The uses of Hedging in Selected Final Year Project Reports Written by Undergraduate Students of Science and Arts Programmes, Federal University Wukari

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Abstract
This paper is a comparative study of the uses of hedging in selected final year project reports written by undergraduate students of science and arts programmes of Federal University Wukari, Taraba State, Nigeria. The study was carried out using qualitative method which is purely descriptive and discursive. The texts in the corpus of the study were analysed to identify the significant or prevalent hedging devices. The result showed that hedges are used in academic writing in order to avoid being categorical or assertive and to take precautions against negative responses to claims or opinions. Furthermore, the outcome of the investigation showed that there is no significant difference in the use of hedging devices by science and arts students of the chosen fields of study. It was observed that the students of both science and arts use hedging to be cautious of the way they present their hypothesis, findings and conclusions. The use of hedging devices helps to mitigate the findings, avoid assertion or over statement in order to reduce threat of opposition from critics, or researchers.

Introduction
Speakers or writers often choose particular linguistic strategies that enable them to achieve their purpose of communication in a particular context and this could be either in the spoken or the written form. The spoken form is spontaneous, while the written form is the meticulously represented version of the spoken form. Writing is a process of communication by which ideas, thoughts or information are represented on a surface for a target audience. Communication through the medium of writing depends to a large extent on the ability of the writer to successfully use the appropriate linguistic symbols on one hand and the ability of the target audience to interpret them on the other. This implies that both the speaker or the writer and the audience or the hearer must have what Ferdinand de Saussure, the father of linguistics refers to as league and parole and in Noam Chomsky’s terminology, competence and performance. In addition, the knowledge of the field of discourse (topic or subject matter) and the context in which language is used are important factors for effective communication in both the spoken and the written medium.
An academic setting is one of the social contexts in which language is often used both in the spoken and written form. The different types of activities performed in academic settings whether through writing or speaking are reflective of the differences in the language used. Writing is a daunting task especially in the academia, where the audience is scholars in the field who are assumed to have enough knowledge of the writing task being handled. There are however, certain academic conventions and generalities, which, once understood would make such writing effective (Evans
An academic report is generally a schematic formal report that requires students to investigate and present findings and recommendations in a logical and well-structured way (AUT University, Student Learning Centre, 2013).

In addition to the foregoing distinctive characteristics of academic writing, the use of cautious language (hedging) is now considered as crucial feature of academic writing. Cooper (2010) for instance opines that one basic feature of academic writing is the need to be cautious in one’s statements in order to distinguish between facts and claims. This feature is termed “hedging.” It is the use of linguistic devices to show hesitation, or uncertainty and display politeness and indirectness. This study there seeks to identify the prevalent hedging devices in the fields of science and arts.

**Method of Investigation**

The corpus consists of four final year project reports selected from core science and art disciplines. Accessibility and representativeness were used as criteria for the selection. Accessibility refers to the ease with which the project reports were obtained, while representativeness refers to the extent to which the selected projects represent core science and core art disciplines. Qualitative and discursive approach was adopted as the method of investigation. These were deemed appropriate, because they allow explanation and description of a phenomenon in natural context without recourse to hypothesis or the use of statistical calculations. Each text was subjected to analysis to identify the hedging devices used across the sections. The uses of the hedging devices were finally discussed to determine the extents to which they differ.

**Conceptual Underpinnings**

**Hedging**

The concept “hedging” does not have one agreeable definition. The verb “hedge” in the Oxford Advanced Learner’s Dictionary has both intransitive and transitive forms. As an intransitive verb, it is used to avoid giving direct answer to a question or promising to support a particular idea etc. As an intransitive verb, it means putting a hedge around a field. Another sense of it is always in the passive. It refers to the act of surrounding or limiting something/somebody. To hedge against something in generic sense means to do something to protect oneself against problem, especially against losing money in business. In this work, hedging is examined from the linguistic perspective and in particular as protective or defensive strategy in academic writing.

