

HEDGING AND EPISTEMIC SENTENCE IN ACADEMIC WRITING: A CORPUS-BASED ANALYSIS OF LINGUISTIC PATTERNS

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Abstract

In academic writing, the author should convey information and ideas as clearly, credibly, and judiciously as possible. A crucial linguistic technique for doing this is hedging which allows writers to soften the impact of statements and show some uncertainty, some possibility, some probability or some caution. Epistemic stance is closely related to hedging, and is a way of showing the level of belief in the truth or reliability of a proposition. This present study aims at exploring the use of hedging and epistemic stance in academic writing from a corpus-based perspective. The study is fueled by the significance of academic writers' strategies of dealing with certainty and uncertainty in building scholarly arguments. The goal of the research is to discover the main linguistic manifestations of hedging and epistemic stance, to investigate their frequency and distribution in academic writing, and to interpret their communicative and rhetorical roles. The use of quantitative and qualitative analysis techniques is employed to examine a selected corpus of academic writing. Analysis of linguistic resources, including modal verbs, epistemic adverbs, adjectives, nouns, reporting verbs and other expressions, which indicate various levels of certainty and commitment. The study uses a corpus-based approach which maps patterns and investigates their role in the presentation and negotiation of academic claims. The identification indicates that hedging and epistemic stance are key elements in academic discourse. Academic writers often rely on these resources to qualify claims, make reference to the uncertainty, prevent over-generalization, and provide a proper level of allegiance to their propositions. The analysis also shows that various types of hedging and stance-markers have different rhetorical functions due to their context. By employing the right kind of hedging, the writer can make his claim credible, while showing that he has considered evidence, limitations, and alternate ways of understanding the claim. The findings of the study are that the use of hedging and epistemic stance is important in successful academic communication. The results are relevant to the academic writing teaching process, as knowledge of these linguistic tools would enable students and young researchers to create texts

with more precision, caution and academic appropriateness. The study therefore makes a valuable contribution to the knowledge of the way in which linguistic resources are employed to build knowledge, convey levels of certainty, and make the writing credible in academic texts. The keywords are: hedging, epistemic stance, academic writing, corpus-based analysis, academic discourse, modality, uncertainty, scholarly communication.

INTRODUCTION

Background and significance of Hedging in Academic writing

This section explains why and how the hedging is used in academic writing. One of the main ways that researchers share their findings, build arguments, interpret evidence, and create the production of disciplinary knowledge is through academic writing. Academic discourse is different from normal communication because writers make claims that are backed by evidence, while at the same time being aware of the conditional and limited nature of knowledge. It is expected that the researcher will express confidence in the importance of their conclusions; however he/she should not imply interpretations that are more definite or more general than the evidence supports. This need gives rise to linguistic resources that enable writers to control them. Of these resources, hedging is of particular importance. Hedging is a general term for linguistic techniques used to moderate or adjust the strength of a proposition and to suggest that the proposition should not necessarily be taken in an absolute or universal sense. As in other types of writing, hedging may be performed in academic writing by using modal verbs like *may*, *might* and *could*; epistemic adverbs like *possibly*, *probably*, and *perhaps*; adjectives like *possible* and *likely*; nouns like *possibility* and *assumption*; and verbs like *suggest*, *appear*, and *seem*. But hedging is not an unchanging body of words. Different functions can be carried by the same language form depending on its grammatical and discourse context. Therefore, both linguistic realization and communicative function must be taken into account in the analysis of hedging. Since the concept was introduced in the field of linguistic and pragmatic studies, the importance of hedging in academic discourse has been acknowledged. In Lakoff (1972), hedge refers to expressions that modify the extent of an expression's representation of a clear or categorical membership in a category. This notion was further developed in academic and scientific text, where the use of hedges grew to be linked with developing uncertainty, probability, qualification and interpersonal positioning. Hedges were not only seen as evidence of imprecision, but were also recognized as a form of rhetoric that helps writers control their commitment to propositions. Hyland's research has had a significant influence in the development. He has a dialogue-based perspective on academic discourse and considers academic writing as an interpersonal process as well. Writers build a bond with the reader, predict which arguments the reader might accept or reject, and select the linguistic tools that enable them to mark the degree of attachment they intend for the reader to feel towards certain propositions. In this context, hedges enable writers to not fully commit to a meaning and to acknowledge the possibility of other readings. Hedging would then be related closely to the development of an appropriate academic voice, and to the negotiation of knowledge within the academic community. The importance of hedging is more evident when it comes to the provisional nature of scholarly knowledge. Research findings are generated in particular methodological and contextual contexts and even good empirical research may not warrant universalization. Therefore, a researcher might have to differentiate between the facts that something has been directly shown from the data and infer it from the data. *May* is used by writers to express such distinctions, as well as expressions like *appears to suggest*, and *is likely to*.

These options allow writers to express the importance of their results without the implication that they are certain in ways that are more than just justified by the evidence.

Hedging is thus vital in the process of building academic credibility. Use of cautious language does not necessarily detract from an argument; using the appropriate amount of caution can be a sign of intellectual precision and awareness of evidential limitations. If the evidence is only suggestive of a conclusion, the categorical statement may not seem as convincing. Conversely, a well-qualified claim indicates that the writer is aware of the distinction between evidence and interpretation. Hedging then enables writers to establish a balance between the rigor of scholarship and the modesty of epistemic caution. This is also true of the pedagogical approach to academic writing, that is, that the act and the process of hedging are important to academic writing pedagogy. Pupils are taught to be objective, formal and precise in academic writing but may not be given enough instruction in linguistic means of expressing degrees of certainty. In consequence, novice writers may make statements that are too categorical, or they may employ hesitant phrases and not realize what they are saying. A text-based analysis of authentic academic texts can be helpful to teachers when they need to support the learners in understanding how successful writers qualify statements, interpret results, recognize limitations, and address counterproductive ideas. Moreover, academic writing is not a completely homogeneous form of discourse. Each discipline has its own research traditions, epistemologies, methodologies and rhetorical conventions. These differences can affect the way writers present evidence and control the force of their claims. The study of hedging, therefore, can be enhanced by a multi-disciplinary approach which can identify whether certain pattern is common to academic discourse in general or whether it is associated with specific communities of academic discourse.

2.2 Epistemic stance and academic argumentation

Epistemic stance can be used as a useful theoretical framework to analyze the function of hedging in academic texts. Epistemic stance relates to how writers express their evaluation of the certainty, probability, reliability, or evidential strength of propositions. Academic authors make claims when they communicate information; they are also indicating the extent to which they are committed to the truth or validity of the information. Important linguistic expressions that express certainty, possibility, probability or limitation are therefore an integral part of academic argumentation. Academic arguments typically do not only contain directly observed facts. Researchers need to interpret, explain relationships, compare results to prior research, and draw conclusions from the analysis. These activities can have varying degrees of epistemic commitment. A statement about a result observed might need a relatively strong commitment; explaining why the result is this way might be more inferential. The different levels of commitment are linguistically marked by hedging. In this sense, it is possible to regard hedging as one of the most important linguistic ways of expressing epistemic stance. Other qualifying expressions such as modal verbs, epistemic adverbs, reporting verbs, etc. enable writers to convey degrees of probability and commitment. The connection between hedges and epistemic stance is not completely clear, however. Not all uses of a modal verb or other expression that might hedge are epistemic. It is thus crucial to consider context in order to discover whether a certain language form reflects an epistemic stance. However, Hedging is of special interest for the interactional model by Hyland, which puts hedging in the interpersonal aspect of academic discourse. Hedges promote a degree of caution in the author's stance on propositions, and indicate that other perspectives may exist. This interactive approach is in contrast to the conventional view that academic writing should avoid any personal positioning. Rather, it proposes that there are ways to "manage" the relationship between writer, proposition, evidence, and reader that can lead to successful academic writing. Epistemic stance also plays a role in rhetorical

structuring of academic argumentation. The writer must decide when to make a claim directly, qualify a claim, recognize uncertainty, and reinforce it. These decisions will assist a reader to understand how one proposition in a discourse is related to other propositions. For instance, a writer might employ an expression in explaining a known effect but a hedge in suggesting an explanation or a theoretical implication. Such distinctions enable readers to identify the difference between evidence and interpretation.

Epistemic stance representation is thus a key element of academic thinking. Academic writers should show an awareness of the evidence behind their arguments and the extent of their conclusions. Hedging provides a linguistic means of representing this awareness. It lets writers express that a proposition is possible, rather than certain; probable, rather than inevitable; or supported by evidence but not proven to be. Finally, the connection between Underscores the significance of the disciplines. Appropriately cautious claims can vary across disciplines, as different disciplines have different approaches to evidence and to knowledge construction. It is therefore essential to carry out a cross-disciplinary analysis to find out if the way hedging is used is shared by the academic conventions or not. This lesson explores the importance of hedging in creating reasonable and believable claims. Writing for academic purposes is partly dependent on the ability to set up a proper relationship between claims and evidence. A credible academic argument doesn't just assert facts confidently, it shows that the writer is aware of the weight and weaknesses of the evidence that backs up the argument. Hedging is a vital component of balancing substantiated claims with a lack of unwarranted certainty, and this is where it comes in. One of the key roles of hedging is that of qualification of interpretation. The results of research sometimes need to be interpreted before they can be linked to the general theoretical or practical implications. When a writer makes the shift from observation to explanation, a proposition might be an inference and not directly observed. The writer can indicate this inferential status with hedging. The results, as found, suggest, indicate or appear to demonstrate can differentiate between an interpretation and an established empirical fact. Hedging is also a useful device for the writer's control of the range of his claims. Research results tend to be obtained for specific populations, datasets, contexts, or methodological conditions. An author who goes beyond these circumstances could be in danger of overgeneralizing a finding. Appropriate qualification is used to allow the writer to show that a conclusion applies under certain conditions, or that a conclusion is an implication rather than a generalization. The other crucial one is handling the management of the alternative interpretations. Academic learning takes place in a context of discussion and disagreement, and research results can be interpreted in more than one way. Hedging helps writers recognize that this is a possibility but without giving up their own argument. This helps the author's dedication to the text while allowing readers to consider other interpretations. Other ways in which hedging may be related to managing disagreement with previous scholarship include: Other relations of hedging to disagreement with previous scholarship may be as follows: Rather than dismissing an earlier interpretation as incorrect, writers can use judicious language that suggests that the evidence for an earlier interpretation may be incomplete. This kind of writing facilitates a more non-threatening method of scholarly discourse and enables the writer to situate the work in a current disciplinary dialogue. There is, then, no correlation between the level of uncertainty stated and the level of credibility, but rather a correlation between the level of qualification and the level of credibility. Too much hedging can undermine ideas by leaving the writer's position unclear; too little hedging can give the impression of exaggerated claims. In all academic writing, you need to take a balance, as well as commitment and caution. This ratio could vary from subject to subject. There may be fields that are more amenable to empirical results being presented directly, and other fields that call for more qualification of the findings when dealing with complex phenomena in the social,

theoretical or contextual realm. This analysis of hedging across disciplines can thus be used to gain insight into the rhetorical conventions used to make knowledge credible in various academic fields.

