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Dedication

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Abstract

Hedging is a multi-purpose rhetorical strategy which is usually used in scientific arguments to secure ratification of claims, reduce the risk of negation, avoid conflict, manage disagreement and leave room for the audience to assess presented information. Hedges are frequently used in research articles to mitigate the findings of research endeavors. The present research aims to investigate the types and frequency of hedges in discussion sections of two important genres of applied linguistics research articles i.e. qualitative and quantitative. To this end, a total of 100 articles from the most popular applied linguistic journals are collected (50 qualitative and 50 quantitative research articles) and analyzed in terms of types of hedges as well as their frequency. The hedge words were recognized based on the taxonomy suggested by Hyland (1996). The results were analyzed through independent sample t-tests. The results indicate that there is a significant difference between discussion sections of qualitative and quantitative articles considering both the total number of hedge words ($p = .000$) and the subcategories based on Hyland (1996) taxonomy, namely, reliability ($p = .002$), attribute ($p = .003$), writer oriented ($p = .001$) and reader oriented ($p = .000$). Based on the results, it can be suggested that hedging is genre specific, at least as far as the qualitative and quantitative research genres are considered.

Chapter One: Introduction

1.1. Preliminaries

Scientific writing has been inevitably associated with “exactness”. The role of scientific writers, from many people's viewpoints, is to convey information in an explicit and precise way. But a scientific writer has many reasons not to be exact and explicit; for example he may consider the consequences of inadequacy in his scientific claim(s), or want to express his uncertainty about a scientific issue or reflect the state of knowledge. For Brown and Levinson (1988), presenting a scientific claim is a face threatening act (FTA), so even if the scientific writer is utterly certain about his claim(s) to be presented explicitly and precisely with no anxiety for the later criticisms, some degree of uncertainty and fuzziness is often applied, to leave a little space for his readers (most of the time scientific community). That is to say, it is not only the content that matters, but the way it is presented is significant in the process of being accepted by a scientific community-the thing which is even evident, more or less, in every day acts of communication.

‘Hedging’ is a multi-objective linguistic device that can help an author to achieve the above mentioned purposes. There are different definitions for “hedging” and different authors have specified different taxonomies and functions for hedge words. For

Salagar-Meyer (1994) investigating hedge words is not limited to scientific and academic writing (Adams-Smith, 1983; Kibui, 1988; McKinlay, 1983, in medical research papers; Rounds, 1981, 1982 in social sciences; Prince et al., 1982 in physician-physician oral discourse; Pindi & Bloor, 1986, in economic forecasting; Dubois, 1987, in biomedical slide talks; Myers, 1989, in a corpus of molecular genetics). Others have gone far to investigate hedging in general language texts and contrastive rhetoric (Clyne 1991; Markkanen & Schroder, 1988 a,b; Powell, 1985; Skelton, 1988; Stubbs, 1986; Zuck & Zuck, 1987).

Cherished by the similar purpose, the present study is a contrastive study of the frequency and function of hedge words in discussion sections of two important types in research articles, namely, qualitative and quantitative. There are two reasons for putting emphasis on research articles in this study. The first reason is that the majority of research article writers use hedge words in different sections of their articles for different purposes (Hyland, 1996 a,b; Salagar-Meyer, 1994; Smith and Osherson, 1984; Varttala, 2001). The second reason is the importance of research articles in academic discourse (Holmes, 1988; Hyland, 1996; Myers, 1989; Salagar-Meyer et.al, 1989; Samraj, 2002; Vancle, Kopple and Crismor, 1990; Varttala, 2001, Vassilva, 2001; Yang, 2003).

There are two important research types in applied linguistics, namely, qualitative and quantitative. Although some authors such as Larsen-Freeman and Long (1991) believe that these two types are two ends of a continuum, and most of the time we can't describe an article as fully qualitative or quantitative, simply speaking, qualitative

articles are different from quantitative articles considering content and data collection procedure.

