

Utilization of Hedging Devices by American and Iranian Researchers in the Field of Civil Engineering

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Received: March 10, 2012 Accepted: March 27, 2012 Published: June 1, 2012

doi:10.5296/ijl.v4i2.1494 URL: <http://dx.doi.org/10.5296/ijl.v4i2.1494>

Abstract

The main purpose of the academic writing is to inform the other researchers from different cultures in a particular field. Because of the existed differences emanated from cultural backgrounds among the researchers who use English as their second or foreign language, the contrastive rhetoric plays crucial role in guiding the non-native writers. One of the important issues in academic writing which is considered difficult matter for non-natives who want to write for the academic purposes is hedging devices. Hedges are used to present findings cautiously along with leaving room for readers to have their own interpretations. Therefore, the purpose of this study was to find out the frequencies of different types of hedging devices in the field of Civil Engineering. To this end, 20 research articles (RAs), 10 by American writers and 10 by Iranian writers, from the leading journals were selected and their Discussion sections were selected and read to find out the existed hedging devices. All the articles have been published during 2009-2010. The time was considered because it was supposed that the time may influence the style of the writings of the authors in this field. Then, the obtained hedges were classified based on Salager-Meyer's (1994) taxonomy. The results revealed that, American writers showed their preferences to type 1, 4, and 5 while Iranians outnumbered in using type 2 and 3. Therefore, in general, the number of hedging devices by American writers was more than Iranian writers. In order to find out that the difference between the groups is significant or not chi-square procedure was used and it was found that despite some variations among the types of hedges, no statistically significant difference observed between the American and Iranian writers in terms of utilizing hedging devices in the Discussion sections of their research articles. This finding can be interpreted in a way that what is important in utilizing hedging devices as the linguistic phenomenon is the discipline influence not the nationality or cultural backgrounds of the authors. Thus, the non-native authors, i.e. Iranians, could use hedges like their native counterparts, and this

shows that the hedging devices are teachable and can be used by non-natives like natives.

Keywords: Hedging devices, Culture, Academic writing, Discipline

1. Introduction

One of the issues which gained great interest in academic writing for analysis is cultural identity since “cultural differences undoubtedly dictate variations in writers’ organization of texts. Such differences can be observed in the way L1 and L2 authors structure their papers...” (Kaplan, 1997, p. 20).

Some of the recent studies have concentrated on how researchers from various nationalities or disciplinary backgrounds organize their writings. For example, Breivega, Dahl & Flottum (2002) conducted a study involving research articles from three disciplines – medicine, economics and linguistics – and three languages – English, French and Norwegian. They tried to find out whether cultural identities in academic writing are related primarily to nationality or whether they are related primarily to specific discipline. Namely, they wanted to know that which one of these factors have more influence on academic writers; the nationality or discipline’s conventions. They found out that “cultural identity is more likely to be related to discipline than to language” (Breivega, Dahl & Flottum, 2002, p.219).

Another example of these kinds of studies which involves different nationalities is the study done by Vassileva (2001). She observed how English, Bulgarian English (BE) and Bulgarian differ in showing their commitment and detachment. Her findings showed that the degree of detachment was found most evident in English and least noted in BE, with Bulgarians being in the middle point between the two.

Hyland (1994), in an attempt to examine hedging in EAP (English for Academic Purposes) and EST (English for Science and Technology) textbooks, examined a corpus of 24 textbooks which were representative of a range of writing material intended for L2 students. In his analysis the corpus of the study, he concludes that the general interest in modality which exists in the research literature is not widely reflected in the pedagogic materials. Moreover, he finds EAP writing texts as dealing more with the issue of modality compared to ESP materials.