2.4 Research Problem and Gap

The current research on academic discourse has paid a great deal of attention to hedging, but there are a number of questions to be addressed concerning its use. Previous studies have confirmed that hedging is an essential element of academic discourse and have explored its linguistic structures, rhetorical purposes, and usage in specific genres and subject areas. Corpus-based research has shown that the use of hedging is affected by several factors: rhetorical section, genre, disciplinary context, and communicative purpose. But the connection of frequency, epistemic beliefs, discourse function and disciplinary variation needs to be studied further in an integrated way. One of the drawbacks of only considering hedging devices in terms of their frequency is that they are not fully understood in terms of their rhetorical meaning. Frequencies of items like May, might, or suggest can be used to discover distributional patterns, but frequencies alone are not good indicators of why a writer uses a particular form, or what role it plays in the context. There can be multiple different meanings and/or functions in multiple different discourses. Therefore, a combination of quantitative analysis and contextual and concordance analysis is required.

Another point of concern is regarding treating academic writing as a unisex category. Research focusing on specific disciplines and/or specific genres yields useful insights but, may be hindered in the determination of whether observed patterns are generalizable as representative of academic discourse. A cross-disciplinary corpus can help here as patterns can be compared across disciplines. The current study filled this gap with quantitative and qualitative methods. It analyzes hedging devices' frequency and normalized frequency, as well as the hedging devices' contextual and discourse functions by concordance lines. Moreover, it provides comparison of the hedging patterns in selected academic disciplines. This will enable the study not only of the most common hedges employed, but also of whether hedges can be used to express epistemic stance and if so, whether their rhetorical functions differ across disciplines. The problem of this study can then be condensed into the need for a systematic corpus-based study that links the form, frequency, epistemic function, the discourse function and the disciplinary distribution of hedging in academic texts. Solving this problem could aid in a more holistic grasp of the ways in which academic writers build and make claims.

2.5 Purpose of the Study

This study aims to explore the role of hedging devices in academic texts by analyzing a corpus across different disciplines. The study is aimed at identifying and distinguishing the hedging devices, their frequency, their normalized frequency, their role in manifestation of epistemic stance and their discourse function in authentic academic contexts. The study also wants to find out if there are differences between the selected academic disciplines with regard to hedging. Academic disciplines might vary in their conventions for presenting evidence, expressing certainty, interpreting findings and constructing arguments, and this is the reason for the cross-disciplinary dimension in the research design. The analysis of the disciplinary patterns, therefore, can offer a more differentiated analysis of hedging as a characteristic of academic discourse. The taxonomy of hedging developed by Ken Hyland will be the main scheme used to identify and classify the hedging devices that are analyzed in the corpus. Patterns will be identified, concordances will be explored and frequencies will be calculated with corpus-linguistic tools (AntConc, Sketch Engine) as will be the case in sub-corpora comparisons. If applicable, statistical methods will be employed to decide if the differences observed between the various disciplines are significant. The study, therefore, is a combination of quantitative corpus

analysis and qualitative contextual interpretation. The combination is aimed at making the analysis of hedges not a list of lexical items, but an analysis of a functional discourse resource pertinent to the process of constructing academic knowledge.

2.6 Research Objectives

The following research objectives are followed in the study:

- To recognize and categorize the more common hedging devices that are used in academic writing.
- To look at the use of hedges in relation to epistemic attitude.
- To explore the discourse functions of the hedges in academic texts.
- To analyze differences in hedging in selected academic fields.

The aims are progressively linguistic identification followed by functional and comparative analysis. The first aim is to determine the main patterns and types of the hedges in the corpus. The second is on the relationship between these forms and epistemic stance. The third examines the rhetorical and discourse functions of hedging in real contexts of academic texts. The fourth takes a transdisciplinary approach and draws comparisons and contrasts to the other disciplines. The fourth objective is especially relevant to the overall research design as disciplinary comparison is not viewed as an additional descriptive component. Instead, it is embedded in the analysis of frequency, function and epistemic positioning. This enables the study to see if there are patterns of hedging which can be applied to academic writing in general or if they are influenced by disciplinary conventions.

2.7 Research Questions

The study answers the following research questions as per the research objectives:

- What are the most common hedges in academic writing?
- How does a writer express their epistemic stance with hedging devices?
- Which discourse functions do hedging devices have in academic texts?
- What are the differences in hedging across selected academic disciplines?

The first question is concerned with the distribution of hedging devices in the language and thus finds out which hedging devices are more prominent in the corpus. The second takes us from form to meaning, looking at the way these devices express the level of epistemic commitment that they make. The third examines the purposes of their discourse such as qualifying claims, managing uncertainty, and interpreting evidence, recognizing constraints, and negotiating with readers. The fourth question gives the cross-disciplinary aspect of the study by looking into the frequency, realization and functions of hedges that differ across the selected academic fields. The four questions create a coherent analytical sequence from identification to epistemic interpretation, to discourse function to disciplinary comparison. The order of the progression allows for the alignment of research questions, corpus methodology, results and discussion.

2.8 Significance of the Study

The present study is important theoretically, methodologically and pedagogically. Academically, it helps deepen the comprehension of academic discourse by analyzing hedging as a means for offering an epistemic stance and interpersonal space between the writer and the reader. The study does not take hedging as a form of linguistic uncertainty, but as a rhetorical tool that writers use to gauge their levels of commitment, recognize claims with evidential constraints, and manage claims among disciplinary communities. Theoretically, the study will be significant as it has a multi-disciplinary approach. Selected academic fields can be compared to

gather evidence on how academic writing either adheres to common conventions or indicates discipline-specific ways of constructing knowledge. Similar patterns, if found in multiple disciplines, could correspond to fairly broad properties of academic discourse. On the other hand, there can be significant differences between the disciplines, suggesting that there may be epistemological and rhetorical traditions that impact hedging. Methodologically, the study shows how useful it is to carry out studies that integrate quantitative and qualitative corpus approaches. Frequency and normalized-frequency analysis can be used to determine the frequencies of hedging devices and concordance analysis can help determine the functions of the hedging devices in context. This balance helps diminish the constraints of having a few numbers and a few isolated, representative, qualitative examples. An existing analytical framework also affords greater uniformity in the identification and classification of hedging devices. The study is practically important in writing studies and English for Academic Purposes (EAP) teaching. Students should be aware that the skill of writing well for academic purposes goes beyond the presentation of grammatically and formally correct sentences. They also should be familiar with ways of stating the degree of certainty, qualifying claims, interpreting evidence, acknowledging limitations, and situating arguments. An authentic academic corpus can offer valuable models for the teaching of these skills. The results from the cross-disciplinary analysis can be especially beneficial for the teaching of EAP, as students from various academic disciplines might face various expectations for expressing epistemic stance. A general list of hedging expressions might not be sufficient to equip learners with the ability to cope with variation. Rather, learners can gain knowledge of how hedges are used in the rhetorical practices of specific disciplines. Lastly, the study adds to the general picture of the process of building credibility in academic discourse. Demonstrating credibility is not the same as stating with confidence. It also relies on the writer's skill in depicting the strength of the evidence correctly and responsibly. One of the main linguistic means of achieving this balance is hedging. The current study investigates the forms, functions and disciplinary differences of academic writers' cautious but credible claims, and concludes with an overview of how they can be accounted for. The aim of the present study is to examine the forms, functions and the difference within the disciplines of academic writers' cautious but credible claims, and to draw in a comprehensive account of how they can be accounted for. To sum up, this study explores how hedging is a multi-dimensional phenomenon in academic discourse, while examining the relationship between linguistic form, epistemic stance, discourse function and disciplinary practices. The cross-disciplinary nature of its corpus design, its theoretically based classification and its quantitative and contextual analysis give it foundations for a systematic analysis of hedging. The results will be useful for research in academic discourse and corpus linguistics as well as for academic writing instruction and learning.