1.2. Significance of the study

The scientific output of a country is usually determined by the amount of articles that the researchers of that country can publish in different journals. Definitely, articles that are published in international journals receive more credits. That's why many the researchers try to submit their works for publication in popular international journals. According to Garfield (1983), English is the dominating language in academic communication, constituting about %80 of the world publication of scientific research. Belcher (2007) states that “many have noted the increasing concentration of gate keeping power in the hands of mainstream English only journals” (p. 1). So, English can be recognized as the dominating language in academic world and the researchers who try to have their articles published in international journals should, in the first step, translate their works to English. As proposed by Hyland (1996), the ability to write effectively in English is an essential factor if one wants to have full participation in international research community. Besides, the most important thing for a writer of a scientific article is that his scientific claims be accepted. The way a researcher presents his claim plays a significant role in the process of getting acceptance from the scientific community.

Appropriate expression of claims differs in different languages and scientific genres which makes it difficult for researchers whose first language is not English. They have to know the appropriate ways to convey their claims in English considering the framework of the scientific genre they work within.

‘Hedging’ is a linguistic device, the learning of which can help a researcher to appropriately express his scientific claim(s). Unfortunately, appropriate application of this important linguistic device is one of the problems that non-native speakers of English face in L2 writing. In addition, as far as genre of the research plays an important role in the way a researcher presents his claim and uses hedge words, the emphasis is put on ‘qualitative’ and ‘quantitative’ research types which are different in ‘content’ and ‘form’.

1.3. Statement of the problem

Following the results of a pilot study, it was recognized that there is a significant difference between qualitative and quantitative articles considering both form and function of hedge words. The present study is then conducted to reveal the frequency and form of hedge words used in the discussion section of applied linguistics articles, both qualitative and quantitative types and to see if there exists a significant difference

between them. The results of this study can help researchers to apply appropriate strategies in writing scientific articles considering their research type.

1.4. Objectives

The present study investigates the frequency and form of hedge words used in qualitative and quantitative articles. In order to study hedge words in these two types and to find out if there is a significant difference between them the following research questions were posed:

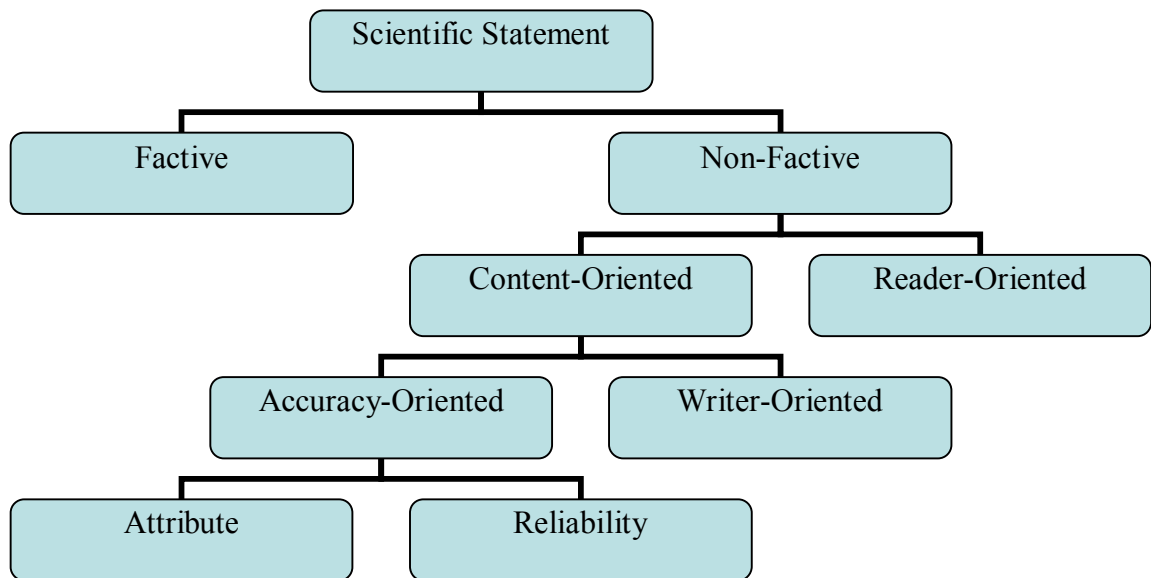
1. What are the frequency and form of the hedge words used in discussion section of applied linguistics quantitative research articles?
2. What are the frequency and form of the hedge words used in discussion section of applied linguistics qualitative research articles?
3. Is there a significant difference between applied linguistics qualitative and quantitative research articles considering the frequency and form of hedge words used in their discussion section?

