strictly opposed to that view by stating that women and men do not talk in distinct ways, but that they, in fact, share more similarities in language than most people would think. She justifies her claims by saying that similarities between both genders do not receive as much attention as differences.

Owing to the fact that most research in this field of sociolinguistics has been done on spoken communication, the aim of this paper was to analyze gender differences in academic written discourse. The research questions asked if female ESL students hedge more than male ESL students and if females used distinct types of hedges more/less frequently than males to express uncertainty about a specific topic. Therefore, ten Magister theses, five for each gender, by ESL students of Chemnitz University of Technology were analyzed according to the usage of hedges. Four forms of hedges, such as lexical modal verbs, modal adverbs and adjectives and epistemic modal verbs, were analyzed. The group of lexical verbs comprised the words: *assume*, *suggest*, *propose*, *appear*, *indicate* and *seem*. The modal adverbs *apparently*, *possibly*, *probably*, *relatively*, *rather* and *slightly* and the modal adjectives, *apparent*, *possible*, *probable*, *likely*, *unlikely* and *improbable* were investigated in the second and third group. The final group consisted of the epistemic modal verbs, *could*, *should*, *would*, *must*, *may* and

Conclusion

might. All four groups of hedges were analyzed with the help of the concordance program AntConc, which determined the frequencies of the chosen words in the texts.

The results showed that females used a slightly higher number of lexical epistemic verbs and epistemic adverbs, whereas males applied slightly more epistemic adjectives. The findings for the modal verbs indicated no difference between the genders. Therefore, one could conclude that significant differences in hedging between female and male ESL students in this study are non-existent. In addition, distinct types of hedges, such as lexical epistemic verbs and epistemic adverbs were employed more often by females, whereas males applied epistemic adjectives more frequent. Both findings could be due to the fact, as some linguists (e.g. Hyland & Milton) claim, that non-native speakers still struggle to apply hedges correctly to express their claims in an indirect manner. It could be possible that hedging differences between female and male native speakers of English are more significant than between non-native speakers (Hyland & Milton, 1996, p. 184).

The results of this study could not confirm the findings by Coates (2004) and Tannen (1994), but could rather give support for Cameron's (2007) claims. Thue Vold (2006) conducted a study that examined hedging differences between genders and several disciplines. Her findings also suggest that gender does not influence differences in hedging in academic writing.

A good starting point for further research on this topic might be to completely concentrate on one form of hedges, i.e. investigate only epistemic adjectives and the differences between genders. Leaving the factor gender aside, it would be interesting to compare several nationalities and their academic writing styles and to find out if Hyland's (1996) findings can be verified.

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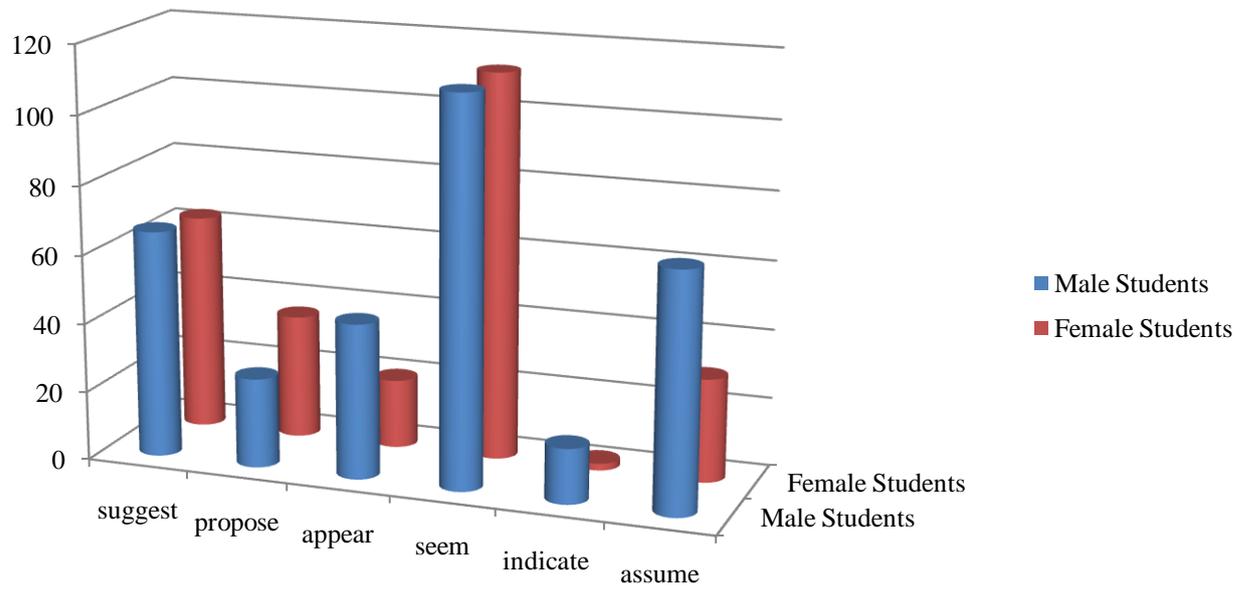
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Appendix 1: Frequencies of Epistemic Lexical Verbs and their most frequent Collocations divided into Gender

