BEST: International Journal of Humanities, Arts, Medicine and Sciences (BEST: IJHAMS)
ISSN (P): 2348-0521, ISSN (E): 2454-4728
Vol. 4, Issue 2, Feb 2016, 75-82

PEDAGOGICAL IMPLICATIONS OF HEDGING IN THE DISCUSSIONS OF MEDICAL RESEARCH DISCOURSE

AGNES WANJA KIBUI
Senior Lecturer, University of Nairobi, Kenya

ABSTRACT

Academic discourse is written to cater for a particular audience and like any other text contains the author's interpretation of his discourse. The author negotiates and persuades the reader to accept his interpretation of the text in discussion. One of the strategies used to convey messages in academic writing is the use of hedging. Hedging is used as a rhetoric strategy to modify the definiteness of an utterance, or to modify the commitment of the author to the propositions he puts in a text. The use of hedges has the interpersonal aspect in that they are used to indicate that the speaker does not want to impose upon the hearer's desires or beliefs. The present study investigates the types of hedging used in the discussion of medical research discourse. It also establishes the functions hedges perform in these discussions and the frequencies of particular hedges. The study which is quantitative in nature established that hedging is used frequently in the discussions of medical research findings and that it has various functions as the authors present their claims with caution, precision and humility. The study has a pedagogical implication and concludes that hedging is an essential writing feature in medical genres that needs to be given attention when teaching communicative skills to medical students.

KEYWORDS: Hedging, Pedagogical, Research Discussions

INTRODUCTION

Hedging was first defined by George Lakoff in 1972 as a word or phrase whose job is to make things fuzzy or less fuzzy. Skelton (1986) developed this concept further by adding that hedges are used to indicate caution as they express the extent researchers commit themselves to particular proportions by adding caveats such as 'I think; sort of; maybe; or, it is said' in order to signal distance. Similarly, authors underline their support or enthusiasm with phrases such as 'there is no doubt; I am sure; or, it is certain' and so forth. Hedging does not make the findings of the study vague or fuzzy for it clarifies the relationship between the speaker and the preposition. Prince et al (1982), explain that one class of hedges is responsible for fuzziness within the proposition content, while the other class of hedges correlates with fuzziness in the relationship between the proposition content and the speaker; that is, the speaker's commitment to the truth of the proposition conveyed. In academic writing, hedges can be defined as words, phrases or rhetoric tactics which can make the absolute truth or falsity of propositional content more clear, or less clear and negotiate the degree of writer commitment to the propositional content. That means that authors hedge their claims because hedges can strengthen their arguments by admitting limitations, uncertainties and the right of peers to participate in the ratification of knowledge (Hyland, 1998). Hedges therefore are polite strategies which are modifications of the force of an assertion. Varttalla (2001) opines that hedges are easily identifiable in terms of politeness because the author does not want to impose his or her views on the reader since the latter may have their own areas of interest within pragmatics.

Classification of Hedges

Different linguist specialists have classified hedges in several sub-groups which express uncertainty of the proposition or the speakers self commitment to the proposition. One way of hedging is shown by the use of impersonal phrases, the modal system, lexical verbs, introductory phrases and the addition of –ish (e.g., she has bluish eyes) to certain adjectives. Prince, Frader and Bosk (1982) classify one category of hedges as approximators. This type of hedges affects the proposition content but not the speaker's commitment. For example, 'His hair was sort of black'. They call another type of hedges 'shields' which does not affect the proposition content but indicates the author's commitment. For example, 'I think his feet were blue'. Rounds (1982), classifies another type of hedges which tends to disperse or cut off a source of disagreement or argument. She calls this type of hedges 'diffusers' which is indicated by the use of jargon, referencing, avoidance and footnote.

Importance of Hedges in Academic writing

Although hedging is associated with vagueness, it can assign responsibility for a particular proposition and provide a more exact understanding of a situation by a researcher. That means, hedges are not used simply to cover oneself or to make things fuzzy in a negative connotation but they are also used to negotiate the right representation of the state of the knowledge under discussion. Powell (1985) points out that hedges should not be perceived as lamely performing a descriptive purpose which might better have been served had it been encoded with precision; rather, as in the case of vague quantifying expressions such as most, many, few and so forth, vagueness may perform a sometimes highly subjectively determined evaluative function in which an author expresses a judgement concerning the significance of a quantity. That means that the researcher uses quantifying expressions deliberately for he is aware that he is hedging and does not want to be precise in any way. If the author is not sure or certain about a proposition, he should avoid absolute statements which might put him in an embarrassing situation if he is questioned. Instead, he should use modifiers in order to be on the safe side.

