Hedging in Academic Writings of EFL Students: ChemCorpus

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*T*he current study focuses on the use of hedging in ChemCorpus. The data for this study consisted of a collection of 52 academic papers by magister students majoring English at Chemnitz University of Technology. The data including 103329 words were analysed by using the AntConc software focusing on the copulas other than 'be'. The study revealed that the most frequently used copula was 'become' in terms of base, present and past form. Additionally, the use of hedging was investigated considering gender differences and it was concluded that similar hedges were frequently used by both male and female students. Lastly, there appeared to be slight differences in terms of the distribution of the selected hedges for both groups.

Keywords: hedging, academic writing, ChemCorpus

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Introduction

In our daily life, we generally feel the need for using hedges in some certain contexts: sometimes for refusing an invitation, sometimes for expressing negative ideas, and sometimes for giving an advice to a friend. Either consciously or unconsciously, people have a tendency to use hedges. Second language (L2) writing, especially academic writing, is not an exception. Each written text includes an interaction between a reader and a writer (Hyland, 1994). Due to this interaction in a written text, readers are expected to understand and predict the meanings between the lines that the writer tries to explain. In this respect, hedging is considered to be an important interactive element in academic writing and widely used in academic discourse. Once the writers have doubts and want to express the degree of their certainty of the utterances, they prefer to use hedges in their writings with the intention of allowing their readers to make their own interpretations and judgments of the idea or the statement. To this end, the primary objective of the current study is to portray the use of hedging with a specific focus on the copulas other than 'be' in final academic papers of magister students attending the department of English and American Studies at Chemnitz University of Technology. Also, this study focuses on whether the use of hedging differs depending on gender.

The Concept of Hedging

The extensive body of literature on hedging in academic writing suggests that various researchers have attempted to define the concept of hedging (Brown & Levinson, 1987; Crompton, 1997; Hyland, 1994; 1998; Lakoff, 1973; Myers, 1989; Salager-Meyer, 1994). The term 'hedge' was coined by Lakoff (1973), who pointed out that hedges are words "whose job is to make things fuzzier or less fuzzy" (p. 471). In other words, hedges are used to avoid or degrade the certainty of statements.

Similarly, Hyland (1998) defines hedging as "any linguistic means used to indicate either a) a lack of complete commitment to the truth value of an accompanying proposition, or b) a desire not to express that commitment categorically" (p. 1). That is to say, hedges are collections of words that let speakers or writers reveal their ideas without implying that they are a hundred percent sure about the statement and allow their listeners or readers to make their own judgments and provide opportunity to reflect their own ideas.

Additionally, Salager-Meyer (1994) presents the definition of hedges as a three-dimensional concept: "(1) that of purposive fuzziness and vagueness (threat-minimizing strategy); (2) that which reflects the authors' modesty for their achievements and avoidance of personal involvement; and (3) that related to the impossibility or unwillingness of reaching absolute accuracy and of quantifying all the phenomena under observation" (p. 153). In

Salager-Meyer's definition, it is assumed that hedges are also used as politeness strategies in that the writers are expected to use a modest writing style in revealing their findings in addition to fuzziness.

The Categorization of Hedging

Although the definitions of hedging overlap in some aspects, there has not been a consensus on the categorization of hedging in the review of literature on hedging. Numerous categorizations are proposed in order to define the boundaries of hedging. Salager-Meyer (1994) presents a taxonomy including both forms and functions of hedging. It is summarized as follows:

1. **Shields:** modal verbs expressing possibility, semi-auxiliaries like "to appear", "to seem"; probability adverbs like "probably", "likely" and their derivative adjectives, epistemic verbs such as "to suggest", "to speculate";

2. **Approximators:** stereotyped "adaptors" as well as "rounders" of quantity, degree, frequency and time (e.g., "approximately", "roughly", "somewhat", "quite", "often", "occasionally")

3. Expressions such as "I believe", "to our knowledge", "it is our view that . . ." which express the authors' personal doubt and direct involvement.