There are many hedging devices that speakers or writers employ in different communication contexts. Riekkinen (2009) asserts that in the field of hedging studies, there is little clarity or agreement as to what counts as hedges. Hedges are defined differently in different fields of study which resulted in the difficulty of pinpointing what exactly they are. Prokofieva & Hirschberg, (n.d) define hedging as a linguistic phenomenon in which a speaker communicates a lack of commitment to what he/she is saying. They also add that hedging serves the purpose of face-saving in social interactions or conversational context. A speaker intentionally hedges to avoid
hurting the feeling of his/her interlocutors. Also, a writer may use hedging to take precaution against negative response to his/her claims, position taken, or a statement made. Hedging is often considered as polite strategy employed to persuade the audience. It is used as a means of saving face in conversation by facilitating turn taking, or mitigating face-threatening. Politeness and hedging have become forms of social interpretation of verbal and non-verbal behaviours revolving around the concept of saving –face, thus playing crucial role in social interaction strategies (Bonca (2013). Fraser (2010) describes it as a rhetorical strategy that a speaker employs to signal lack of a full commitment either to the full category membership or expression in utterance by choosing a particular term, particular structure or imposing specific prosodic from an utterance.

The foregoing views depict the fact that hedging in linguistics is a communication strategy used for different purposes. They are used as polite communication strategy, that is, to avoid sounding rude or making assertive and conclusive claim. Also, writers or speakers use hedging to take precaution against likely criticism by the audience. Speakers or writers therefore make tentative statement, or express uncertainty about somebody or something, depict non-finite opinion, stance or finding.

**Academic Writing**

Like speaking, writing is done in particular contexts to achieve particular purposes. Academic writing is a kind of writing done in an academic setting by academics for academics. It has often been considered as a complex, rigorous, pains-taking, and sometimes troublesome dimension of academic life. Writing in the academia requires the use of formal language, building upon the views of others (existing works), selecting cautious words and expressions, being succinct (facts are precise and accurate), and above all, using impersonal constructions (Hampton 2015). In a similar vein, Oshima&Hogue (2007) are of the view that Academic writing is the kind of writing performed in high school and college classes. It is different from creative writing, which is the kind of writing you do when you write stories. It is also different from personal writing, which is the kind of writing done when letters or emails are written to friends and families. Academic writing is formal, and is characterized by distinctive structure or format. It is a type of writing which has conventions or structures such as the beginning, the middle or the end as in Essay writing or Introduction, Literature Review, Methodology, Data Presentation and Analysis, Summary, Conclusions and Recommendations as in project report writing. Although the format of project report differs from one discipline to another or from one faculty or department to another, introduction, literature review, methodology, presentation and analysis, result and discussions seems to be conventional.

**Data analysis**

The identified languages manifesting hedging power (words, phrases) were first tabulated in two tables A & B in consonance with the two categories of texts. The tables consist of seven columns showing the different types of languages manifesting hedging power. They are modal verbs, lexical
modal verbs, adverbs, modal nouns, probability adjectives, approximators of degree, quantity, frequency, time, and introductory phrases. Since the research is purely qualitative, the number of the occurrences of each of these have not deemed important. Therefore, the focus of the analysis was based on the uses of the hedging devices identified rather than on their frequency.

**Table A: Words and Phrases manifesting hedging power in core arts project reports.**

<table>
<thead>
<tr>
<th>Modal auxiliary verb</th>
<th>Lexical modal verbs</th>
<th>Adverbs</th>
<th>Modal Nouns</th>
<th>Probability adjective</th>
<th>Approximators of degree, quantity, frequency and time</th>
<th>Introductory phrase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Could, should, may, would</td>
<td>Suggested Attempt to Closely Similarly slowly generally widely reasonably actually mainly</td>
<td>Assumption</td>
<td>Likely, Little Near absence</td>
<td>often, not so much, about, some</td>
<td>According to Similarly, However Actually</td>
<td></td>
</tr>
</tbody>
</table>

The table above shows the identified languages manifesting hedging power, alternatively referred to in this work as hedging devices. These devices in academic report writing are used to avoid being categorical and committed to claims or assertions. They enable the researcher to remain reserved on claims or opinions. It is against this background that hedging devices are seen as protective or defensive for the writer of academic research.