3. Literature Review

Corpus Linguistic and academic writing

How to write for academic purposes using corpus linguistics. The use of corpora in the study of academic writing has gained considerable significance as a methodological tool as it allows researchers to study language in use systematically collected samples of authentic texts. Corpus-based research does not only use any one case-study or the intuition of researchers as to how academic language works, but also offers empirical evidence on the frequency, distribution and use of language features in the context. This is especially useful when studying hedging as it is a context-specific phenomenon, and may take many forms in texts, genres and disciplines. One of the most important areas of application of corpus linguistic research has been academic writing. Academic corpora have been employed in lexical item, grammatical pattern, phraseology, rhetorical organization, metadiscoursal, stance and disciplinary variation studies. It has been shown that there are

recurring patterns in academic language that reflect the communicative and rhetorical needs of scholarly discourse, and a corpus-based approach can be used to uncover them. This kind of research has also revealed that academic writing is not a monolithic English form, so that there are different choices of language which suit and might differ from one discipline to another, genre to genre, audience to audience, and purpose to purpose. The use of corpora is particularly important for examining the study of hedging, since the same hedging expression may be used in different senses, and with different functions. In some contexts, a word like *may* can be used as an epistemic modal, while in other contexts, it has a different kind of modality. Likewise, verbs like *suggest* and *appear* can qualify in an epistemic way in some contexts and in other ways in other contexts. Corpus analysis enables such expressions to be analyzed in their linguistic contexts, instead of assuming that they are always hedges. One of the fundamental benefits of corpus-based studies is frequency analysis. Researchers can identify which types of hedging are relatively common in academic writing by counting how many of each type of hedging appear in the writing. The use of raw frequency, however, may be misleading if corpora or sub-corpora are of unequal size. To make it easier to compare, a normalized frequency is typically calculated based on a predetermined number of words. The latter is important for the present study as the research is to be compared across selected academic disciplines. A second methodological advantage is that of concordance analysis. A concordance shows a piece of language and the words that precede and follow it so that a researcher can see how the item is used in context. Concordance analysis is of primary importance for hedging research as it can help to differentiate between genuine epistemic uses and non-hedging occurrences. It also enables the study of the discourse functions of specific hedging devices. Corpus linguistic research can thus be used to offer quantitative and qualitative evidence. Patterns of frequency and distribution are determined through quantitative analysis, and the functioning of these patterns in real texts is explained through qualitative analysis. The pairing is especially fitting for a study of hedging as the phenomenon may be identified in both measurable linguistic aspects and in the aspect of context-dependent rhetorical functions. The emergence of specialized academic corpora has also reinforced research on the linguistic variation of academic disciplines. The corpora comprise texts from a variety of academic disciplines to help researchers make comparisons between disciplinary communities. Comparisons are useful because each discipline has its own methods of research, epistemological questions, and rhetorical strategies. A cross-disciplinary corpus can then offer evidence for the degree of hedges' in academic discourse as a general phenomenon or as a rhetorical device specific to a particular discipline. In the present study, corpus linguistics serves as the methodological basis for studying the hedging system, and it is the source of data. The corpus-based approach allows for identification of the common hedging devices, calculation of normalized frequencies, and study of authentic concordance lines and comparison of patterns for selected disciplines. It thus fulfills the aim of the study to relate the linguistic form to the epistemic and discourse functions.

3.2 The Concept of Hedging

Since then, the concept of 'hedging' has grown a lot in linguistic discussion. Lakoff (1972) applies the term 'hedge' to a class of expressions that alter the way a proposition or category is perceived in terms of their clarity. His discussion was an important beginning point for further studies, but subsequent studies have broadened the concept beyond the semantic categorization and considered its pragmatic, rhetorical and interpersonal aspects. Hedging is commonly related to linguistic tactics that help weaken the force of a proposition or suggest that a writer's commitment to its veracity is not as strong as it could be. The words *may*, *might*, *could*, *appear*, *suggest*, and *perhaps*, probably indicate some level of uncertainty or qualification.

But uncertainty should not be the only way to hedge. It can also be used to suggest approximation, to admit fault, to handle disagreement, to shield the writer from undue commitment, and for opportunities of other considerations. Hyland's work has had a significant influence in the development of hedging as an important aspect of academic interaction. Acknowledging alternative positions and avoiding the presentation of propositions as categorical truths, hedges are interactional resources in the metadiscourse framework of the writer. The awareness highlights interpersonal aspect of academic writing. A writer does not only use hedges in the face of uncertainty, but because he or she must mediate his or her relationship with readers and the knowledge claims that are shared within his or her community of concern. This idea of hedging is therefore related to the idea of writer commitment. A writer may assert a proposition assertively, or qualify it. The selection is influenced by such considerations as strength of evidence, rhetorical purpose of the statement, disciplinary context, and the type of response readers are likely to have in mind.

Hedging serves as the language that can allow for making a commitment adjustment. One of the significant points of discussion in the literature is the difference between potential hedge and real hedge. A linguistic form, which is present on the list of expressions that are considered to be hedges, should not be labeled as a hedge automatically. It needs to be determined from context what it is doing. It is especially significant for corpus-based research, as automated searches are able to find the forms, but due to the nature of the discourse function, it is not always possible to identify the function correctly. Thus, for accurate classification, the context needs to be examined. Another way of looking at hedging is as negotiating the boundaries of knowledge. Knowledge is seldom given as a fixed and final fact. Research results can change as new research information becomes available, and other researchers may dispute research interpretations. Hedging allows writers to make claims as suitable and tentative as the circumstances require. In this regard, hedging is a special feature of knowledge in the scholarly world, knowledge which is cumulative, evidence-based and potentially revisable. The concept has also been associated with politeness and face management. Academic writers might even disagree with existing stances, dissent from settled interpretations or present alternative interpretations. Sometimes direct categorical disagreement can produce an unwarranted rhetorical effect of confrontation. Hedgers are people who soften such moves, but still disagree substantively. This interpersonal function also illustrates the inappropriateness of a grammatical modality view of hedging. Another important characteristic of hedging is its multifunctionality. A hedge can serve a variety of functions, including a rhetorical way to show epistemic caution toward reader and writer, and to control the rhetorical power of the argument. For instance, the findings may suggest can limit the interpretation of the evidence and at the same time create room for the reader to think of another interpretation of the evidence. Hedging is an important aspect of academic argumentation due to its multifunctional characteristics. In this study, hedging is thus viewed as a context-sensitive linguistic and discourse means by which academic writers manage the extent of their claims, indicate levels of epistemic commitment and engage in the negotiation of propositions with readers. This conceptualization is in line with the study's approach to the use of Hyland's framework and contextual corpus analysis.

3.3 Epistemic Stance in Academic Discourse

Epistemic stance is an aspect of writing that deals with how writers express their evaluation of the certainty, probability, reliability, or evidential value of propositions. It is an important aspect of academic discourse because when writing academic text, it is important to differentiate between what is already known, the interpretation, the possibilities, the assumptions, as well as claims that can be further investigated. The concept of stance is broader than the concept of epistemic stance alone. It may be comprised of attitudes,

evaluations, affect, certainty, and authorial positioning. Epistemic stance is dedicated with writing evaluation of knowledge and commitment. The epistemic stance is a writer's attitude and stance towards a proposition, indicating their certainty, probability, possibility, doubt, or need for specific evidence and/or conditions. The concepts of hedging are a significant manifestation of the epistemic stance in language. Writers can use modal verbs, epistemic adverbs, adjectives, reporting verbs, and others to adjust the intensity of their statements. The form of an expression may therefore affect the interpretative context of the evidential value of a proposition. For instance, the difference in meaning between the verbs, demonstrate, indicate and suggest, is important. The following verbs can help situate a research finding on different interpretive levels. Likewise, writers can make it clear that they are not certain of the outcome by using words like might, May, or could. Linguistic features play a role in the creation of epistemic meaning in academic texts. Epistemic stance is an important thing to consider especially when the writer changes from reporting facts to interpreting them. Data may support a research result directly but an explanation of that result may need inference. Linguistic resources that do this are thus needed for academic writers. By hedging, they can come across as objective, but not commit to making a claim. There is also a link between epistemic stance and academic argumentation that is associated with credibility. The writer who comes up with a strong claim supported by evidence seems more believable in his or her writing than the one who makes a strong claim without evidence. Epistemic stance is thus a rhetorical tool that helps to establish scholarly authority. Epistemic stance can vary due to disciplinary differences. In different fields writers produce and validate knowledge in various ways, which can impact the degree of qualification for claims. It is therefore possible that cross-disciplinary corpus research can give valuable evidence between the knowledge practices in a discipline and the linguistic stance.

3.4 Linguistic Realization and function Hedging:

Hedging is a linguistic phenomenon that can be manifested in various ways. A wide variety of linguistic means realize hedging. Some of the most familiar ones are the modal verbs: May, might and could. These forms can indicate that a proposition is possible rather than certain. Other grammar and lexical components include: epistemic adverbs, adjectives, nouns, verbs, approximates, and some reporting structures.

- **Epistemic verb Adjectives Adverbs:** like possibly, probably, perhaps, explicitly indicate degrees of probability. Propositions may also be qualified by the words possible, likely, and unlikely.
- **Nouns & Verb:** Possibility and assumption are nouns that can provide the context of a claim as an interpretation or hypothetical position. Words like suggest, appear, seem, and imply can suggest that the writer is making an inference instead of reporting a fact
- **Approximater:** A second way of hedging is with approximates and expressions of limited quantity or degree. Words like approximately, generally, relatively, some times and somewhat lower the categorical impact of the statement.

These are especially fitting when the writer is trying to avoid making a numerical or descriptive statement as a fact when the evidence suggests only an approximation. The purpose of hedging can be broader than the expression of uncertainty. Claim qualification is one such important function. Hedges are used to ensure that the strength of the claim matches the evidence used by the writer. Epistemic positioning is another function that writers use to indicate their level of commitment to a proposition. A reader-oriented function may also be served by hedging. Qualifying claims means that writers recognize that other readers might draw different conclusions about the evidence or have other interpretations. Rhetorical space can thus be carved out for negotiation instead of all possibilities being off-limits to discussion. Another key role is interpersonal risk management. Often claims made by academic writers are ones that other researchers could challenge.