Lakoff (1972) opines that students of language especially psychologists and linguistic philosophers have long been attuned to the fact that natural language concepts have vague boundaries and fuzzy edges. Consequently, natural language sentences will be true to a certain extent and respects and false to a certain extent and respects. A researcher may be very certain of the truth of what he wants to claim but hedges in order to negotiate some measure of flexibility for himself and his claims, and avoid potential audience agitation. Hedging may therefore allow the author to withdraw his utterances gracefully and maintain his face regardless of critical comments. Musa (2014), Serholt (2012) and Chris & Zawacki (2006) explain that scientific discourse is not only content - oriented and informative but also aims at convincing and influencing the audience. Therefore, the connotations of vagueness and imprecision hedging conveys in academic discourse is useful and appropriate especially in scientific research. According to the linguists, scientific texts like any other form of communication is supposed to be rational, and should obey the same rules that characterise everyday ordinary communication where politeness is essential. That means that hedging can serve as a useful rhetorical resource to academic writers and must be viewed as another important feature of academic writing and not merely as a decorative addition to an otherwise informative text (Musa, 2014:2).

Hedging in scientific Discourse

In science, hedging is essential since different researchers come up with different views about their findings.

Theories are likely to change and that is why the results are said to be indefinite. Scientific discourse consists of interactions among scientists in which the maintenance of face is crucial; scientists build alliances that define what is knowledge: the statement of the individual becomes a fact when it is accepted and used by a consensus of the community. In these interactions, certain Face Threatening Acts are unavoidable and must redress with various politeness devices (Salager-Meyer 1994). Varttala (2001) argues that hedging may allow the authors to bow out gracefully and protect their reputation. This is because the original utterances are tuned down in order not to exclude the possibility of being proven wrong. Selinker (1979) observes that for every explanation of the results, there is always an alternative explanation that another researcher might come up with. Hypotheses are by nature tentative and understated and this is reflected in their linguistic realization.

Objectives of the study

The primary goal of the study was to establish the pedagogical implications of hedging in the discussion of medical research discourse. The specific objectives sought to:

- Determine the types of hedges used in the discussion of medical research discourse.
- Establish the frequency of hedges used in the discussions of medical research discourse.
- Establish the pragmatic functions of hedging in the discussions of medical research discourse.

RESEARCH METHODOLOGY

The study used a descriptive survey design which employed quantitative method since this was a content analysis research. The corpus comprised twenty (20) discussion sections which were selected at random from articles published in medical journals as follows:

- British journal of ophthalmology – 5 Articles.
- Cancer letters – 5 Articles.
- International journal of cancer – 5 Articles.
- Journal of Head and face pain – 5 Articles.

The length of the discussion sections ranged from 71 to 472 words and the total number of words was 6,214. All the content and function words were counted, while compound nouns, percentages, initials and figures were counted as one word. Words or figures that were in brackets were not counted. Data was analyzed using descriptive statistics such as percentages and frequencies.

In this corpus, the ‘comment’ was used to cater for all the words or phrases which were identified as hedges. That way, there was no risk of classifying every adjective or adverb used in the corpus as a hedge. The definition of a comment in this case was a word, phrase or statement that indicated a speaker’s opinion or assertion about the results. This was expressed either directly or indirectly or by showing commitment or detachment. There were five types of comments which were classified by different colour coding.

Data Analysis and Discussions

Data was analyzed as per each objective.

Objective one: The types of hedges used in medical research discussions. The results are presented in table 1.