**Table B. Words and Phrases Manifesting Hedging Power in core science project reports**

<table>
<thead>
<tr>
<th>Modal auxiliary verb</th>
<th>Lexica verb</th>
<th>Adverbs</th>
<th>Modal Noun</th>
<th>Probability adjectives</th>
<th>Approximators of quantity, degree frequency or time</th>
<th>Introductory phrase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Could, may, might</td>
<td>Expected Claim</td>
<td>possibly widely usually commonly extensively exclusively Actually</td>
<td>Claims Possibility</td>
<td>Likely, Little Very small Very few</td>
<td>often, as much as, about at least such as some</td>
<td>However, Apart from— Although Actually</td>
</tr>
</tbody>
</table>

Table B above shows the identified words and phrases manifesting hedging power from selected project reports written by the students of core science programmes. Like in table A, these devices are used by the writer of academic report writing to express the fact that their findings or claims are inconclusive and open ended. Other scholars can agree or disagree with them or build upon
their results or opinions. The use of these devices therefore mitigates the magnitude of claims or assertions and serves a precautionary measure against criticism.

Discussion of Findings
The results of the analyses in the two tables show that hedging in academic writing is a common linguistic phenomenon. There are no significant differences in the hedging devices used by the students of both categories of disciplines. The results of the analysis in both tables revealed that hedges in academic undergraduate projects are used as devices for mitigating statements, claims or stances. These are contrary to the uses of hedges to evade responsibility, create vagueness to make non-combatant stance or statement as often found in administrative discourse or political texts. The results disclosed that hedges in academic discourse are mostly used to show non-finality of claims and precaution measures against possible criticism of statement or claims.

Uses of Modal Auxiliary Verbs
Prevalent incidences of the use of Modal auxiliary verbs for making tentative and non-final claims were identified in all the four research projects forming the corpus of the study. Though there was no attempt to present them quantitatively, the exploration of the four texts showed that they are the most frequent occurring hedging devices. Modal auxiliary verbs reflect the writers’ attitudes and help them to express ideas indirectly, which makes the works more effective. They allow writers to be fuzzed about informational content, avoid face threatening acts and formulate illocutions so as not to offend the hearer (Boncea 2013). The auxiliary verbs are mostly used to express probability, uncertainty and or hesitation. Five types of modal auxiliary verbs identified in the four texts are: Could, should, may, might, would. The following are identified in the following excerpts:

Also the hostile attitudes of most of the people in the locality could not permit free discussion with the researcher on the topic. Thus; most information provided by such respondents may be bias with prejudice. However, the important issues were noted and would be given due consideration (Text I)

Market may come in the form of physical location where transactions are made, which may exist as anything from thrift or boutique, stores selling individual items to wholesale markets selling goods to other distributors (Text II)

Idowu (2012) opines that language could be seen as symbolic system which members of a community share to enable them communicate effectively (Text III)

One could argue that further investigation is needed. Medicinal plants represent a rich source rich source from which antimicrobial agents may be obtained. (Text IV)
A deficiency in Mn could lead to poor growth and impaired production. The consumer in this might also suffer the toxicity effects such as hepatic failure, diabetes etc (Text IV)

These auxiliary verbs as shown in the excerpts above are used to express uncertainty, possibility or probability. Their uses depict the writer’s inconclusive claim or non-finality. By using auxiliary verbs, writers protect themselves from criticism and leave claims or stances non-final as other scholars may come up with more facts or stronger arguments. Apart from saving one’s face, the uses of auxiliary verb make the writer sound friendly and polite rather than being rude, authoritatively and assertive.

Modal Lexical Verbs
These are lexical verbs with modal auxiliary meanings. They are epistemic verbs often used to perform acts such as suggesting, evaluating or doubting (Boncea 2013). When used as hedging devices in academic discourse, they express the researcher’s stance as non-personal and non-final. The words in boldface in the following excerpts are examples:

In line with the above, this study attempts a sociolinguistic analysis of market language with reference to two selected market--- (Text II)
Therefore research into the effect of these local medicine plants is expected to enhance the uses of the plants against diseases caused by the test pathogen (Text III)
However, majority of the respondents suggested that there are technical terms used in the process of buying and selling (Text II).