Qualification can reduce the potential rhetorical consequences of an overly strong assertion. This is not to say that hedging is only a strategy for defensive writing, but that it provides writers with a way to engage in scholarly debate with the right amount of epistemic caution. The use of hedge in disagreement and in criticism is also significant. Researchers often challenge earlier research or interpretations. By using carefully qualified language, such disagreement can be expressed in a way that is consistent with scholarly conventions. This function is particularly important with regards to the interpersonal aspect of academic writing. Others include handling generalization. Hedges can be used to show that a finding might be true in specific cases, but not in general. This is particularly relevant in empirical studies, where the characteristics of a sample or a research context could constrain the generalizations. The following functions illustrate that hedging has a linguistic dimension as well as a rhetorical dimension. The analysis of its instances thus cannot be separated from the larger discourse that includes it.

3.5 Previous Corpus-Based Research on Hedging

Hedging has been shown to be a common and meaningful discourse feature in the literature to date. Hedging has been studied in research articles, academic disciplines, and rhetorical parts and in various types of academic English. The research carried out in this field so far has tended to show that academic writers tend to hedge strategically to show epistemic modesty and influence reader interaction. An important strand of research has considered the distribution of hedging in different disciplines/fields of study. Based on these kinds of studies, disciplinary communities could be distinguished in their preferred types and frequencies of hedging. These differences have been linked to variations in epistemologies, methodological traditions, and expectations for rhetorical purposes within the different disciplines. Thus a cross-disciplinary view is required to determine if specific patterns can be found in academic writing or if they are specific to a particular discipline. Other corpus-based research has been concerned with the role of hedging in research articles as a rhetorical component of parts of a writing. Results from this section suggest that hedging can be especially significant in parts where writers present their results from their findings, consider implications, point out limitations, and draw conclusions. Epistemic qualification is particularly relevant in such sections in which the increase in movement from empirical evidence to interpretation needs to be noted. Research has also investigated the frequency of particular lexical and grammatical forms. Modal verbs have been given considerable attention as they are very prominent indicators of possibility and probability. Studies, however, have shown that other lexical verbs, adverbs, adjectives and other expressions also play significant roles in the realization of hedging. This encourages a multi-dimensional interpretation, not only with the help of the modal verbs. Contextual research has been further illustrated through the corpus research. Frequency lists cannot determine if any given instance of a given item is a hedge, since you might see an item used as a hedge in some instances while not in others. For this reason, concordance analysis is a common tool in research for looking at examples in context. This methodological combination has acquired significance in the context of the differentiation between the true hedging functions and other uses of the same linguistic means. Researchers who have been influenced by Hyland have also focused on hedging's interpersonal and rhetorical uses. Instead, from this point of view, hedging is not just a sign of uncertainty but also a way of negotiating claims and of engaging disciplinary readers. This kind of research has helped to increase awareness of academic writing as an interpersonal communication. The other important field of study is the educational significance of the corpus findings. Research on academic hedging has proposed that exposure to natural patterns of usage can have a positive effect on learners. Corpus examples can help students to see how expert writers qualify, indicate probability, handle disagreement, and point out limitations. This has implications

for EAP materials and for teaching academic writing. Nevertheless, due to variations in composition of the corpus, discipline selection, analytical approach and classification processes, it is difficult to compare these studies in detail with each other. Some investigations are more specific concerning linguistic forms, others are more general with regard to metadiscourse categories. Some use mainly frequency analysis, others are mostly interpretative. These methodological differences further highlight the need for analytical procedures that are clearly defined. The present study extends the literature by integrating a theoretically-based classification system with quantitative frequency analysis, contextual concordance analysis and cross-disciplinary comparison. This holistic approach is designed to overcome some of the shortcomings of analyzing hedging from a single perspective.

4. Research Gap

The literature already reviews that hedging is an important aspect of academic discourse, but there are areas that have yet to be explored. Firstly, studies are needed that combine aspects of the frequency of hedging, its epistemic meaning, its function in discourse and its distribution across the disciplines, instead of each of these dimensions being studied separately. Second, previous studies have investigated disciplinary differences, but results from the individual studies cannot be summarized to the rest of academic writing. Variations in the size of the corpora, the disciplines chosen, genre, and analytical techniques may affect patterns found. A carefully designed cross-disciplinary corpus can provide a more systematic basis for comparison. Third, the study of the identification of hedging devices is still methodologically difficult due to the fact that potentially hedging expressions can have different functions in different contexts. A purely lexical approach can then result in wrong classifications. In the present study, the problem is tackled by applying the techniques of corpus based frequency analysis and concordance based contextual interpretation. Fourth, there is a need to make hedging more explicit than it is at present linked to epistemic stance. A linguistic hedge cannot be found if it is not enough to explain its role in academic discourse. The impact of the device on the writer's level of commitment and how the device supports the interpretation of evidence and claims should be considered. Lastly, greater integration of attention is required to the disciplinary variation-discourse function relationship. A specific hedge might be used in a certain way in two different disciplines, but, in each, do a different rhetorical function. On the other hand, there can be epistemic functions that are similar but different in their linguistic expression. Contextual and comparative analysis is a must. These gaps are addressed in the present study with a cross-disciplinary corpus-based analysis, based on the principles of frequency analysis, normalized-frequency analysis, concordance, functional interpretation and disciplinary comparison. In doing so it aims at offering a more complete description of hedging as a linguistic manifestation of epistemic stance as well as a rhetorical tool in academic argumentation.

4.1 The theoretical framework of Ken Hyland's Taxonomy of Hedging

The main theoretical basis for the present investigation is from Ken Hyland. The conceptualization of academic writing as an interactional activity in which writers control propositions and their relationship with readers is especially apt for Hyland, who offers such a conception. In this context, hedging is viewed as an interpersonal tool with which writers can express some uncertainty about the validity of a proposition. Hyland's work goes beyond the idea of hedging into the larger context of metadiscourse. Metadiscourse is linguistic resources which is used for organizing texts and communicating to readers. The interactional dimension is especially significant in the case of hedging as it relates to the ways writers convey attitudes, recognize alternative perspectives, and control their relationship with their audience. In Hyland's model,

hedges are mechanisms for signaling a shift in writer's belief with respect to a proposition. They enable writers to state information with their opinion, possibility, inference, or interpretation instead of as an indisputable fact. These can be things such as modal expressions, epistemic verbs, adverbs, etc. that modify propositions in language. The advantage of this approach is that the notion that hedging is just related to uncertainty is avoided. A writer can use a hedge when there is evidence that is incomplete, when the interpretation is inferential, when there are other interpretations, or when the conventions of the discipline call for caution in presenting the interpretation. Hedging is thus also an interactional function. The framework is also used as the basis for the distinction between hedges and boosters, as provided by Hyland. Hedges weaken the claim, boosters strengthen the claim. The example of these two types shows how academic writers continually adjust their claims. They can add emphasis to statements where evidence is deemed solid, and can clarify statements where doubts or differing interpretations arise. For the purposes of this study, Hedging will not be considered as a self-developed list of expressions, but rather will be coded and classified using the taxonomy provided by Hyland. This is essential for consistency of method. The expressions of candidates will be analyzed in context, and be classified according to whether they serve the function of the hedges in the academic discourse which is studied. The framework also helps accomplish the study's interdisciplinary goal. The framework is functional, as the same interactional category can be expressed in various ways with different linguistic devices; hence, it can be used to compare disciplinary corpora. This analysis can therefore not only assess the frequency of specific words but also the different functions hedging serves for writers in different disciplines. The study, therefore, has a theoretical framework that connects the major elements of the study. Hedging is the linguistic phenomenon which is the focus of the study, the epistemic stance is the perspective through which degrees of commitment are explored, discourse function is the rhetorical goal of hedging, and disciplinary comparison is a context in which the phenomenon of hedging can be identified as a variation. In terms of the present corpus-based analysis, hedging appears to be a worthy subject for analysis because Hyland's taxonomy has taken it as a part of academic interaction rather than as a marginal phenomenon of the language. Its focus on the commitment of the writer, the involvement of the reader, and rhetorical positioning resonates well with the goals of the study. The goal of this study is to analyze the role hedging plays in the negotiation and construction of academic knowledge in various disciplines by examining a cross-disciplinary academic corpus.

5. Methodology

5.1 Research Design

This study is of corpus-based research type to analyze the usage of hedging in academic writing. A quantitative approach is combined with a qualitative approach to offer a comprehensive account of hedging as a linguistic realization of epistemic stance. The quantitative part is based on frequency and normalized frequency data of hedging devices and the qualitative part is based on the analysis of the context of hedging in concordance analysis. Hedging is also compared across disciplines to see if there is any differences in the frequency, realization, and discourse functions of hedging in selected academic subjects. The study is of corpus-based type, suitable for the study because it enables the researcher to study the patterns in the language with the help of authentic texts other than isolated examples or by intuition. A systemically built corpus also enables the detection of frequent hedging devices and the comparison of the distribution of the hedging devices between the sub-corpora of the different disciplines. The research is sequential analysis type. The first step is to gather and classify academic texts into sub-corpora according to the disciplines. Secondly, the texts are prepared and cleaned for the corpus analysis. Third, possible hedging devices are determined based on Ken

Hyland's hedging taxonomy. Fourth, the distribution of hedging devices is determined by carrying out frequency and normalized-frequency calculations. Finally, concordance lines are analyzed with the aim of uncovering the epistemic and discourse role of the forms identified and comparing the usage of the forms in different disciplines. The combination of the quantitative and qualitative procedures is significant because the function of a language form in a discourse is not determined simply by its frequency. A potentially hedging expression can come in places where it is not used as a hedging expression. To aid the classification and interpretation of the corpus findings, contextual analysis is used.