4. **Emotionally-charged intensifiers:** "extremely difficult/interesting", "disheart-eningly weak"

5. "**Compound hedges**" which comprised "strings of hedges". "It may suggest that…", "it could be suggested that …" (p. 155).

In line with her definition of hedging, Salager-Meyer (1994) identifies five main categories. Unlike the classification of Salager-Meyer's (1994), Crompton (1997) proposes the following categorization:

1. Sentences with copulas other than *be.*

2. Sentences with modals used epistemically.

3. Sentences with clauses relating to the probability of the subsequent proposition being true.

4. Sentences containing sentence adverbials which relate to the probability of the proposition being true.

5. Sentences containing reported propositions where the author(s) can be taken to be responsible for any tentativeness in the verbal group, or non-use of factive reporting verbs such as "show", "demonstrate", "prove". These fall into two sub-types:

a. where authors explicitly designate themselves as responsible for the proposition being reported;

b. where authors use an impersonal subject but the agent is intended to be understood as themselves.

6. Sentences containing a reported proposition that a hypothesized entity X exists and the author(s) can be taken to be responsible for making the hypothesis (p. 284).

In some points, these two categorizations focus on similar points; however, Crompton's (1997) taxonomy seems more comprehensive. The important point in both classifications is the lack of certainty in propositions.

Moreover, Crompton (1997) presents a summary of the categorization of hedging devices by different researchers. This categorization is displayed in Table 1.

Table 1. Categories of hedging devices recognized by two or more researchers

Hedging device	Skelton (1988)	Myers (1989)	Salager-Meyer (1994)	Hyland (1994)
Copulas other than be	□	□	□	□
Lexical verbs	□(comment)	□	□(epistemic)	□(epistemic)
Modal verbs	□(all)	□(making a conditional statement)	□(expressing possibility)	□(epistemic)
Probability adverbs	-	□	□	□
Probability adjectives	-	-	□	□

(Crompton, 1997, p. 280)

As seen from Table 1, *copulas other than be* is the only category that all researchers have an agreement on. Although it seems that there is also a consensus on lexical verbs and modal verbs; however, it is acknowledged that the scope and nature of these verbs may differ among researchers (Crompton, 1997). This point is the impetus for the current study seeking to investigate only the hedging devices- copulas other than 'be' in EFL academic writing.

Hedging in Academic Writing

In recent years there has been a shift in the role of hedging. Previously, the focus was on the use of hedging in oral discourse; however, around the 1990s the use of hedging in academic discourse has been brought to the agenda (Meyer, 1997). Hedging has gained so much importance in scientific research articles and been widely used in academic writing (Crompton, 1997; Hyland, 1998; Skelton, 1988; Swales, 1990).

In academic writing, writers are expected to use a modest and objective language in order to present information. It is the writer who is responsible for creating and maintaining the balance between representing the facts and providing claims for the current research (Salager-Meyer, 1994). Nash (1990) asserts that

> The writer ... currently evaluates and criticises the information and the propositions he or she tries to set down as fully, accurately, and objectively as possible. For centuries this dialectical processing of objective fact and subjective evaluation has been the goal of academic writing and of the training that leads to academic writing. (p. 10 cited in Hyland, 1998, p. 6)

In order to achieve the goal of academic writing, hedges are extensively used especially in presenting solutions or answers for the research questions. Therefore, writers are expected to pay attention to the judicious use of hedging so that writers display the findings in a suitable manner. It is also important to note that the use of hedging may vary among the sections of an academic paper. Hedges are generally used in discussion and conclusion sections of academic research papers (Crompton, 1997; Hamamcı, 2007, Hyland, 1994, Salager-Meyer, 1994). That is to say, researchers can contribute to the field of inquiry with the use of hedging productively and cooperatively in these sections because by using hedging researchers can interpret the findings without making categorical or certain statements. Thus, other researchers also have a chance to contribute to the ongoing research since there still appears uncertainty and tentativeness.