lexical epistemic verb	female	male	total
infinitive of suggest	12	14	26
3rd pers. sing. of suggest	31	39	70
suggesting	2	4	6
suggested	18	9	27
suggest	63	66	129
suggest that ...	8	5	13
suggests that ...	15	16	31
suggested that	3	4	7
suggest + indefinite articles a/an ...	1	4	5
suggest the ...	2	1	3
reference to others + suggest (s)/(ed)	23	24	47
1st pers. sing. pronoun + suggest	2	1	3
total of all collocations	54	55	109
infinitive of propose	0	7	7
3rd pers. sing. of propose	2	2	4
proposing	0	0	0
proposed	34	17	51
propose	36	26	62
propose that ...	0	1	1
proposes that ...	0	0	0
proposed that ...	0	1	1
propose + indefinite article a/an	0	3	3
proposed + indefinite article a/an	2	3	5
reference to others + propose (s)/(ed)	6	10	16
1st pers. sing. pronoun + propose	0	0	0
total of all collocations	8	18	26
infinitive of appear	5	11	16
3rd pers. sing. of appear	13	25	38
appearing	0	0	0
appeared	2	9	11
total usage of appear	20	45	65
appear + to be	3	2	5
appear to + verb	0	8	8
appears to be	3	9	12
appears to + verb	3	6	9
total of all collocations	9	25	31
infinitive of seem	36	18	54
3rd pers. sing. of seem	63	53	116
seemed	13	41	54
total usage of seem	112	112	224
seems to be	30	15	45

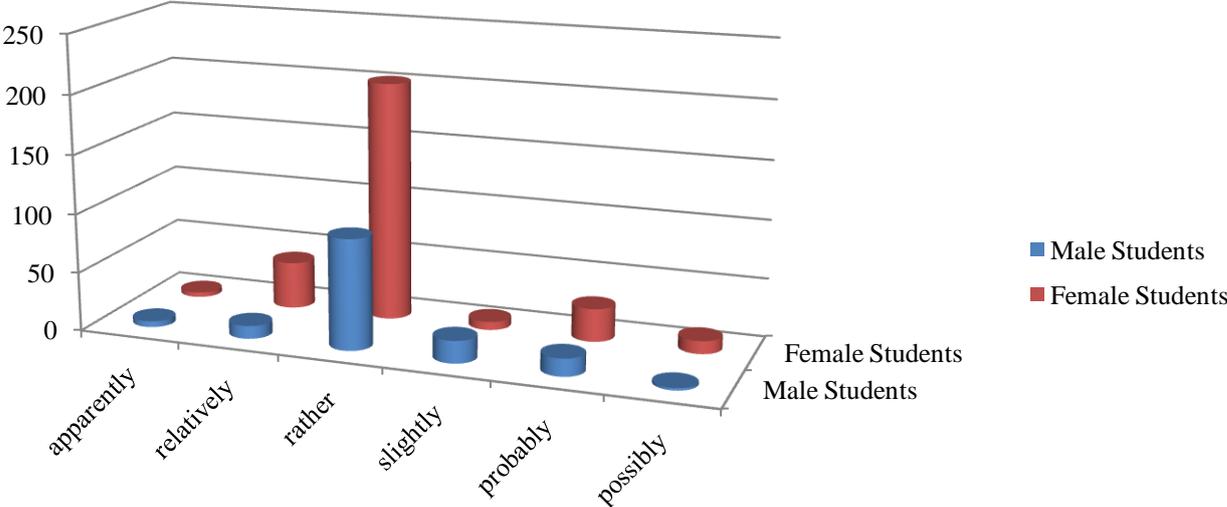
seems to + verb	11	13	24
seem to be	12	4	16
seem to + verb	12	8	20
reference to others + seem	2	2	4
seems that	1	13	14
total of all collocations	68	55	123
infinitive of indicate	7	1	8
3rd pers. sing. of indicate	3	0	3
indicating	2	0	2
indicated	4	1	5
total usage of indicate	16	2	18
indicate that ...	3	0	3
indicates that ...	0	0	0
indicated that ...	0	0	0
indicate + indefinite article a/an	3	1	4
indicates + indefinite article a/an	1	0	1
reference to others + indicate (s)/(ed)	3	1	4
total of all collocations	10	2	12
infinitive of assume	13	8	21
3rd pers. sing. of assume	7	10	17
assuming	5	3	8
assumed	44	9	53
total usage of assume	69	30	99
assume that ...	6	4	10
assumes that ...	2	1	3
assumed that ...	40	3	43
assume + indefinite article a/an	1	2	3
reference to others + assume (s)/(ed)	17	14	31
1st pers. sing. pronoun + assume	2	3	5
total of all collocations	68	27	95