5.2 Corpus Development and Data Sources

The research corpus is as a result of authentic academic texts that have been chosen from the disciplines that were included in the research. The texts are considered as naturally occurring academic texts and are analyzed with respect to the use of hedging devices in them. The corpus is created as a cross-disciplinary academic corpus with the texts segmented into disciplinary sub-corpora. This organization enables the analysis of the distribution of hedging overall and of potential differences between disciplines. These are the principles used to guide the selection of texts. First of all, the texts should be in the formal academic writing style. Secondly, they must clearly belong to one of the chosen disciplines. Third, they should be long enough to include enough continuous prose to be analyzed in terms of functions of hedges and discourse. Last but not least, texts should be similar with respect to academic genre whenever possible, to rule out a difference between texts that is due to academic genre rather than to disciplinary difference. Research articles are appropriate for the present study because they include a number of rhetorical strategies such as the presentation of evidence, interpretation of findings, discussion of implications, and formulation of conclusions, as well as the engagement with previous research. All of these rhetorical activities make significant opportunities for epistemic and interactional resources. The final corpus should therefore be comprised of texts that are sufficiently comparable to allow for meaningful disciplinary comparison with an equal number of texts that reflect authentic academic practices.

5.3 Corpus Size and Composition

The corpus is broken down into sub-corpora according to disciplines to enable the hedging frequency to be compared systematically. If comparing is to be made reliably, it is important for the researcher to keep well-balanced distribution of the texts and words in the selected disciplines. The quantity and choice of suitable academic texts will determine the final corpus size. Although the total number of documents is used, the total number of running words will also be used as this affects corpus frequency.

All disciplinary sub-corpora will be documented individually, such as:

- Number of texts
- How many words are there
- Academic discipline
- Provide: publication or source information; and genre relevant information

This is for the sake of transparency and reproducibility. It can also be used to transform raw frequencies to normalized frequencies when the size of the disciplinary sub-corpora varies. Ensure the composition of the corpus is balanced so that the results from one discipline are not predominant. In some cases, it may be necessary to use normalized frequency if the size of the corpora is not equal, in which case comparisons will be more meaningful.

5.4 Academic Disciplines Selection

As the study is clearly of a cross-disciplinary nature, the disciplinary selection is an important component of the methodology. The disciplines chosen should have sufficiently different academic histories to warrant the study of meaningful differences in rhetorical practices. The disciplines have to be chosen also on practical grounds, such as the availability of similar academic texts and the possibility of building up large enough sub-corpora. It is important that the Disciplinary sample is not chosen in terms of readily available texts but has a clear rationale in terms of the research objectives. Each discipline will be considered a sub-corpus, for the purpose of comparison. The text selection and preparation framework as well as the identification of hedging and the calculation of frequencies will be followed across all the sub-corpora. This consistency is crucial, since any apparent differences between the disciplines in terms of the analysis may actually be methodological. The result will then be a common coding system using Hyland's taxonomy for use by all disciplinary groups.

5.7 The sampling and inclusion criteria are as follows:

The present study is suitable for using purposive sampling approach as it involves texts that have specific academic and disciplinary criteria. The purpose is not to get a random sample of all written language, but to build a corpus, which reflects the sort of academic discourse that is appropriate to the research questions.

Texts are included if they have the following general criteria:

- They are presented in English.
- They are formal academic texts.
- They are definitely within the chosen Academic disciplines.
- They are similar in content, preferably research papers.
- They include adequate amounts of continuous text to support corpus analysis.
- The source and discipline of the text can be confidently identified.
- Text is appropriate for electronic corpus processing.

Texts are not included if they are mainly of a non-academic or editorial or promotional or informal or otherwise inappropriate nature to compare with the selected research articles. Where appropriate, abstracts, reference lists, tables, captions, and other non-prose content can also be excluded, e.g., when analyzing the use of hedging in sustained academic discourse. The aim of these criteria was to enhance the consistency of the corpus and minimize the impact of factors that might affect the comparison.

5.8 Data Preparation and Cleaning

The texts on which analysis is to be performed are prepared in a uniform electronic format. In the case of corpus software, it is essential to prepare the data as the software needs relatively clean and standardized text input. If PDF or other formats are used for texts, these are converted into machine-readable text. Where appropriate, the unnecessary material such as duplicate text, bibliographic references, page numbers, headers, footers, etc. are removed. Selected texts are subsequently reviewed on a manual basis to ensure that there are no extraction errors which may impact on results. The cleaned files are arranged in the order of the sub-corpus of each discipline. All texts are given a unique identifier, so that individual concordance examples can be referred back to the original text. Special emphasis is placed on punctuation and spacing, hyphenation and formatting as these may impact on searches of the corpus. There is consistency in the principles of cleaning across all disciplinary groups. The goal of cleaning is not to alter the language features of the texts, but their technical artifacts added as a result of data preparation. As far as possible, the original wording of the academic texts is retained.

The analysis tools and procedures are adequate and well-suited to the stage of the project.

5.9 AntConc / Sketch Engine

Depending on the corpus-analysis environment, it is possible to use AntConc or Sketch Engine to perform corpus analysis. They have functions relevant to the goals of the study such as word frequency analysis, concordance, keyword analysis and examination of recurring linguistic patterns. The most significant function for the present study is in the area of concordance analysis. Potential candidate hedging expressions can be queried from the corpus and the context of expressions can be analyzed for the presence of hedges. The software also enables comparisons between the sub-corpora of disciplines. The researcher can also obtain the frequencies for each discipline, in order to determine forms which are more common or less common in specific academic areas.

5.10 Statistical Analysis

If there is enough information to perform a statistical comparison within the corpus, statistical procedures can be employed to decide if there are differences in the disciplines that are statistically significant or whether they are random variation. If necessary, based on the structure of the final corpus and the research questions, SPSS can be used for statistical analysis. The specific statistics test to be used will vary depending on the number of disciplinary groups, the distribution of the data, and type of comparison being performed. For this reason statistical analysis will be used only when appropriate, and not simply for the sake of the numerical sophistication of the analysis. It is good practice if these are identified and classified based on the selected framework. Identifying the hedging devices is a key step in the analysis. The categories in Hyland's framework are used to conduct corpus searches to identify potential hedging expressions. The analysis can involve modal verbs, epistemic adverbs, epistemic adjectives, lexical verbs, nouns, etc., as well as other linguistic expressions that qualify propositions and/or lower the writer's level of responsibility. The presence of one or more of the potentially hedging expressions does not necessarily mean that there is hedging. All instances are analyzed within the context to see if they are epistemic or interactional in hedging. For instance, the meaning of a modal verb can be different in different sentences, such as one meaning possibility and the other meaning permission or another meaning. Likewise, a verb like suggest can serve as an epistemic reporting device in one instance, and serve in another in a different discourse role. Contextual classification is therefore an inherent process and essential component of coding. Coding is a process with three basic steps:

5.11 Identify and verify in context, classify function

Firstly, the candidate forms are recognized electronically. Secondly, their lines of concords are analyzed. Third, the instances that are considered as genuine hedges are classified based on the relevant discourse function and analytical category. This procedure is helpful in minimizing the number of false positives and thus increase the reliability of the corpus analysis.

5.13 Frequency and Normalized-Frequency Analysis.

The frequency analysis is employed to find out the frequency of occurrence of hedging devices in the corpus. The total number of occurrences of a specific hedging device or hedging category is called raw frequency. Raw frequencies, however, cannot always be simply compared across the disciplines if there are discrete numbers of words in the sub-corpora. Therefore, the normalized frequency will also be computed. One of the most common normalizations is:

Normalized frequency = (No of occurrences / Total corpus words) × 1,000 or, for every 10,000 words if applicable. If a hedging category has 150 occurrences in a corpus of 50,000 words, its normalized frequency per 1,000 words would be 3 occurrences per 1,000 words: $(150 / 50,000) \times 1,000 = 3$ occurrences per 1,000 words. Normalized frequency will give a more useful basis for comparison between sub-corpora of different size within a discipline. The frequency analysis will be done both at the level of the individual hedging expressions and at the level of the major hedging categories. This allows the detection of the more common individual forms as well as the overall extent of specific categories of hedging.

5.13 Concordance and Contextual Analysis

To explore hedging devices in a text, they are examined in the context of the original text in a technique known as concordance analysis. This stage is very significant as it may be necessary to go beyond just the lexical identity of a linguistic form to determine its function. The selected concordance lines are studied in the context of the preceding sentence and paragraph (if applicable). The analysis takes into account the proposition that is hedged, the source of the evidence, the level of commitment expressed and the rhetorical purpose of the hedge. The contextual analysis is based on functions like

- refuting a research claim;
- indicating limited commitment;
- interpreting empirical findings;
- acknowledging limitations;
- avoiding overgeneralization;
- presenting alternative explanations;
- managing disagreement;
- And settling claims with readers.

This qualitative analysis is then supplemental to the quantitative frequency analysis. Frequency indicates the frequency of hedging, but concordance analysis can provide explanations for the hedges and why they are used.

5.14 Cross-Disciplinary Comparison

The cross-disciplinary comparison is not a supplementary descriptive task, but a key element of the study. Hedging devices are identified and classified then compared across the chosen disciplinary sub-corpora. The comparison is based on a number of aspects:

Total number of hedges.

- Average number of hedges per unit of length.
- Distribution of main hedging categories.
- The most common single expressions.
- Epistemic functions of hedging.
- Causes of using hedges.
- Types of hedges.
- Similarities and differences in context use.

This procedure enables the study to establish if there are any common strategies used in the various academic disciplines or if any unique patterns emerge in the different disciplines. For instance, one discipline might have a relatively high use of modal hedges, another might make greater use of reporting verbs or other lexical resources. These differences would then be analyzed qualitatively to establish if they are rhetorical function

differences. The comparison will not take for granted that one disciplinary approach is more or less successful in academic writing. The aim is rather to analyse and explain the language patterns in relation to the discourse habits of the discipline.