Hedging and Gender

There has been ongoing debate about the relationship between the use of hedging and gender starting with the introduction of Lakoff's influential book, *Language and Woman's Place* in 1975. According to Lakoff (1975), women tend to use hedges, tag questions, question intonation, prefacing declarations (e.g. I guess, I think) or prefacing questions (e.g. I wonder) in their language and hedging appears to be among the characteristics of women's speech used to avoid any strong statements; to "[mitigate] the possible unfriendliness or unkindness of a statement- that is, where it's used for the sake of politeness; and lastly, to overcome the "fear of seeming too masculine by being assertive and saying things directly" (pp. 53-54). After Lakoff, hedging and gender have been studied by various researchers (Dixon & Foster, 1997; Holmes, 1990; Poos & Simpson, 1996; Serholt, 2012).

Holmes (1990) conducts a study aiming to find out hedges and boosters in women's and men's speech. In her study, she prefers to use the term "pragmatic particles" as an umbrella term for the concepts like hedges or tags (p.185). This study reveals that women do not use more particles than men do contrary to expectations. It is also concluded that the pragmatic particles are used to "assert their views with confidence, or as positive politeness devices signalling solidarity with the addressee, rather than as devices for expressing uncertainty" (Holmes, 1990, p. 202). That is to say, although the amount of the use of hedging does not show significant difference between women and men, the study implies that these particles mostly appeal to women. Another study on gender and hedging is carried by Dixon and Foster (1997). Similar to Holmes (1990), Dixon and Foster (1997) define the term, hedge as "a class of devices that supposedly soften utterances by signaling imprecision and noncommitment" (p. 90). Although the researchers utilize Holmes's methodology in the study, they conclude that "hedging was not gender-differentiated" (Dixon & Foster, 1997, p. 101). Different from the aforementioned studies, Serholt (2012) asserts that although male students appear to use more hedges than female students, the way of using hedging seems to be similar. Therefore, the study reveals that gender is not a determining factor in the use of hedging in academic writing. Researchers agree on the application that in studies dealing with

gender and hedging issue should not solely take into account the occurrence or frequency of the hedges but also consider their functions of the hedges in the context (Holmes, 1990; Poos & Simpson, 1996; Serholt, 2012).

Methodology

The Corpus: ChemCorpus

In corpus studies, the most challenging part is probably compiling the corpora for the study since it takes too much time and a tiring process. However, in the current study, academic papers written by magister students majoring English at the Chemnitz University of Technology were selected. The corpora have already been complied in ChemCorpus (Schmied & Dheskali, fc). This corpus has been developed at the Chemnitz University of Technology and includes 3.5 million words (Schmied, 2015). The data for this study coming from ChemCorpus were downloaded from the university website by means of student id, password, and local network at university campus in Chemnitz, Germany.

The corpora consisted of 52 academic writings including 7 male writers and 45 female writers. The total number of the word tokens was 103329. The papers were about semantic, sociolinguistics, syntax, Foreign Language Acquisition, and Second Language Acquisition. They were not in the form of the IMRAD model (Introduction, Methodology, Results, and Discussion).

In this study, a corpus-based approach that "corpus-based linguists tend to use corpora in order to test or refine existing hypotheses taken from other sources" (Baker, 2010, p. 95) is used because the aim of the current study is to examine the use of hedges; specifically, the copulas other than 'be' which are used for hedging in ChemCorpus will be of focus.