Appendix 2: Figure of the Frequencies of Epistemic Lexical Verbs divided into Gender

Appendix 3: Frequencies of Epistemic Adverbs and their most frequent Collocations divided into Gender

epistemic adverb	female	male	total
apparently	4	5	9
relatively	11	40	51
rather	203	94	297
slightly	19	7	26
probably	15	28	43
possibly	2	11	13
total number of adverbs	291	239	530
rather than	60	28	98

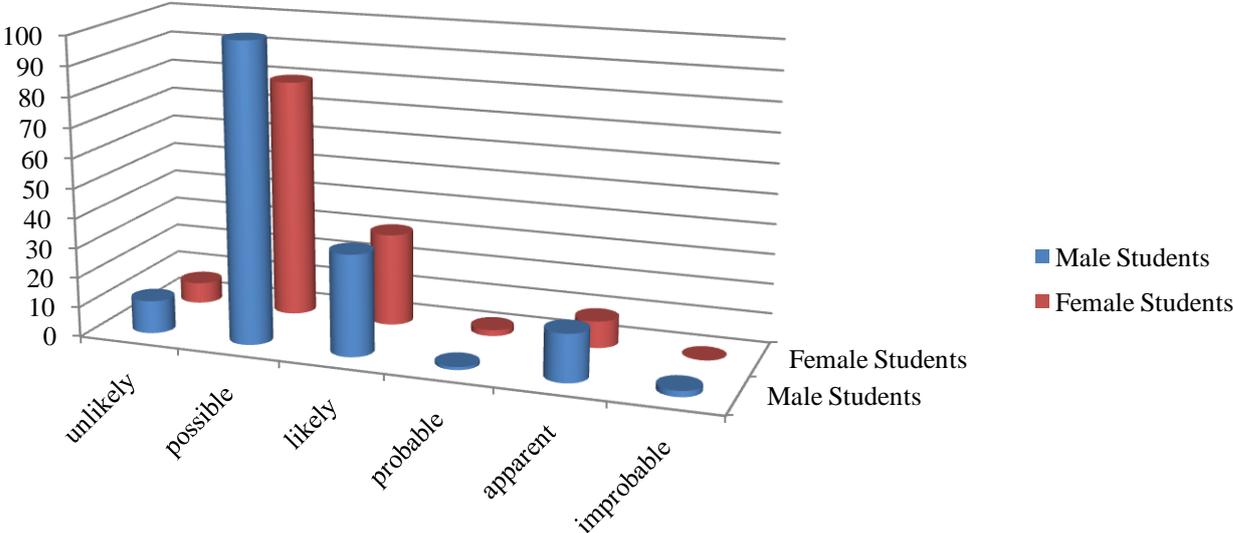
Appendix 4: Figure of the Frequencies of Epistemic Adverbs divided into Gender