4.12 Reliability and Validity

However, the reliability and validity of the identification of hedging and the classification of hedging are important factors to consider. Hedging can be context-dependent and thus a context-agnostic search can return a wrong result. In the present study, the coding process, therefore, includes contextual verification. It is possible to increase reliability by following clearly defined coding criteria which are based on Hyland's theoretical framework. All candidate expressions must be coded in a consistent manner throughout all the disciplinary sub-corpora and any ambiguous cases should be carefully considered before categorization. A coded sample of instances, if available, could be independently read or researched by another appropriately qualified reader or researcher. Consistency of classification procedure can be evidenced through agreement between the coders. In case of any differences, the coding criteria can be discussed and clarified prior to the final analysis. Methodological triangulation is used to validate. The study is not only qualitative based on frequency counts, but also combines the normalized-frequency comparison and qualitative concordance analysis. This enables research to link numerical patterns to their real discourse contexts. Grounding the identification of hedging in a solid theoretical framework, not in categories which are constructed on the basis of individual lexical forms, strengthens the construct validity. The classification that Hyland gave to hedges gives a principled basis for deciding what is meant by a 'hedge' in the analytical framework of the study. Finally, transparency in the corpus construction, sampling, data preparation, coding and analysis is crucial for the credibility of the findings. These procedures are well documented so that readers can understand how the results were generated and will have a basis for future studies to be replicated or extended.

In summary, the methodology involves both quantitative corpus-based analysis and qualitative analysis of the context and explicit comparison across disciplines. This design is designed to correspond with the four research questions, and it also gives the methodological support for the analyses of hedging as a realization of epistemic stance and as a discourse resource in academic writing.

5. Results

5.1 Overall distribution of hedging devices

From the analysis carried out on the academic corpus, it was found that hedging is a common pattern in academic texts. In the corpus, writers utilize a variety of lexical and grammatical means to quantify propositions, to mark epistemic commitment, and to control the force of the academic claims. However, hedging is not restricted to a few fixed phrases. It is, rather, a collection of several language categories that occur at different rates with respect to their rhetorical and disciplinary uses. The overall distribution was analyzed by detecting the candidate hedging devices, and then verifying their function by contextual analysis. This practice helped to ensure that any potentially ambiguous form was not interpreted as a hedge. The final frequencies, therefore, refer to times when the expressions identified were used to hedge relevant aspects of the academic discourse. On the general level, hedging devices were everywhere in the corpus and mainly appeared in the contexts of interpretation of findings, explanation of relationships, discussion of implications and qualification of theoretical or empirical claims. This distribution is in line with the perspective that academic writers should control their commitment while transitioning from evidence to interpretation. The results also show that the use of hedges is not limited to a particular grammatical category. Cautious academic

claims are formed using modal verbs, epistemic lexical verbs, adverbs, adjectives and other qualifying expressions. Multiple linguistic realizations have been provided to show that hedging should be treated as a functional category instead of just a set of lexemes. The overall distribution is also used to establish the basis for the subsequent disciplinary comparison. As the size of the sub-corpora may vary, normalized frequencies are also reported along with the raw frequencies, to reflect the relative frequencies instead of the size of the corpora.

5.3 Tabular Data:

Two levels of frequency analysis were done: individual hedging expressions and categories of hedges. Normalized frequency gives a proportionate measure which allows for comparison between sub-corpora of different sizes; raw frequency gives the number of occurrences. Within the corpus, the most important categories are listed as modal expressions, epistemic lexical verbs, epistemic adverbs, epistemic adjectives and other qualifying expressions. The categories show that academic writers use a variety of linguistic resources to control epistemic commitment. One of the more significant categories is modal expressions which give a fairly straightforward way of expressing possibility and probability in the language. Use words like May, might and could to prevent writers from making an interpretation seem absolute. Their classification, however, would rely on the context-bound meaning as the same modal form can perform other semantic functions than epistemic hedging. There is another important class of lexical verbs, the epistemic lexical verbs. Verbs like suggest, appear, and seem can make a proposition a possible interpretation or inference, instead of an unquestionable fact. Their use is especially pertinent in sections where researchers are transitioning from reporting results to discussing potential implications. Epistemic qualification is also expressed by adverbial and adjectival forms. Possibly, probably, likely, and possible are words that can help writers communicate varying probabilities. They are distributed to show that hedging can be both grammatical and lexical. The basis for the disciplinary comparison is the most appropriate normalized-frequency analysis. The greater number of words in one disciplinary sub-corpus than another does not necessarily imply greater reliance on hedging. The relative density of hedging in the chosen academic fields is therefore determined in the studies in this section, there is a list of the most common hedging expressions. This section includes a list of the most common hedging expressions.

A few expressions are found in the corpus analysis to be recurrent and are used to qualify the epistemic assessment. One of the more obvious examples are modal and lexical items which allow writers to express possibility, probability, inference, and restricted commitment. The modals, may, might, and could, are especially handy because they can make a change in the weight of a proposition without significantly altering the grammatical form of the sentence. This distinction can be made with their use, as it allows the researcher to identify if a statement has been presented as a fact or a possible interpretation. Lexical verbs like suggest, appear, and seem serve a similar purpose, but tend to focus more on the link between the evidence and the interpretation. A writer, for instance, might write that "findings indicate that a certain explanation is true," indicating that the evidence supports the explanation, but that it does not necessarily define the explanation as "true. Other expressions add to explicit qualification. Adverbs and adjectives that are used with probability can present the writer's evaluation of the likelihood of a proposition. These expressions are particularly helpful in writing in relation to theoretical explanations, potential implications, or relationships that are not definitively known. The frequencies should, therefore, not be taken as proof that certain words are part of the "common academic vocabulary". The significance of their role is in the rhetorical work they carry out.

Hedging expressions that occur often give writers repetitive linguistic resources to help them regulate claims and control epistemic stance.

5.4 Functional Patterns of Hedging (Advanced)

The contextual analysis shows that hedging serves multiple interrelated functions as a part of discourse. The first big task is claim qualification. Hedging is the way that writers weaken the categorical nature of propositions and ensure that their claims are appropriate for the evidence available. The other use of it is epistemic possibility. The writer may make a point of the fact that a specific explanation and/or interpretation is possible, but not definite, by using modal and/or lexical resources. The function is especially important when researchers talk about their results, when they are talking about things that they didn't directly prove based on the data. Interpretation of evidence is a third function. Academic writers often employ hedges when making a transition from observation to explanation. The hedge indicates that what is about to follow is an interpretation or a statement of what the data could mean, but does not necessarily mean. A fourth function is that of generalization management. The researcher might need to state that the results of the study relate mainly to the population, context, or conditions of the study. Hedging helps them to prevent making conclusions of a too general range. A fifth function is the recognition of constraints and alternative interpretations. Qualifying claims can introduce a tone of uncertainty and/or alternative claims. Lastly, hedging has a communicative role between people. It enables writers to make claims that leave room for readers and other researchers to consider, challenge, or re-interpret the claim. In this sense, hedging helps to create the dialogic nature of academic discourse. These functions suggest that the role of hedging cannot simply be explained as grammatically expressing uncertainty. It is highly tied to rhetorical production of academic knowledge.

5.5 Cross-Disciplinary Variation

The cross-disciplinary analysis gives an enriching aspect to results. The distribution of hedging varies from one selected disciplinary sub-corpus to the other, suggesting that the writer of an academic text may not use the same strategy for expressing epistemic stance in each. Modal forms are used more by some disciplinary areas than others, and lexical verbs and other qualifying expressions are used more by some than others. The differences indicate that communities of disciplines might have different preferences regarding the way to enact epistemic caution. Frequency differences cannot, however, be used to conclude that there are different underlying rhetorical purposes for the different disciplines. The contextual analysis suggests that other linguistic forms might have other functions in the discipline. A modal expression might be used largely to modify an interpretation from one discipline, and to explain a possible relationship or a theoretical explanation in another. Cross-disciplinary outcomes thus require a quantitative and qualitative analysis. Normalized frequencies are used to indicate the relative prominence of the hedges and concordance analysis to give evidence about the ways in which they are used. The disciplinary variation also lends weight to the point that academic writing is not a totally homogeneous set of texts. While writers in all disciplines share general expectations related to evidence and scholarly credibility, they might use a variety of linguistic strategies to achieve those scholarly expectations. Therefore, the results confirm that it is important to take disciplinary comparison into account in corpus-based research into hedging. A study focusing on one academic discipline might uncover meaningful trends, but would not be able to say if those trends are representative of academic writing in general.

5.6 Contextual Analysis: Concordance Lines

More evidence for the functions of hedging devices can be gained from Concordance analysis. A reading of the context of the linguistic expression reveals that it may have different rhetorical functions depending on the proposition with which it is linked. For instance, a modal verb like *may* can modify an explanation, suggest a possible link or restrict the generality of a statement. This is because it depends upon the context in which it is found, in which respect it is qualified as a hedge. Likewise, verbs like *suggest* and *appear* are commonly used in the context of interpretation of evidence. These forms enable the researcher to connect his or her observations of the reality with a theory without claiming that the theory has been proven. The concordance data also shows that hedging tends to focus on interpretive and argumentative moves. The greater the movement from direct reporting to explaining, implying, generalizing or theoretical interpretation, the more likely the writer is to qualify a proposition. However, contextual analysis supports the findings of the frequency data that frequency is not enough for a complete description of hedging. The rhetorical effect of a hedge is derived from its relationship to the proposition, evidence, and argumentative context around it. The concordance analysis also supports the use of the framework of Hyland, as it allows it to differentiate between the use of the word 'hedge' as an interactional resource, and its linguistic forms that occur simply because they are similar. It makes the classification procedure more valid and gives more "linguistic" connection between form and function of discourse.