While the mentioned studies and others (like, Varttala, 2001; Myers, 1989; Salager-Meyer, Defives & Hamelynck, 1996, and ...) tried to found out the influences of different cultures or disciplinary backgrounds on academic writings, none of them referred to the norms of the Eastern and Western cultures which can affect the writings of the academic writers. As Flowerdew (1995, in Mc Kay, 2003) illustrates, Eastern values might widely differ from Western values. Therefore American culture is considered to be different from the Iranian culture. For instance, in Iranian academic contexts, the novice researcher cannot openly reject his/her supervisor’s opinions when found false statements, but it is not uncommon in western cultures to challenge the supervisor’s decision or opinion, since we all are human and making mistakes is an inevitable feature of mankind.

Therefore, the purpose of this study is to investigate if writers coming from Eastern cultures represented by Iranian writers and Western cultures represented by American writers differ in their employment of hedges in Discussion sections. The findings are expected to be helpful for English for Specific Purposes (ESP) and English for Academic Purposes (EAP)

instructors in guiding their students and raising their consciousness towards the role and usage of the hedges in their writings. They are also can have considerable advantages for students to get familiar with the hedges and try to use them in their writing if they want to publish their findings in journals reviewing by native speakers of English and finally have voice in their discipline.

2. Hedging Devices in Academic Writing

Members of a particular discourse community as researchers or writers wish to publish their works and findings in journals since by doing so, they will be accepted and recognized as members of their professional discourse community (Mojica, 2005) and “have voice in the world about their discipline” (Nasiri, 2011, p. 20). To reach this goal, the use of hedges is of critical importance. Most journal editors might expect their contributors to use an established writing style. Hedges can be used to conform to this expected style of writing (Banks, 1996). Therefore, the writers who employ hedges in writing their research articles and academic papers would appear to have greater opportunities to get their papers published than the ones who do not use these devices.

Accordingly, Salager-Meyer observes that “a totally unhedged style would not be considered seriously by journal editors” (1997, p.3). In addition, in selecting which articles to publish, the editors may also consider how the readers will respond to the articles. Hedges could probably enable the authors to make a good relationship with their readers, minimizing the possibility of being heavily criticized by those who disagree with the claims the author makes, because by using hedges authors do not state that their claims are absolutely true and therefore leave room for their readers to make their own decisions about the findings. Without hedges, the authors’ claims might be considered arrogant, inappropriate, rude and even offensive. Hyland states that hedges allow the writers “to express a perspective on their statements or the statements of others, to present unproven claims with caution and to enter a dialogue with their audience” (Hyland, 1998, p.6). In other words, using hedges to mitigate claims, express genuine uncertainty or present disagreement might create a positive atmosphere between the authors and the readers.

The hedges in this paper were classified based on Salager- Meyer’s (1994) taxonomy of hedges. They are as follows:

- 1) **Shields**, such as *can, could, may, might, would, to appear, to seem, probably, to suggest*.
- 2) **Approximators** of degree, quantity, frequency and time: e.g., *approximately, roughly, about, often, occasionally*, etc.
- 3) **Authors' personal doubt and direct involvement**, expressions such as *I believe, to our knowledge, it is our view that ...*
- 4) **Emotionally-charged intensifiers**, such as *extremely difficult/interesting, of particular importance, unexpectedly, surprisingly*, etc.
- 5) **Compound hedges**, the examples are: *could be suggested, would seem likely, would seem somewhat*.

3. Methodology

The data in this study were taken from twenty English articles published in the journals of Civil Engineering from 2008-2009. Ten articles were written by Iranian researchers, while the other ten were the works of their American counterparts. The researcher investigated the employment of hedges in Discussion sections. The hedges which appeared in those sections were coded and analyzed. Their frequencies have been tabulated to show the total number of hedges in the targeted section by targeted authors.

In this study, the researcher would like to find out whether the authors from two different nationalities would differ in utilizing hedges although they come from the same field.

4. Results and Discussions

The following table shows the number of hedges used by American and Iranian authors in writing their academic articles.