Appendix 5: Frequencies of Epistemic Adjectives and their most frequent Collocations divided into Gender

epistemic adjective	female	male	total
unlikely	1	11	12
possible	80	100	180
likely	31	34	65
probable	2	1	3
apparent (only non-epistemic usage)	9 (excluded)	16 (excluded)	25 (excluded)
improbable	0	2	2
total of adjectives	114	148	262
impossible to	3	17	20
possible to	18	19	37
likely to	18	20	38
unlikely to	0	4	4

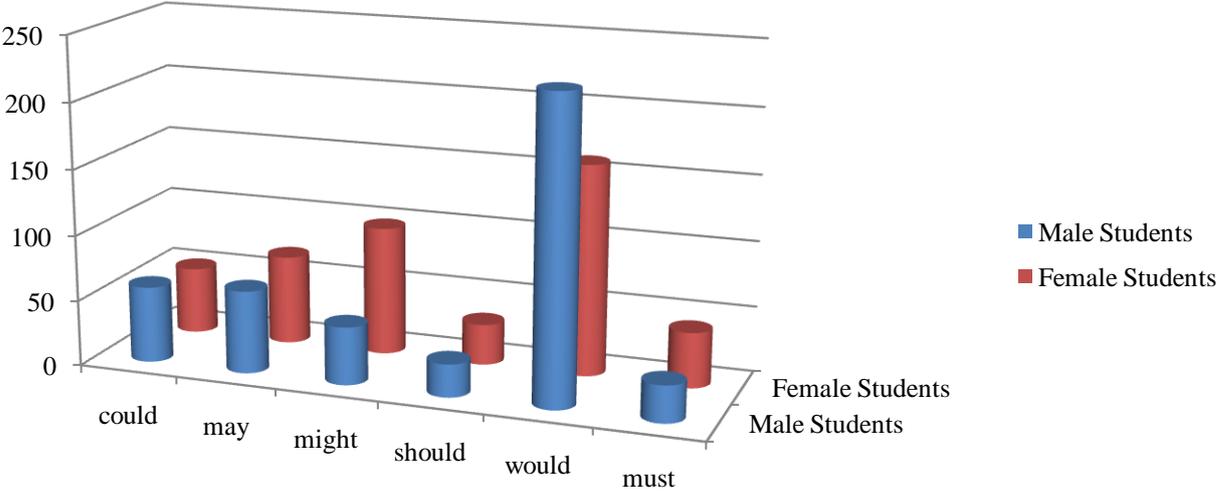
Appendix 6: Figure of the Frequencies of Epistemic Adjectives divided into Gender



Appendix 7: Frequencies of Epistemic Modal Verbs divided into Past and Present Usages, most frequent Collocations and Gender

epistemic modal verb	female	male	total	total usage of verbs (epist. and non-epist. meanings)
could present usage	51	58	109	109
could past usage (non-epistemic)	28 (excluded)	74 (excluded)	102 (excluded)	102
total	51	58	109	232
may	68	63	131	131
might present usage	75	38	113	
might past usage	23	6	29	
total	98	44	142	142
should present usage	29	20	49	
should past usage	2	5	7	174
total	31	25	56	56
would present usage	147	193	335	
would past usage	13	20	33	
total	160	229	389	403
must	42	28	70	116
could be	30	33	63	
could have (non-epistemic)	2	17	19	
may be	18	24	42	
may have	3	17	20	
might be	36	13	49	
might have	25	7	32	
should be	22	16	38	
should have	4	3	7	
would be	45	29	74	
would have	21	18	39	
must be	20	15	35	
must have	8	3	11	

Appendix 8: Figure of the Frequencies of Epistemic Modal Verbs divided into Gender



Selbstständigkeitserklärung

Ich versichere hiermit, dass ich die vorstehende Bachelorarbeit mit dem Titel

“Gender and Hedging in Academic Writing: A Comparison of Gender-preferential Usages of Hedges in ESL Learners’ Magister Theses

selbstständig verfasst und keine anderen als die angegebenen Hilfsmittel benutzt habe. Die Stellen, die anderen Werke dem Wortlaut oder dem Sinn nach entnommen wurden, habe ich in jedem einzelnen Fall durch die Angabe der Quelle, auch der benutzten Sekundärliteratur, als Entlehnung kenntlich gemacht.

Ort/ Datum

Unterschrift