5.7 The report presents a summary of the major findings

The overall results suggest that hedging is an important and polyfunctional phenomenon in academic writing. A variety of grammatical and lexical structures in the corpus permits the writer to qualify claims, express epistemic possibility, understand evidence, control generalization, recognize limitations, and engage readers in appropriate ways. The results of this frequency analysis reveal that hedging is not used in a limited number of expressions, but in a variety of different linguistic categories. Normalized-frequency analysis is used to better compare the disciplinary sub-corpora, and concordance analysis to identify the functions of the devices in the context and rhetoric of the texts. The results also confirm disciplinary differences. The general need to communicate claims responsibly is common to the selected academic disciplines, but there are differences in how often and how increasingly this need is realized through hedges. However, more important is the fact that the same expressions of hedging can have slightly different roles in different disciplines, as may be inferred from the contexts. Based on these findings, the next part of the study is presented. The patterns will be discussed in terms of the theory of epistemic stance, academic argumentation, earlier corpus-based research studies, Hyland's theory, and the implications of the disciplinary difference for academic writing and EAP pedagogy.

6. Discussion

The major findings are interpreted.

Based on the results of the present study, it may be concluded that hedges are an important part of academic texts and serve as an important tool for regulating the strength of knowledge statements. The analysis reveals that academic writers don't only use categorical statements to communicate research finding, interpretation and implication. Rather, they use a variety of linguistic features to regulate the degree of commitment to propositions. This pattern reinforces the perspective that academic argumentation is an ongoing struggle between the desire to render one's own position and the awareness of what evidence is and is not available to support that position. The distribution of hedging devices in the corpus further illustrates that hedging can

be represented by more than one linguistic category. Certain words such as modal expressions, epistemic verbs, adverbs, adjectives and other qualifying words help to build cautious claims. The result is significant as it implies that the full set of linguistic realizations of the academic modality should be taken into account rather than just focus on the modal verbs. The findings of the context are also relevant. Hedging is a phenomenon that is especially observed in argumentative and interpretive texts where the writer shifts from providing evidence to explaining or making more general inferences. This suggests that the rhetorical processes of turning research evidence into academic claims are closely intertwined with hedging. Qualification is used by writers when the link between evidence and interpretation is not always direct and when a conclusion is drawn beyond the conclusions of the study itself. In conclusion, the results suggest that hedging is involved in academic credibility management. Careful language does not imply low levels of confidence. Rather, the evidence boundary of a claim may be demonstrated by appropriate qualification. Academic authority is then created, not just by presenting evidence, but by calibrating the writer's dedication to the evidence. The results obtained across the disciplines offer another layer to this perspective. Hedging is found in all disciplines studied, but not uniformly in terms of frequency and in the realization of hedges in the target languages. This implies that epistemic caution is a general communicative goal shared by all academic writing, and that the form of epistemic caution can be affected by disciplinary norms. The meaning of hedging in terms of epistemic stance. Hedging as an expression of epistemic stance. The close connection between hedging and epistemic stance is one of the main findings of the study. The linguistic forms found in the corpus enable writers to express degrees of certainty, possibility, probability and commitment. In the choices that writers make, they not only say what they say, they express the strength of their message to readers. This result confirms the theoretical prediction of that academic writing is not a mere description of facts. The writer(s) actively situate themselves with their propositions. A statement introduced by a strong reporting verb or categorical expression implies a stronger commitment than a statement that is qualified with *may*, *might*, *could*, *suggest*, or *appear*. The association is important when writers differentiate between observation of facts and interpretation of facts. An inference may be used in the explanation of a research finding if there is no statistical or experimental evidence to support it. Hedging helps writers convey this difference. The writer is able to report the empirical finding with a proper level of confidence, and to qualify the interpretation of it. This pattern shows that epistemic stance should not be identified with uncertainty. The question in academic discourse is not just whether the writer is confused, but how the writer frames the proposition in the context of the evidence at hand. One of the main linguistic ways of achieving this positioning is through hedging. The results are in line with the interactional perspective of Hyland, as hedging shows epistemic commitment, while also controlling the relationship between the writer and the reader. Qualifying a proposition allows the author to provide the reader with time to assess the evidence and entertain other views. Hedging, therefore, comes into play in the interaction in which academic knowledge is presented and negotiated.

6.3 Rhetorical and Discourse Functions of Hedging

The results show that hedging serves various rhetorical purposes, all of which interact with each other. The first is the qualification of claims. Hedges are used by writers to avoid making a proposition sound more valid than it is supported by the evidence. This is especially relevant if findings were discussed that may not be generalizable. The second is an interpretive warning. Researchers explain why a certain pattern has occurred; in this case, the explanation could be an inference. Words like *May* or *appear* to mean can mean or seem to mean, letting writers make an interpretation without making it sound as if it is a proven fact. The third function is management of generalization. Sometimes academic researchers are required to translate from

specific results, to general ones. Hedging allows them to acknowledge that these extensions might have limitations. This allows us to keep evidence and claim within a reasonable size. The fourth function is "recognition of alternative possibilities". Research in academia often has conflicting theories. Hedging allows writers to offer one opinion as possible, while leaving the door open for another. The fifth function is the discussion of academic differences. The writers may have to argue alternate conclusions or findings. Qualification can be useful in this sense to make such a disagreement more academically appropriate, which will minimize unnecessary categorical confrontation. A writer may put forth an alternative explanation, but still note that the old explanation might have some merit in certain situations. Lastly, hedging serves a social function with regard to personal interaction. It encourages writers to consider how the reader might respond and set a tone and expectation for involvement. This reinforces the idea that academic writing is not about getting something across but is rather a communicative process between writer and reader, in line with Hyland's perspective. The study demonstrates the various functions of hedges as a multi-functional discourse tool. It cannot be fully understood if it is just seen as a grammatical expression of uncertainty.

6.4 Cross-Disciplinary Differences

The cross disciplinary comparison shows differences in hedging across disciplines. Hedging is used across all disciplines in the corpus, but not all hedges or linguistic resources are used in the same frequency or for the same rhetorical functions across the different disciplines. It is possible to make sense of such variation in terms of the epistemologies of the disciplines. There are varying ways of thinking about evidence, explanation, interpretation, and validation of knowledge in various academic areas. As a result, writers might have varying rhetorical preferences in their communication of epistemic commitment. In some disciplines, for instance, with a strong empirical measurement orientation, much attention is given to precisely defining the interpretation of quantitative results. When making explanations or generalizations, it may be more extensive qualification if a discipline in which interpretation of the complex social or theoretical phenomenon is more central. It must be noted that these differences do not mean that one discipline is more cautious than the other. Instead, they suggest that prudence can be achieved in other rhetorical means. The findings also highlight that raw frequencies cannot be considered without its context. The more often a particular type of hedge occurs, the less certain writers in that discipline are not necessarily. The expression may just be preferred because it carries out a specific rhetorical function that is familiar to the rhetorical tradition it belongs to. It is noted, then, that the cross-disciplinary approach helps to inform a more complex notion of academic hedging. Academic writing has conventions shared by a community of academics, but used in unique ways by the members of different disciplines. Hedging is therefore more broadly a feature of the discourse of scholars and also a rhetorical tool specific to a particular discipline.

This section examines the present study's findings compared to the results of previous corpus-based studies. The results generally confirm the previous corpus studies on the hedging phenomenon as an important aspect of academic discourse. Previous research has consistently found that academic writers employ modal verbs, epistemic verbs, adverbs, adjectives and other linguistic tools to qualify claims and show the extent to which they make them. The present study takes this work further by synthesizing several analysis aspects. It looks at the relationship among frequency, epistemic stance, discourse function, and disciplinary variation instead of focusing on frequency alone. This integrated approach corroborates previous observations that hedging is context and multifunctional. The results are also consistent with studies that were affected by the interactional model of Hyland. This can be indicated by the ways that hedging is used to circumscribe commitment and to acknowledge other interpretations, which lend themselves to the argument that academic writing is an

interpersonal negotiation. Linguistic choices place writers in relation to their propositions and readers. The disciplinary variation found in the present study is also consistent with studies from other research projects that have argued that academic discourse varies based on disciplinary conventions. The results do confirm, however, the importance of exercising caution in generalizing from one subject. What is identified as a pattern in one academic field cannot be taken to be representative of all academic writing. A methodological implication of the comparison is the need to use both quantitative and qualitative procedures. Previous studies have shown that the frequency analysis helps identify the important forms but contextual analysis is required to fix their actual functions in the discourse. The present study is in line with this by presenting the linguistic patterns found quantitatively through the method of concordance analysis.

The implications for Theories of Academic Discourse are as follows:

The results of the study have a number of implications for the theoretical discussion of academic discourse. First, they adopt an interactional perspective on academic writing, where knowledge claims are created through the language that both states and proposes something and controls relations with readers. The study also confirms the epistemic calibration. The difference between fact and opinion is not as simple as it might seem to be when using the term academic. These two poles of interpretation fall somewhere between the extremes of possibility and probability, and qualified interpretation and conditional generalization. The possibilities for representing these intermediate positions are realized through hedging.

The cross-disciplinary results also call for a conversation of “shared” and “differentiated” academic discourse. The rhetorical expectations around evidence and credibility are highly generalizable across the academy, but they are mediated and modified by disciplinary expectations. This entails the implications of models of academic metadiscourse. Hedging is not one of the full statements which can be added to a complete statement. It is firmly connected to the process by which writers develop claims and their claims' legitimacy. The use of “certainties,” “probabilities,” “possibilities,” or “tentative” alters the way the reader perceives the place of a proposition in the argument. Overall, the results confirm a view of academic discourse that sees the linguistic form, the epistemic meaning, the rhetorical function, and the disciplinary context as co-constitutive. In Academic Writing and EAP Pedagogy, the implications are discussed. The implications for Academic Writing and EAP Pedagogy are discussed in 6.7.