Table 1: Types of Hedges

Type 1 Comments:	**Copula verbs other than BE**	**F**	**Other verbs**	**F**	**Modal Auxiliaries**	**F**	**Adjectives / adverbs**	**F**
	Seems appear	**11** **13**	**Hoped** **Attempt** **Tend** **Indicate**	**1** **1** **1** **3**	**May** **Could** **Would** **Might** **Should** **Can** **Will** **Must**	**34** **17** **7** **6** **3** **2** **2** **1**	**Possible** **Probably** **Likely** **Unlikely** **Uncertain** **Certain** **Somewhat** **Perhaps**	**11** **2** **3** **3** **1** **1** **2** **1**
Type 2 Comments:	Use of passive	F	Referencing	F	Impersonal Phrases	F		
	Has been considered	6	Kerr has suggested	6	Our results suggest	6		
Type 3 Comments:	Multiple Comments	F						
	Would seem	15						
Type 4 Comments:	Author's feelings	F						
	We feel	9						
Type 5 Comments:	Justifying results	F	Indicating doubt	F	Explaining results	F		
	Reasonable	4	Still not fully understood	3	Considerably	39		
Total Number of Comments = 214								

Type 1 Comments

Copula verbs, seems and appears, were used in the study to indicate the uncertainty of the proposition. For example: '---It also seems possible that--- and these appear to be----'.

Other verbs (not copula) used in the study were 'attempt and hoped'; while 'tend and indicate' seemed to be used when the author was fairly confident of the statement. Modal auxiliaries such as could, may, and might seemed to express both uncertainty and possibility, while should, must, and will were used when the author seemed to commit himself in his statement. The use of adjectival and adverbials lexemes indicated a degree of possibility of the proposition or uncertainty.

Type 2 Comments

In this category the author seems to detach himself from the truth of the proposition by presenting results in the third person. This is indicated by the use of passive, referencing and impersonal phrases.

Type 3 Comments

This type of classification comprised multiple comments and expressed a high degree of uncertainty or possibility or authors views regarding the possibility. For example, at first glance, this may appear somewhat—speculative.

Type 4 Comments

This type of comment was composed of the author's own comment and his commitment to the statement. The comment has been indicated by the use of the pronoun 'we' followed by a verb of thinking, feeling, proposing, suggesting and so forth. For example, - 'we feel his clinical outcome-', we suggest that this patient---

The other example is where the author is fairly certain of the proposition but would not like to commit himself. This was expressed by phrases such as to our knowledge: For example, this is to our knowledge, the first, report of an association-------

Type 5 Comments

This classification consisted of any other comment in the corpus which could not fit well in the first four types of comments because the author uses a different type of approach to detach himself, For example, in order to justify the results, he uses lexical items such as reasonable, appropriate, merit consideration and so forth. For instance, it seems reasonable to try----, it might be appropriate to—

Where the evidence is not shaky and the author feels that it is not sufficient, he uses implicit expressions. For example: '----are still not fully understood. It is difficult to obtain----- there appears to be a slight survival advantage in---'. In some other occasions, doubt has been expressed by the use of conditional 'if-clause'. For example, '---if anything, the cases have somewhat----and if true, suggests a biological role---'.

While explaining results, the author uses emotional expressions which are indicated by intensifying adjectives and adverbs. Examples of such intensifiers are 'importantly, extremely, most worrying' and so on. For example, 'most importantly, the patients serum---- observations show extremely large-------'. When the author feels quite confident and committed in his statement, he uses signalling devices such as "clearly, entirely, obviously, substantially" and so on. For example, 'Nevertheless, our results clearly indicate---; the findings in our patient are entirely---'. In other cases, emotional emphatic expressions have been used to indicate the significance of the results. Examples of such expressions are "particularly encouraging, particular importance, most striking, and so on.

- Objective two: The frequency of hedges in medical research discussions. The analysis is presented in table 2.

Table 2: Total Number of Comments

Category	Total	Percentage
Type 1 Comments	126	59
Type 2 Comments	18	8.4
Type 3 Comments	15	7
Type 4 comments	9	4.2
Type 5 Comments	46	21.4
Total	214	100

The information presented in table 2 shows that type 1 comment is a frequent feature in the discussion of medical research. The modal auxiliaries were used more times than the other lexemes- 72 (33.6%). That means that they are used with a purpose as the author selects his lexeme very carefully and for a particular function.