The interest in the scientific investigation of medicinal plants from Nigeria is based on the claims of the effective use for the treatment of many diseases (Text III)

The verbs in boldface in the four examples behave like modal auxiliary verbs. They are performative verbs depicting intended actions of the writer/researcher. The verbs attempt, expect, suggest and claim express the writer’s reluctance to present the utterance as personal. The verbs express hesitance by the speaker to be assertive and conclusive. Attempt in the first excerpt suggests trying to do a difficult task of which success is uncertain; expected in the second is a believe that something will happen but yet to; suggest implies putting forth and idea or opinion for others to consider or think about; while claim expresses the researcher opinion that a stance or opinion is true but yet approved.

Modal /Probability Adjectives
Modal or probability adjectives are used as hedging devices when they are used with epistemic sense to mitigate the strength of the nouns they describe or qualify. Examples found from the texts in the corpus are: Likely, little, near, similar as in the following excerpts.
Actually, there is **little** work on the history of the Etulo people of Nigeria (Text I).

But in the process of business transaction and bargaining, it is **likely** to hear diverse languages which are replica of the socio-cultural milieu of the markets (Text II).

Prior to this time, **little attempt** has been made in sociolinguistics research to investigate the peculiarities of the marketing in Nigeria (Text II) However, the limitation of the work stems from **near absence** of published works on the topic during the period of the study (Text IV). Tannis are widely distributed in plants having **similar** structures to tannic acid. Living things need **very small** amount of some trace metals, although high levels of these metals can be toxic (Text IV).

The adjectives in boldface in the above excerpts limit or reduce the strengths or the magnitude of the nouns that they qualify. The verb **little** as used in the excerpts reduces the magnitude of the work covered and the attempt made. The researcher is politely saying that research has been conducted on the topic of study but much is left to be investigated. **Near absence** as in the above linguistic context means that existing publications on the topic are very limited. The adjective **similar** which qualifies the noun structure connotes plants with common structures but not exactly the same. The adjective **small** which is preceded by an intensifying adverb (very) diminishes yet a small size. Modal adjectives in academic writing are used to diminish the strength or magnitude of the researcher’s claims or assertions.

**Modal Nouns**

Modal nouns are derived from lexical modal verbs. They serve as hedging devices when used with epistemic sense. Those found in the texts in the study corpus are **assumption and possibility** as in the excerpts below:

*The author makes a bold attempt to correct the widely held but erroneous assumption in certain quarters that the Etulo people do not have a history of their own.*

Phytochemical screening of plant extract for antimicrobial activity differs from one geographical location to another due to soil composition or climatic conditions of the area. Thus, there is **possibility** of obtaining different result from this research.

**Assumption** as used in the first excerpt above refers to a long time belief that the people whose history is under study do have. The study was therefore embarked up to correct the belief (assumption). In the second excerpt, the modal noun **possibility** is used to express the researcher’s uncertainty of obtaining a different result from those of previous study. The researcher used the modal noun ‘possibility’ to express the fact that different results might be obtained but not certain. In this way, the researcher protects himself from criticism or negative responses to his claims.
Adverbs

The adverbs identified as hedging devices from the selected research projects in the corpus are: closely, possibly, similarly, generally, gradually, some, widely. Though these adverbs have various functions, they are used in academic report writing to express an indefinite degree. Boncea (2013) asserts that they are used to provide inadequate qualifications, or to tone down the assertiveness of a claim, argument or stance. Examples from the texts are:

It is pertinent to note that many of our cultures in Nigeria are **gradually** eroding away due to lack of inadequate documentation of what these cultures are all about. It was **generally** a small agricultural structure (Text I)