Research Questions

The present study seeks answers to the following research questions:
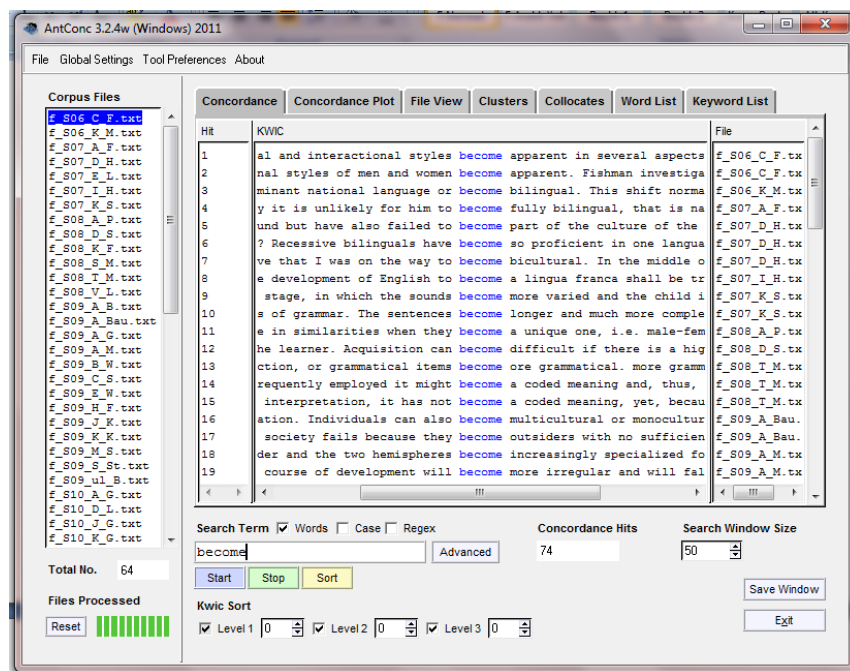
1. How is the distribution of hedging with a specific focus on the copulas other than 'be' used in academic papers of magister students at Chemnitz University of Technology?

2. Does the distribution of hedging differ depending on gender?

Data Analysis

The corpora of the study were analysed by using corpus analysis software programme called AntConc (Anthony, 2004). Generally, there are two ways to present the analysis of the corpora including a concordance or frequency figures (Lindquist, 2009). In the current study, the results from the corpora were presented as a concordance that "is a list of all the contexts in which a word occurs in a particular text" (Lindquist, 2009, p. 5). Depending on the purpose, the occurrence of the copulas other than be was investigated in the selected corpora. The copulas to be examined were determined depending on the fact that the copula other than 'be' is the only category that all researchers have an agreement on the categories of hedging devices. To this end, considering the framework of the study carried by Abdollahzadeh (2011), the copulas other than 'be' including "appear, become, feel, guess, prove, remain,

seem, and sound" were decided to be investigated in ChemCorpus. Also, the frequency of the hedges was examined considering gender differences. A sample shot of the program is displayed as follows:

Figure 1. A sample shot of AntConc software

Findings

The distribution of the copulas other than 'be' used in academic papers. The first research question was about the distribution of the hedges used in academic papers of magister students at Chemnitz University of Technology. In this respect, the copulas including appear, become, feel, guess, prove, remain, seem, and sound were searched in the corpora of the study and the findings are presented in Table 2.

Table 2. The distribution of the selected copulas in terms of base, present, and past form

	Base Form	Present Form 3rd PS	Past Form	Total
become	74	56	33	163
seem	36	55	2	93
sound	29	49		78
appear	16	10	6	32
prove	8	4	15	27
remain	8	7	4	19

feel	7	3	1	11
guess	4			4

In examining the distribution of the copulas, each copula was entered in three forms including base form, 3ʳᵈ person singular present tense form, and past tense form. As it is shown in Table 1, the most frequently used copula was 'become'. It was followed by 'seem' and 'sound'. Some of the copulas were not present with all forms in the corpora like 'sound' and 'guess'. While the copulas 'appear' and 'become' outnumbered in the base form compared to present and past form. Moreover, the copulas 'seem' and 'sound' outnumbered in the 3ʳᵈ person singular present tense form.