The results have implications for academic writing and English for academic purpose (EAP). Students should be taught that writing in the academic context is not just about grammar and the correct use of formal vocabulary. They also should need to know how strong their own claims should be based on the evidence available to them. An important pedagogical implication is to prepare the students to hedge as a tool for communication, and not as a list of words to be memorized. Students need to not only know the expressions that can be used as hedges, but when and why certain expressions are suitable. Examples can be helpful for this purpose, especially if they are from the corpus. Learners can see how the various expressions (may, might, suggest, appear, likely, etc.) are used in authentic contexts in concordance lines. This enables learners to see hedging in whole sentences instead of in single sentences. The differences in disciplines found in the study also implies the need for students' disciplinary needs to be considered in EAP instruction. In general academic writing courses, the concept of epistemic qualification can be introduced, and then the learner can grasp how epistemic qualification works in his/her specific discipline through examples. There should also be a focus on teaching students that there is a balance to effective hedging. Too much qualification can compromise the point of the argument, too little qualification can lead to the overstated argument. It is therefore not a goal of every academic statement to be 'cautious', but to be 'appropriate' to the evidence. Lastly, the teaching of

hedging can help students' general knowledge of academic argumentation. By differentiating between evidence, interpretation, possibility, and conclusion, students will be better able to develop logically responsible arguments. Therefore, hedging is not just a linguistic phenomenon but also a component of the skill of scholarly reasoning. The overall discussion shows that hedging is being used to a significant extent in the process of building academic knowledge. It enables writers to express epistemic stance, qualify interpretations, manage interpersonal relationships and build credible claims. However, the differences in it from one discipline to another show that academic writing is influenced by the rhetorical traditions of specific communities of knowledge. The results of this study are summarized in the final section, describing the significant contributions, limitations, and future research directions of the study.

7. Conclusion

A summary of the major findings from the research

The present study aims to explore the phenomenon of hedging in academic writing from the corpus-based and cross-disciplinary perspectives. The analysis was mainly centered upon identifying and studying the classification of hedging devices, their epistemic stance and their discourse function and variation with reference to selected academic disciplines. The results suggest that hedging is one of the main components of academic writing and may be manifested in various resources of grammar and lexicon. The academic writer can control the force of his or her claims and express various levels of epistemic commitment by using modal verbs, epistemic verbs, adverbs, adjectives, and other qualifying expressions. The present study also shows that hedging does not only serve to indicate uncertainty. It provides functions such as qualification of claims, interpretation of evidence, restriction of generalization, recognition of alternative explanations, management of disagreement and an appropriate relationship with readers. Therefore, hedging should not be regarded as a linguistic resource for indicating weak or uncertain knowledge alone, but rather as a multi-functional discourse resource. The analysis also indicates that the meaning of the hedging device is highly context-dependent, since this is influenced by the discourse context in which it is used. There can be different functions for a linguistic expression that can serve as a hedge in two different contexts. This is a reflection on the need to consider both frequency analysis and concordance analysis. The cross-disciplinary comparison suggests that though hedging is employed in a variety of disciplines, its occurrence, linguistic manifestations, and discourse functions can differ from one discipline to another. Every academic writer has a general need to make a warranted claim, but each community of writers may have a unique way of doing this. The overall results are consistent with the four research questions, showing that academic writers use a variety of hedging devices, they use these to mark different degrees of epistemic commitment, they are used for various rhetorical and discourse functions, and the various uses of hedging differ in disciplinary contexts.

7.2 Theoretical Contribution

The study has implications for the theory of academic discourse because it confirms the connection between hedging and the epistemic stance. The results show the writers' use of hedging to situate their claims in regard to their level of confidence and the strength of their evidence. The study also confirms the interactional view of academic writing that Hyland (2001) proposed, which is based on the idea that academic writing is an interaction between writer and reader. By hedging, writers allow themselves to limit their commitment, recognize other possibilities, and provide room for readers to consider propositions. An important theoretical implication is that academic credibility should not be synonymous with categorical certainty. Rather, valid academic conversation can be achieved through proper epistemic calibration. The more that a claim is

committed to, the stronger it is rhetorically, the more the evidence for it is. Jointers of the dimension also implies that there are common and discipline-specific characteristics in academic discourse. It is therefore possible to see hedging as a general resource of scholarly communication, with its actualization being contingent on the disciplinary conventions.

7.3 Methodological Contribution

Methodologically, the study shows the usefulness of quantitative corpus analysis and qualitative contextual analysis. Frequency and normalized-frequency data show evidence for the distribution of hedging, and concordance analysis data shows how specific kinds of hedges are used in authentic academic settings. Hyland's taxonomy offers a theoretically-driven framework to identify and classify hedges. This is better than using just a list of words that are known to be hedger words, since the function of potentially hedger words may differ from context to context. Another methodological contribution is the cross-disciplinary corpus design. The study's organization by sub-corpora of each discipline allows for an examination of whether the patterns outlined in the study can be shared across disciplines or are linked to certain communities of academic writers.

7.4 Pedagogical Implications

The results have far-reaching implications for academic writing and EAP classes. Students need to be educated about how to control the force of the claims as compared to the evidence in academic writing. Authentic corpus examples can be used to introduce hedges for the learner, who is then able to see how experienced academic writers qualify claims and express probability, interpret findings, acknowledge limitations and discuss alternative explanations. The study further implies that hedging should be taught in a functional rather than as a vocabulary item. The learner should grasp the rationale behind the choice of an expression, and how varying the level of commitment within a hedged sentence may alter the level of commitment expressed in the sentence. The cross-disciplinary findings also indicate that the instruction of academic writing should take into account the variation of disciplines. There might be diverse expectations about evidence presentation and certainty among students in other fields. Examples that are relevant to disciplines can therefore enhance the effectiveness of academic writing instruction.

7.5 Limitations

Although this study is helpful, there are some shortcomings. First, the findings are dependent on the composition and size of the selected corpus. A larger corpus with more academic genres and disciplines may be able to show other patterns. Second, the study has chosen certain academic fields, not attempting to cover all fields of academic writing. However, the results should not be taken as representative of all disciplinary communities without further consideration. Third, identification of hedging is contextual. The use of a theory or model and contextual validation enhances consistency but some cases may lie on the margins that present a challenge of interpretation. Fourth, the study is mainly on written academic discourse. Spoken academic communication (e.g., academic presentations at conferences, seminars, academic conversations, etc.) may show variations in hedging and may yield different results. Lastly, it is important to remember that the corpus-based frequency cannot account for all aspects of the academic stance. Other factors, such as the context of the text (author, publication, rhetorical section, communicative purpose) can also impact on the use of hedging.

7.6 Directions for Future Research

The present research might be extended in future by building bigger and wider academic corpora. The addition of other disciplines would enable the comparison of whether patterns found here are held true for a wider range of knowledge communities. Future studies may also be conducted that explore contrasting academic genres such as research article, thesis, dissertation, conference paper, and academic book chapter. These comparisons could show genre and/or discipline variations in hedging. Another promising focus could be to explore hedging in various parts of research articles. Comparisons of the introduction, literature review, methodology, results, discussion and conclusion of academic papers may help us understand the variation of the epistemic stance across the rhetorical structure of an academic paper in greater detail. More research into the connection between hedging and boosters might be interesting as well. Examining these two contrasting resources would give a comprehensive account of the process of balancing caution and commitment in academic argumentation. Finally, there is a need for further research to make use of corpus data in EAP pedagogy, creating teaching materials on hedging in authentic texts for each discipline. The following type of activities might help students become more conscious of their epistemic stance and enhance their skills in building epistemic arguments that are cautious and credible.

7.7 Concluding Statement

To conclude, hedging plays an important role in academic writing due to its ability to navigate the complexities of evidence, interpretation and academic claims. It enables writers to impart knowledge without taking any unnecessary risks, yet to remain in a definite stance in their argument. This study shows that hedging is a linguistic, epistemic, rhetorical and interpersonal phenomenon. It is not just an indicator of uncertainty but a means for writers to modulate their statements, express limitations, control alternate explanations, and gain credibility. The cross-disciplinary approach also shows that no academic text is absolutely homogeneous or entirely specific. Rather, common academic ends are achieved by the rhetorical conventions of the disciplines. The analysis of these patterns is important for language research as well as academic writing pedagogy. As such, the study can make a unique contribution to the growing knowledge of the ways academic writers create cautious, credible, socially negotiated knowledge claims through the use of language.

REFERENCES:

- Hyland, K. (1994). Hedging in academic writing and EAF textbooks. *English for specific purposes*, 13(3), 239-256.
- Hyland, K. (1998). Hedging in scientific research articles
- Hyland, K. (1998). Hedging in scientific research articles.
- Hyland, K. (1998). Hedging in scientific research articles.
- Hyland, K. (2000). Hedges, boosters and lexical invisibility: Noticing modifiers in academic texts. *Language awareness*, 9(4), 179-197.
- Hyland, K. (2000). Disciplinary discourses: Social interactions in academic writing.
- Hyland, K. (2000). Disciplinary discourses: Social interactions in academic writing. Longman.
- Hyland, K. (2004). Disciplinary interactions: Metadiscourse in L2 postgraduate writing. *Journal of second language writing*, 13(2), 133-151.
- Hyland, K. (2005). *Metadiscourse: Exploring Interaction in Writing*. Continuum, London, UK.

- Lakoff, G. (1973). Hedges: A study in meaning criteria and the logic of fuzzy concepts. *Journal of philosophical logic*, 2(4), 458-508.
- Myers, G. (1989). The pragmatics of politeness in scientific articles. *Applied linguistics*, 10(1), 1-35.
- Myers, G. (1991). Politeness and certainty: the language of collaboration in an AI project. *Social Studies of Science*, 21(1), 37-73.
- Salom, L. G., & Monreal, C. S. (2009). Interacting with the Reader: Politeness Strategies in Engineering Research Article Discussions. *International Journal of English Studies*, 9, 175-189.
- Boginskaya, O. A. (2023). Hedging as a politeness strategy in research article reviews. *Известия Южного федерального университета. Филологические науки*, 27(4), 22-33.
- Getkham, K. (2013). Politeness strategies in research articles: A cross-disciplinary study. *PASAA*, 46(1), 47-74.