- Objective three: Pragmatic functions of hedging in the discussions of medical research discourse. The results are presented in Table 3

Table 3: The Most Frequent Hedging Lexemes and Their Functions

Lexeme	Frequency	Percentage
May, may be	29	14
Could, could be	17	8
Appear, appears	13	6
Seems	11	5
Possible, possibility	11	5

In this corpus, 'May' is a very common feature with the highest percentage of all lexemes 34 (16%). It is used when the author wants to indicate a high degree of probability. 'Could and would' seem to be used when the author expresses some possibility and uncertainty, while the use of 'might' seems to indicate a higher degree of possibility. 'Can' which is a rare feature in the corpus as it is used only twice, seems to be more on capability in one case and possibility in the other. Possibility in this case is signalled by the addition of 'be' (can be), 'Should, will and must' were also rare as they were used six times altogether. The frequencies of lexemes in types 3 and 5 comments were not considered as many because they consisted of different items which were grouped together in the same sub-category.

The total number of words in the corpus was 6,214. The total number of lexemes which were counted as comments (approximators and hedges) was 214. The quantity of the comments therefore is 34%. That means there was one (1) comment per every 29 words. This is not a small figure when one considers that the corpus was small as it consisted of 20 discussion sections. Morale, Cassany, Marin-Altuve and Pena (2007) in their study on the use of hedges in Hispanic Dental Case Reports also found a high frequency of hedges: one hedge in every 24 words in the three sections of their study

CONCLUSIONS AND PEDAGOGICAL IMPLICATIONS

The data analyzed shows that hedging is an essential writing feature in medical genres that needs to be given attention when teaching communication skills to medical students. The frequent use of hedges in discussion sections of medical journals implies that they are used with a purpose to communicate a message rather than just being vague. The fact that modifying words and phrases have been used frequently (1 hedge for every 29 words) indicates that the author is using an established style of this scientific genre which is used to communicate the message to the reader. This is shown by the great care that the author takes to select the right lexeme for each explanation.

Medical students should be aware of implicit expressions in order to be effective readers and writers of scientific genres. Selinker (1979:196) laments that students give the same weight to observed facts and interpretations. What is difficult to the native speakers of English is a major problem to non-native speakers of English who struggles to understand the implicit phrases. The English for specific purposes (ESP) teacher should train the students to find the meaning of words as used in the context. That means that the ESP teacher should be well skilled in that field.

REFERENCES

1. Hyland, K. (1996). *Talking to the Academy: Forms of Hedging in Science Research Articles -Written Communication* 13(2), 251 – 281.

2. Lakoff, G. (1972) Hedges: A study in meaning criteria and the logic of fuzzy concepts", in Journal of Philosophical Logic', Vol. 2, pp. 458- 508

3. Mckinlay, J. (1983*). An analysis of the discussions Sections of Medical Journal Articles.* MSc Dissertation in Applied Linguistics, University of Birmingham.

4. Musa, A. (2014). *Hedging in Academic Writing: A Pragmantic Analysis of English And Chemistry.* Masters' Theses in A Ghanaian University. University of Cape Coast, Ghana: English for Specific Purposes World, ISSN 1682-3257

5. Powell, M. J. (1985). *Purposive Vagueness: An Evaluation Dimension of Vague Quantifying Expressions* in Journal of Linguistics, VOL. 21, pp. 31- 50

6. Prince, E. F., Frader, R.J. and C. Bosk, C. (1982) " On hedging in Physician-Physician Discourse" in J.di Pietro, (ed), Linguistics and the Professions, Ablex Publishing Corporation, pp. 83 – 97

7. Rounds, P. L. (1982). H*edging in written Academic Discourse: Precision and Flexibility,* (Mimeo). 1981).

8. Rounds, P. L. (1981). *On hedging in Social Science Written Texts. University of Michigan, (Mimeo).*

9. Selinker, L., (1979). "On the use of informants in Discourse Analysis and Language for specialized Purposes" IRAL VOL. 27, NO. 3

10. Serholt, S. (2012). *Hedges and Boosters in Academic Writing. A study of gender differences in essays written by Swedish Advanced learners of English.* University of Goteborgs.

11. Skelton, J. (1986) " Care and Maintenance of Hedges" in ELT Journal, Vol. 42, No. 1, PP. 37 – 43 "Comments in Academic Articles", (in BAAL Forthcoming).

12. Varttala, T. (2001*). Hedging in scientifically oriented discourse exploring variation according to discipline and intended audience.* Unpublished Ph.D. Thesis. Finland: University of

13. Newman, Matthew L., Groom, Carla J., Handleman, Lori D., & Pennebaker, James W. (2008). Gender Differences in Language Use: An Analysis of 14,000 Text Samples. Discourse Process, 45(3), 211 – 236.