Graph 1. The concordance hits of the selected copulas
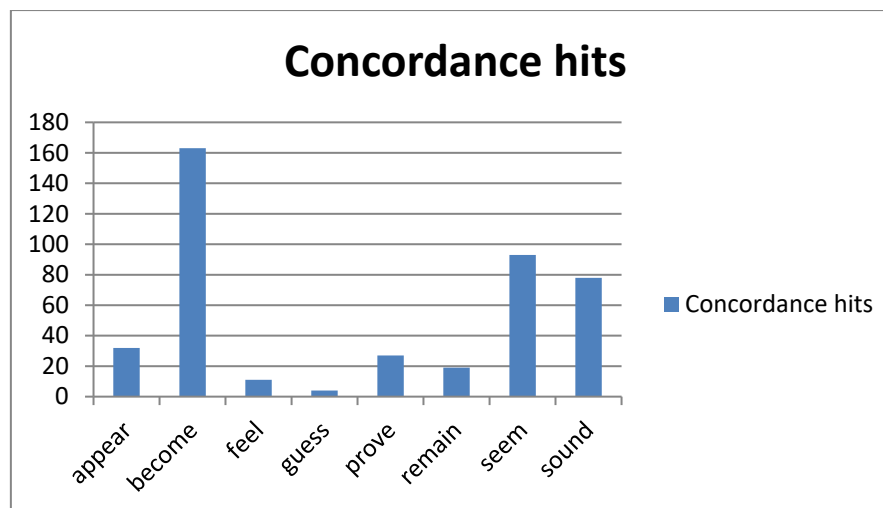
As displayed in Graph 1, 'become' was the most frequently used copula and 'guess' was the least used copula among the magister students at Chemnitz University of Technology. Since the academic papers did not include sections like Introduction, Methodology, Results, and Discussion (IMRAD), the data analysis was carried out as a whole paper. Therefore, the places of the hedges occurred in the papers were not taken into consideration.

Gender and the use of hedging. The second research question was whether there were any differences between male and female students in the use of hedging, the copulas other than 'be'. To this end, the hedges used by students were examined according to the gender differences. In the corpora file, there was an Excel file called 'Magwritten Anonymisiert' including demographic information about the students, the topics of the academic writings, and the word count of the corpora. In total, there were 52 academic papers written by 45 female and 7 male students. In order to investigate the differences in the use of hedges between females and males, firstly, 45 academic paper corpora by female students were added to the AntConc software and the occurrences of the respective hedges were calculated. This process was repeated with the corpora belonging to male students. The following graph displays the concordance hits considering gender among the participants.

Graph 2. The concordance hits of the selected copulas according to the gender differences
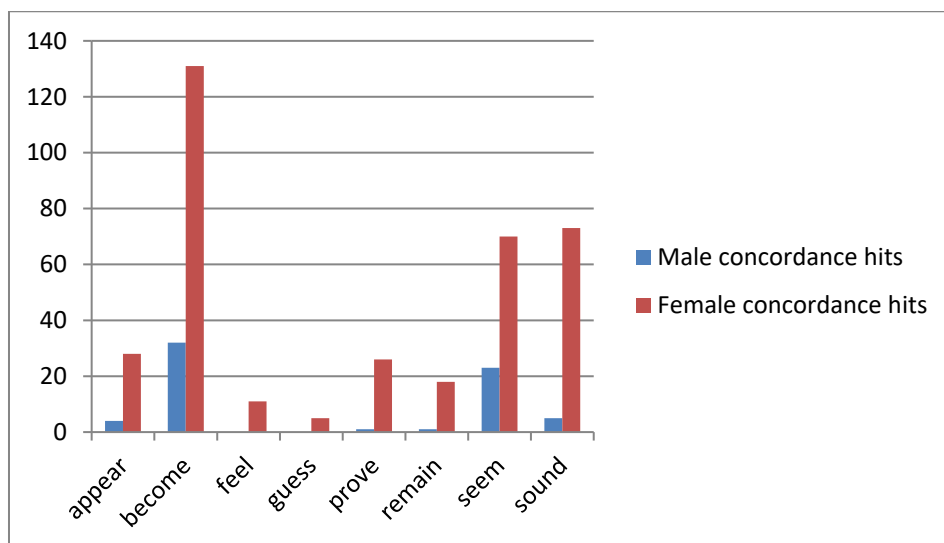
As it is clear from Graph 2, there were some differences among the students in term of use of the copulas. For both female and male students, the most frequently used copula was 'become'. While the second frequently occurred hedge was 'seem' for male students, 'sound' appeared to be the second for female students. Although female students used the copulas 'feel' and 'guess' in their writings, males did not utilize them.