Table1. Frequency of hedges in Discussion sections of Civil Engineering discipline by American and Iranian authors

Hedging type	Type 1 Shields	Type 2 Approximators	Type 3 Authors' personal doubt and direct involvement	Type 4 Emotionally-charged intensifiers	Type 5 Compound hedges	Total
American	F.84	F.41	F.0	F.17	F.11	153
Iranian	F.59	F.53	F.2	F.12	F.6	132

As can be seen, type 1 (Shields) hedging devices are the most frequently employed by both groups of writers, with American writers using 25 hedges more than their Iranian counterparts. This finding confirms those of Adam Smith (1984) who states that type 1 hedges are the most frequent hedging devices in academic papers. Similarly, Butler (1990) also reports that modal auxiliary verbs (included in type 1) occur in approximately 1 of every 100 words in scientific articles. More recently, Hyland (1994) finds that 27% of all lexical devices in his Biology corpus are modal auxiliary verbs (related to type 1 in this study). Samples from the American writers' articles are: variables are considered invisible, one might call, a possible explanation is as follows, which can be obtained from visual study efficiency could be due to the absence of light source. Samples from the Iranian writers' articles consisted; therefore, it can be concluded that, this would require the researcher, it is suggested to cure the repair patches for at least 3 days, there is no possibility to find and apply, this can be problematic and this study could be served as essential inputs.

However, Iranian writers show their preference of type 2 (Approximators) hedging devices

by utilizing this type, 12 hedges more than the other group. Iranian writers use them in sentences such as: there are differences in the plastic range in almost all the specimens, the limiting buckling moment is approximately constant, there are many concrete structures, the constant value of about 0.4% of cement mass, for the larger the amount of chlorides in concrete. Samples from the American writers' articles including: some of the adiabatic section, dye wastewater is usually measured in terms of mW·sec⁻² centimeter, achieved approximately 50, the volume of wastes is about 10000 m³.

In addition, Table 1 also reveals nearly 0% of American writers use type 3 hedging devices (Authors' personal doubt and direct involvement), while 1.51% of Iranian writers employ these devices. Samples from the Iranian writers' articles are: our estimates, as shown graphically in Figure 6, our proposed relation fits well within these reported values. The difference in the employment of type 3 (Authors' personal doubt and direct involvement) might be caused by their growing up in different cultures. Americans are accustomed not to express their individual opinions in this discipline, while in Iranian cultures expressing individual opinions might be considered appropriate.

According to the type 4 (Emotionally-charged intensifiers) hedging devices, American writers used 17 hedges of this type while their Iranian counterparts utilized 12 of this type. Samples from the Iranian papers consist of: the binder becomes increasingly fast, the bond strength could considerably be increased, the permeability of the repair material (MSOC mix) is considerably reduced, the convergence rate increases highly, time required for learning and little significant difference. From the American writers' articles we can find samples such as: the number of photons absorbed by the system is significantly affected, the decolorization efficiencies increased significantly, the temperature of the reactor decreased considerably, the influence of Mw was found to be less remarkable.

Similarly, Iranian researchers were outnumbered by American group in their employment of type 5 (Compound hedges) hedging devices. American group uses 5 more type 5 hedges compared to Iranian group. Samples from American writers' articles are: It can be suggested that, velocity which would drastically reduce the film resistance, the changes in pH with dye decolorization could be mainly attributed to the formation of hydroperoxides, Eq. 3 can be generally used to predict the ratio of the critical heat. Samples from Iranian writer's article are: it is often impossible to provide ideal condition, generally as can be seen from Table 4, almost similar conclusion was obtained.

The results revealed that some differences can be seen in the employment of hedging devices between the two groups of writers from different cultures. Regarding these differences American researchers show higher preference for types 1, 4, and 5, while Iranian researchers favoring the use of types 2 and 3. In order to know the probable significant difference chi-square procedure is used.