**Similarly**, Hall (1968) cited in http://. google. nl (2016). Language is a medium through which human being communicate with one another. These findings **reasonably** confirmed views expressed by Dong (2007) and Daramola (2004) cited in Idowu (2012) that language could be seen as symbolic system which members of a community share to enable them communicate effectively (Text II) Recent studies have shown that infants who are **exclusively** feed on cow milk formulae **may** acquire Cu deficiencies as milk itself is low in Cu. Apart from the amount of Cu in the cereal, this high concentration **could possibly** be caused by raw (Text IV)

The excerpts above show incidences of the use of adverbs to express indefinite degree or uncertainty. By using adverbs expressing indefinite degree or uncertainty, the writer mitigates his or her claims, and at the same time saves his own face and the face of his interlocutors. The writer remains non committed and non-categorical. In academic report writing, these adverbs are used by research project writers to make probable or tentative statement and take precautions against criticisms.

Adverbs of Quantity, Frequency or Degree

The use of these forms of adverbs reduces the meaning of an expression, assertions, or claims made. Those identified from the text in the study corpus are: Usually, often, not so much, about, some

The few available studies in this area are works of the norm and deviation stylistician who **often** perceive the language of marketing as a deviation from or a distortion of normal standard(Text II).With a numerical strength of **about 250,000**, the people speak their mother tongu Etulo( Text I).Bread is an important food product that provides **as much as 50 to90** of the total calorie and protein intake (TextIV).Phenols are compounds containing **at least** one hyclo>-cyl group attached directly (Text III).Bread is a kind of food made from flour, water and other ingredients, **usually** combined with a leaving agent, kneaded, shaped in loaves and baked( Text Iv).
These adverbs are used in academic report writing when exact amount is not known or is negligible. This means that by using adverbs of quantity, frequency, or degree, the researcher renders fuzziness about the undecided number or amount. Determiners like some also fall into this category. It is used in academic report when the researcher does not want to be categorical of a number. The uses of these hedging devices according to Boncea (2013) is not to diminish quantities but rather that the speaker expresses certainty and trust in his utterances because his assertions or claims are based on some previous experiences.

**Introductory Phrases**

Introductory phrases are often used as hedging devices by writers of academic report, especially to acknowledge other scholars and to exonerate themselves from someone else’s claim. They may also be used to express uncertainty of degree. Significant introductory phrases identified from the texts in the corpus are: *However, similarly, therefore, prior to, apart from, and according to*. These introductory phrases signal the attitudes or the belief of the researcher. ‘However’, is an adverb, used with an adjective or adverb to mean “to what degree”. It is used to introduce a statement that is in contrast to what has been said. Similarly, as introductory phrase is used to introduce statements, facts, or related claims. It can be used as a hedging device to avoid being categorical in comparing claims or facts. The phrase *therefore* is often used to introduce the logical result of something that has been mentioned. It is a way of saying for a reason something happened. The phrases according to seem to be the most prevalent introductory phrase used in academic writing. It is a tradition in academic writing to acknowledge other scholars whose works have been or cited. The use of this serves two primary purposes. It helps the writer to avoid plagiarism and to exonerate him from the statement or claim.

Introductory phrases are therefore of different types and are used for different purposes. As hedging devices, they serve as means of saving face. It makes the writer to sound polite by drawing the attention of the audience to a statement, fact or claim about to be mentioned. The content of the writer’s expression is usually embedded in the main phrase. The introductory phrases however, predict what the writer would say.

**Conclusion**

Conclusion can be drawn from the outcome of the study that hedging as a linguistic strategy is a common feature of academic writing. Writers use a lot of hedging devices to take precaution measures against criticism of their claims. Writers often achieve this by making tentative non-final and non-personal statements. It can as well be concluded that hedging devices are also used in academic writing to tone down or reduce the strength of claims or assertions, thereby sounding polite and non-assertive.

There is no significant variation in the hedging devices used by the researchers in both science and arts disciplines. Therefore, hedging is a common linguistic phenomenon in academic reports. Hedges as linguistic strategy in academic writing mitigate, or tone down claims of writer. They are not used to evade statement by making it vague as often found in administrative or political
discourse. Therefore, negligible distinctions exist in the use hedges in arts in and science academic project reports.

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