1.5. Theoretical framework

In order to distinguish qualitative research articles from quantitative ones, the distinction made by Perry (2005) was taken into account. He believes that articles with

social content are mainly qualitative and experimental articles are mainly quantitative. For him, quantitative articles deal with numbers to represent their data, but this role, in qualitative articles, is mostly played by verbal description and finally, qualitative articles are more subjective than quantitative ones.

In order to identify hedge words in the selected articles the taxonomy suggested by Hyland (1996) was used. (See the figure below)



Adopted from Hyland, K. (1996).

There are two main reasons for using this taxonomy over other taxonomies that will be explained later. The first reason is that contrary to many taxonomies presented for hedge words, Hyland's emphasis in his taxonomy is on the function of hedge words rather than their parts of speech. The second reason is that his taxonomy is more

organized and easy to detect which makes it more practical than other taxonomies. Based on this taxonomy, we need to divide statements into factive and non-factive. Factive statements need no hedging. The hedge words used in non-factive statements are divided into content-oriented and reader-oriented. Content-oriented hedge words are, by themselves, divided into accuracy-oriented and writer-oriented and finally accuracy-oriented hedge words are divided into attribute and reliability.

1.6. Definition of key terms

Genre: a particular type of writing which has certain features that all examples of this type share

Hedge: word or group of words used by (scientific) writers in order to make their claim vague

Quantitative research: investigative procedures used to describe in numerical terms a setting and the things going on in it.

Qualitative research: investigative procedures used to study things in their natural settings and the collected data is not subjected to formulaic analysis.

1.7. Outline of the study

Chapter One, introduction, presents a brief orientation to this study and presents the preliminaries, significance of the study, statement of the problem, objectives, theoretical framework and outline of the study.

Chapter Two, a connection with related literature, elaborates on functions of hedge words, hedge words' taxonomies, distribution of hedge words in different parts of research articles, teaching hedge words to non-native speakers and qualitative/quantitative research articles.

Chapter Three, methodology, depicts the corpus and the instruments and procedures adopted to the collection and analysis of the data.

Chapter Four, data analysis and results, focuses on the analysis of the data and discusses the results and findings of the analyses and their interpretations.

Chapter Five, discussion and conclusion, provides answers to the research questions, presents the conclusion of the study, its limitations, some pedagogical implications, and suggestions for further research.

Chapter Two: Review of Related Literature

2.1. Introduction

Although the study of hedge words in research articles is very recent, the available literature is quite considerable. This chapter begins with a discussion about the functions of hedge words. Then in section 2.3 five taxonomies of hedge words are presented. Section 2.4 discusses the way hedge words are distributed in different sections of research articles. Section 2.5 presents cross linguistic studies on hedge words and finally in section 2.6 the distinction between qualitative and quantitative research articles will be presented.