Table 2. Data: contingency table

	1	2	3	4	5	Total
American writers	84	41	0	17	11	153
Iranian writers	59	53	2	12	6	132
	143	94	2	29	17	285

Table 3. Expected: contingency table

	1	2	3	4	5
American writers	76.8	50.5	1.07	15.6	9.13
Iranian writers	66.2	43.5	0.926	13.4	7.87

Chi-square = 8.74

Degrees of freedom = 4

Probability = 0.068

Critical chi-square = 9.49

As the results of the above tables show, the observed chi-square is lower than the critical one. Therefore, there is no significant difference between the two groups of writers in terms of the frequency of hedges.

However, the results of this study show that American writers and their Iranian counterparts are not too different in their employment of hedging devices in writing academic articles in the field of Civil Engineering, the former having employed 21 more hedges than the latter. This result confirms the theory of Breivega, Dahl and Flottum (2002) and the statement of Mohammadi Khahan (2006) who states that the discipline is more effective than nationality considering the cultural identity issue.

In the case of Iranian writers, to some extent, there might be some influences from their cultures since they use English as a foreign language. Furthermore, in academic writing, as discussed earlier, respect is also very important. However, if non-native writers have not been trained enough in the proper academic writing, they might have found it difficult to express their respect in academic written form. As pointed out in the introduction of this paper, hedging can be used to show respect to the readers since "hedges allow researchers to present themselves as cautious, coy, humble and modest servants of their discipline, and to diplomatically negotiate their claims when referring to the work of colleagues and competitors" (Salager-Meyer, 1997, p.11). Many non-native speakers of English find hedging as one of the problematic areas in the field of EFL (Hyland, 1998). The good news is that "learning how to use hedging devices effectively is something that can be taught by making learners aware and drawing their attention to hedging and by direct instruction" (Wishnoff,

2005, p.4). As can be seen, Iranian writers in the sample articles seem to be able to use various hedging devices which appear to be the result of their taking academic writing course.

Realizing the importance of hedging devices in academic writing, I believe that an adequate amount of practice is needed to improve the students' ability in using these linguistic materials. I would like to suggest three types of exercises for the beginner level to train them to employ hedging devices. First, the students may be given some articles in their fields containing hedging devices and then asked to underline and categorize them. This type of exercise might be important in increasing the students' consciousness on how these hedges can be utilized in the academic articles. Second, the students might be given articles in which the hedging devices haven been deleted by the instructors and then they are asked to supply the necessary hedges to make the claims and arguments in the articles less direct. Third, they are assigned to utilize these devices in their own writing.

5. Conclusion

The ability to appropriately use hedging devices for researchers and writers is prerequisite if they wish to publish their work in academic journals. Hedging devices are important features of effective academic writing. They might help the writers to present their statements and claims cautiously, accurately and modestly to meet their discourse community's expectations and place themselves in an honorable position as valued members of the respective discourse community. Moreover, hedges allow them to anticipate criticisms and to avoid confrontation resulting from making bold and presumptuous statements.

Considering the importance of hedging devices in academic writing, there might be "a need for greater and more systematic attention to be given to this important interpersonal strategy" (Hyland, 1994, p.244). This implies that the students must be taught how to recognize and effectively use hedging devices in their writing, especially for Non Native English Speakers who are probably not familiar with hedges and therefore, find it particularly difficult to hedge their statements appropriately.

As it can be seen, both American and Iranian writers in this present study seem to be equally proficient in using various hedging devices to assert their claims in an acceptable manner. This similarity can be attributed to their discipline background. It is seemed that researchers can gain advantage by taking a course that exposed various aspects of academic writing, including hedging devices. This exposure might probably give them background knowledge on how an academic paper should be written.

It should be noted that this study has examined only the works of researchers coming from the field of Civil Engineering. It is suggested that future researches find out how Iranian writers from various disciplines differ in their employment of hedging devices; and how two groups from different nationalities and also different discipline backgrounds differ in utilizing these tools. By conducting such research, we would probably get wider insights on how cultures and sub-cultures influence writing.

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