Table 3. The distribution of the hedges and gender

	appear		become		feel		guess		prove		remain		seem		sound		Total
Gender	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	
Male	4	6	32	**49**	-	-	-	-	1	1	1	1	23	**35**	5	8	66
Female	28	8	131	**36**	11	3	5	1	26	7,5	18	5	70	19,5	73	**20**	362

As presented in Table 3, the most frequently occurred hedge was 'become' with a rate of 49% for male students and with a rate of 36% for female students. The least used hedges were 'prove' and 'remain' with a rate of 1% for male students and 'guess' was the least occurred hedge with a rate of %1 for female students.

Discussion and Conclusion

All in all, this study aimed at describing the use of hedging in academic papers compiled in ChemCorpus. Based on the purpose of this study, it was found that the writers used hedges in their academic writings as indicated in the literature (Crompton, 1997; Hyland, 1998; Skelton, 1988; Swales, 1990).

This study revealed that the results had in common in previous studies regarding the most frequently used copulas. It was concluded that the copula 'become' and 'seem' were the most frequently used hedges in the Magwritten section of the ChemCorpus similar to the findings of the studies by Abdollahzadeh (2011) and Serholt (2012). The amount of the hedges used in the academic papers might be resulted from the limited hedging repertoire of the EFL students. To this end, educators might focus on the types and judicious uses of hedges in academic writing.

Previous researches investigating gender and hedging have presented conflicting results (Dixon & Foster, 1997; Holmes, 1990; Lakoff, 1975; Serholt, 2012). This study showed that the use of hedging appeared to differ between male and female students in terms of the preference of the respective hedges. However, the big picture may suggest that the use of hedging might be a sign of the education provided for the students in the academic writing course since both group used 'become' most frequently. What is more, the number of the male and female participants was not equally distributed and therefore, it might be misleading to come to a conclusion that female students used more hedges than males. Moreover, unlike what the literature suggests (Dixon & Foster, 1997; Holmes, 1990; Serholt, 2012), the current study just focused on the occurrence of the selected hedges. Therefore, the reasons behind the use of certain hedges were not the focus of the study.

In conclusion, the use of hedges is one of the basics of academic writing. With the help of corpus studies, both the academic writers and educators have a chance to create awareness about the key points of academic writing. To this end, the current study may contribute to the educators in that they can make additions, revisions, or omissions to their curriculum since it describes the writings of EFL students.

Pedagogical Implications and suggestions for further studies

Thanks to corpus studies, the researchers have the opportunity to see the academic writers' preferences in utilizing hedges in their writings. Also, as a teacher researcher, one can observe the students' missing points in the use of hedges or the appropriate use of hedging so that these weak points can be improved and the correct usages can be appreciated.

In this study, only the written papers in German context were examined; however, as suggested in the literature, a cross cultural study can be carried out since it is believed that culture might affect the use of hedges. Moreover, further studies employing different taxonomies of hedges can be conducted with the ChemCorpus.

Limitation of the Study

The current study was limited to the academic papers of the magister students at Chemnitz University of Technology. The data compiled in the ChemCorpus was used for the analysis of the study. Also, the analysis of hedges was limited to the copulas other than 'be'. Additionally, this study was a descriptive study which allowed the researcher to make a quantitative research; however, it would suggest more concrete results if the researcher had an opportunity to interview with the participants of the study.

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