2.2. Function of hedge words

Generally speaking, one can not find a consensus among researchers about the functions that are fulfilled by hedge words. Robert Boyle (1965) as cited by Lewin (2005), first suggested that hedge words could be used to convey personal modesty and humility. Perhaps the most famous pioneer in the study of hedging is Lakoff. He (1973) defined hedging devices as “words or phrases whose job is to make things more or less fuzzy” (p. 471). Lakoff, along with other researchers such as Hyland (1996), Myers

(1985) and Salagar-Meyer (1994), are the most prominent figures who investigated “hedging” from different points of view, for example, hedging in different genres, the effect of culture on using hedge words, the possibility of teaching students to use hedge words, etc. Lakoff (1973) believed that logicians and linguists who emphasize semantic work based on classic set theory believe that a sentence can be true, false or nonsense. On the other hand, psycholinguists and linguistic philosophers suggest that sometimes a sentence can be neither true, nor false, nor nonsense. That is to say “natural languages have vague boundaries and fuzzy edges”(Lakoff 1973, p.458). Zadeh (1965) used “fuzzy set theory” to say it is not the case that an individual is always a member of a group or never a member of a group, instead, he can be a member of any group to some extent. According to Lakoff (1973), hedging can “reveal a great deal about the meaning” (p. 473). Dubois (1987) believed that hedging is used to express the author’s claim in an unobtrusive way, the idea that is shared by many other researchers such as Prince, Frader and Bosk (1982); Rounds (1982); Pindi and Bloor (1986) and Skelton (1988). Robert Lakoff (1973, 1975) considered two main functions for hedge words. The first one was to show the lack of certainty on the part of author and the second one was to mitigate the author’s claim for the purpose of politeness. According to Powell (1985) as hedges reflect the writer's or speaker's judgment, they have an “evaluative” function. As Crystal (1988) put it, using hedge words is not always rooted in the author’s lack of knowledge. He brought forward three other reasons for using hedge words:

1. People intentionally do not like to be precise all the time.

2. Sometimes, specifically in scientific writings, the writer understands that the audience needs only “half truth”.
3. Using hedge words can act as safe guard, impeding further questions.

Hyland (1994) summarizes the functions of hedge words and considers two main roles for them:

1. Expressing claims with certain degree of caution, modesty and humility.
2. Diplomatic negotiation of the claim when referring to work of colleagues and competitors.

Further he believed that when an author wants to develop his hypothesis into knowledge, he needs to achieve acceptance from the audience. For this to happen, he needs “linguistic and rhetorical means of persuasion” (Hyland,1994, p.435) and this is the basis to use hedge words.

Salagar-Meyer (1994) specifies two main purposes for using hedge words. The first one is to make the issue fuzzy. She proposes that explicit expression of a claim makes it easy for others to criticize the author’s claim and reflects his lack of humility and his ignorance of the others in that research area. The other purpose is to increase the precision in the author’s claim. That is to say, as Salagar-Meyer (1994) puts it, “hedging may present ... the strongest claim a careful researcher can make” (p. 151). Hedging can reflect the state of knowledge under discussion too. There are other researchers who consider this latter role for hedging (Rounds, 1981; Tarantino, 1991; Skelton, 1988; Gilbert & Mulkay, 1984). Crompton (1997) provides a definition for hedge words in

which their main function is to “explicitly qualify author’s lack of knowledge to the truth of the proposition he utters” (p. 273). Clemen (1997) states that the way we can achieve hedging is through setting utterances in context rather than straight forward statement.

Varttala (1999) investigates the issue from another point of view. To him, the communicative functions of hedges are different in specialist research articles and popular research articles. He maintains that in popular research article, hedging indicates “textual precision and interpersonal negative politeness” (p. 177) and in specialist research articles they function as “textual tools for both imprecision and precision and a feature of interpersonal positive politeness” (p. 177). Specialist articles refer to those articles that are written by a specialist for other specialists and popular articles refer to those articles that are written by a specialist to non-specialist readers. In this regard Myers (1985) has the same idea. He considers hedging as part of a politeness system whose job is to reduce the threat containing in the author’s claim to the face of other scientists. Hyland (1996) considers hedging as playing the central role in gaining ratification from a powerful peer group. There are many others who underscore the role of the audience in the process of hedging. Some researchers such as Horn (2001) believes that transfer from one type of publication to another might have some effects on hedges. For example, Fahnestock (1986) believes that when we publish information from a scientific article in a popular press most of the time we omit hedge words. In

contrast Fornsworth (1990) believed that when a scientific article is converted for extended audience hedge words should not be omitted.

Isabel (2001) believes that hedging is important for two main reasons. The first reason is to show the author's attitude toward his claim and the second reason is to show the author attitude toward the readers, that is to say the author presents his claim based on his expectations from the readers.

Horn (2001) says that for science to progress the author has to gain acceptance from audience for the added information. By accepting he does not mean full agreements with the conclusion but a tentative agreement by the scientific community. One way to achieve this consensus is through the citation of past research. Horn (2001) believes that "keeping, dropping or changing the hedges will affect the consensus building that a writer is trying to develop" (p. 1088). Marco and Mercer (2004) hold that citation creates textual means to relate different articles from a research community. They point out that hedging is used not only to enhance or mitigate the authors' claim but also to help the author to simultaneously express his claim, question current belief and maintain his position in the community. They conclude that citation often happens in sentences marked by hedging cues.

Lewin (2005) suggested five main functions for hedging in scientific articles: politeness, self protection, politics (need to appear modest), evading responsibility and conceal the truth. But contrary to many others such as Myers (1989) or Martin-Martin

(2008), the results of Lewin (2005) investigation show that authors of different articles do not consider “politeness” as the main reason for using hedge words.

As Banzermen and Kelly (2003) put it, using hedge words by an author depends on some factors such as: what the author is going to express? Who is going to be persuaded by what is claimed by the author? What are usually the audience reactions to new claims? And finally what is the main purpose of that scientific branch? So we can say persuasion is one of the effects of using hedge words. Some researchers suggested that using hedge words reduces the persuasion power of the text (Carli, 1990; Gibsons, Buch and Baradak, 1991; Holtgraves and Lasky, 1999; Hosmon, 1989; Hosmon, Huebner and Siltamen, 2002). Some other researchers indicate that using hedge words leads to negative perception of the source and weaker evaluation of the argument (Blankenship and Holtgraves, 2005; Hosmon and Siltamen, 2006). However Durik et al. (2008) believe that if the writer presents the hedge words in the statement containing data (not interpretation of data), it would lead to “negative perception of the source policy and argument” (p. 230). They say that if we divide the hedge words into colloquial (those usually not presented in the research articles such as “sort of”) and professional or academic (those usually presented in the research articles such as “possibly”), the presence of colloquial hedges in interpreting statements causes negative evaluation. They finally conclude that “hedges describing data statement and/or the use of colloquial hedge words can but do not always undermine persuasive attempts” (p. 217).

Vass (2004) argues that there is a direct relationship between hedging and prototypical features of different genres. After analysis of hedging in two legal written discourse genres, namely U.S. Supreme Court opinions and American law review articles, he concludes that hedging is a genre specific subject matter. He considers three different aspects in order to define hedging which are semantic and pragmatic, social and cognitive (i.e. a proposition is hedged when the writer produces the hedge word and it is interpreted by the reader).

Cabanes (2007) specified three main rhetorical functions or communicative goals for hedging in research articles which are: showing politeness as well as difference toward audience, self protection from consequences of inappropriate claims and considering some degrees of precision.

Duenas (2007) considers “impersonalization” or paling the role of author as the main function of using hedge words. He believes that this is the reason why we can find plethora of passive voices or nominalizations in research articles. Based on him, “self-mention” and “reference to author” are also rhetorical devices that are mostly used by authors to present themselves as “authorial”.

Martin-Martin (2008) supports Myer (1989) that “scientific discourse consists of interaction among scientists in which maintenance of face is crucial” and considers “politeness” as the main function fulfilled by hedge words. The other function of hedging based on Martin-Martin is to avoid categorical expressions.