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Metadiscourse Awareness and ESAP Comprehension

The present study examined the effect of explicit instruction about linguistic hedging *on the English for Specific Academic Purposes (ESAP) reading comprehension performance of English Language Learning (ELL) university students through an awareness raising task. A reading comprehension test was developed and validated as the pre-test and post-test. The test, including items for assessing the comprehension of students in their area of specialization, was administered to 100 lower-level and 100 higher-level language proficient undergraduates who were randomly assigned to experimental and control conditions. Then, participants attended ten class sessions on hedging. During the first three sessions, the participants in the experimental group were instructed on the essential meaning of a* hedge, *as well as the types and functions of hedging devices. The next sessions focused on the practical use of these markers as they appear in academic texts. After the treatment, the test was again given to the same students as the post-test. The results of two* t *tests and a two-way ANOVA provided empirical support for the facilitative effect of explicit instruction in recognizing hedging devices that improved their language proficiency and, therefore, improved their reading comprehension scores.*

Key Words: Metadiscourse; Hedging; ESAP; Pragmatic Awareness

Introduction

It is generally believed that reading is the most important language skill for learners in academic contexts (Carrell, 1989; Eskey, 1988; Grabe & Stoller, 2001; Robinson, 1991), especially when English Language Learning (ELL) students must read

English materials in their own area of specialization even though they may never have to speak the language itself (Eskey, 1988). According to Grabe (1991), research in reading has grown considerably and our theoretical and practical understanding of reading has changed significantly (p. 382). Reading is now seen as a dynamic, interactive process of metacognition (Shih, 1992; Vacca, Vacca, & Grove, 1995). Scholars have generally argued that efficient readers use complex processes operating interactively and simultaneously to enhance comprehension (Stanovich, 1991). This interactive approach is particularly effective in teaching reading skills for academic or specific purposes. That is, in addition to decoding meaning from print, successful readers implement metacognative skills to activate their prior knowledge of content and use textual clues to help them cope with new information (Stanovich, 1991).

Parallel to this interactive process between reader and content, there is also another important type of interaction: the one between reader and writer. This *dialogue*, termed metadiscourse, is defined by Vande Kopple (1997) and Vande Kopple and Crismore (1997) as discourse that people use not to expand referential material but to help their readers connect, organize, interpret, evaluate, and develop attitudes towards that material. Crismore (1989) suggests that metadiscourse can promote critical thinking as readers formulate their own opinions and compare them to those of the writer. In fact, writers who are conscious of particular linguistic devices can use them to produce enhanced meaning. For example, in expert to non-expert communication (e.g., textbooks), an awareness and understanding of the concept of audience can help writers present information in a clear, convincing, and interesting way in an effort to promote acceptance and understanding as well as reader-writer solidarity.

Metadiscourse, or the language and ideas we use as we make sense of written or spoken material, is also an important persuasive resource used to influence readers' reactions to text content according to the values and established conventions of a given discourse community; it is particularly useful in helping non-native speakers of English with the difficult task of grasping the writer's persuasive stance when reading challenging texts. This ability to follow the rhetorical moves of the author enables non-native learners of English to more effectively understand the writer's line of reasoning in more demanding texts. Seeing its importance in successful comprehension, Vande Kopple (1997) suggests that specific instruction on metadiscourse can be useful to help second language (L2) readers learn to distinguish factual content from the writer's commentary. As one type of interpersonal metadiscourse, hedging has been an important topic in text and discourse

analysis. According to Hyland (1998), hedging offers the largest number of correlated attributes, such as weakening the force of statements, expressing difference, and signaling uncertainty, which, according to Salager-Meyer (1997), convey the fundamental characteristics of the meaning of the text.

Although a number of studies have been done with native English speakers (NESs) and nonnative English speakers (NNESs) on *hedges*, the findings of these studies do not provide clear- cut evidence that the awareness of metadiscourse in an academic text improves reading comprehension. They do suggest that hedging has a facilitating role understanding textual meaning and is, therefore, a topic that merits further study so that we can make more valid generalizations about the impact of context on text comprehension in regard to metadiscourse awareness in reading comprehension for English language learners. Thus, the purpose of this study is to gain more insight into the effect of explicit instruction in the recognition of hedging on reading comprehension at higher and lower levels of language proficiency in an English for Specific Academic Purposes (ESAP) setting.

Review of Literature

The term hedging is defined by Lakoff (1972) as "words whose job is to make things fuzzy or less fuzzy" (p. 195) and since then, the term has been used to refer to devices which qualify the writer's expression. Hyland (1994) believes that hedging expresses tentativeness in language use, and it is crucial to scientific writing where statements are usually made with a subjective assessment of truth. He asserts that hedges indicate interpretations and allow writers to convey their attitude about the truth of the statements they accompany; therefore, writers can present claims with caution and mitigate categorical assertions. He further explains that through hedging, a professional scientist demonstrates his or her adherence to the standards of the scientific community. In introducing claims, scientists rely on evidence from facts proved by members of the discourse community to which they belong. Accordingly, some written statements, the truth or falsity of which depends on the knowledge of the scientist, are hedged (Hyland, 1996). Knowledge and effective use of both fact and opinion statements is required for a scientist to be regarded as a member of that discourse community.

Research has shown that academic writing is extensively hedged, and that at least one hedge can be found in every two or three sentences (Skelton, 1988). Hyland (1995) suggests that the need to present scientific claims with precision and caution means that hedges in academic writing anticipate the reader's possible rejection of propositions. Therefore,

English for specific purposes (ESP) teachers need to view scientific writing as subjective and acknowledge that hedges are merely a convention of the academic culture.

Research in contrastive rhetoric underscores differences in the discourses of English-based and non-native communities in treating markers of metadiscourse (Hyland & Tse, 2004; Jalilifar, 2007a; Marandi, 2003; Martin, 2003; Zarei & Mansoori, 2007). These studies have targeted different areas of rhetorical significance, such as thesis statements, coherence, cohesion, topic development, and hedging. Contrastive rhetoric treats the features of each community as motivated by their typical linguistic and cultural traditions that cannot be generalized over other communities.

A number of studies have ascertained the role of hedges in academic discourse. Salager-Meyer (1994) analyzed 15 articles from five leading journals and identified the hedges and their frequencies in different rhetorical sections of the articles by means of contextual analysis. Hyland (1995) examined 26 cell and molecular biology research articles in 16 leading journals and characterized the forms and extent of realization of hedges in this genre. Clemen (1996) investigated hedges in 13 copies of the British weekly business magazine, *The Economist.* Results showed a high frequency of hedges such as shields, approximators, and compound hedges. The choice of expressions of tentativeness is often dictated by the general structure of the discourse, by its communicative purpose, by the claims the writer intends to make, and by the author's presentation of generalization (Salager-Meyer, 1994). Results showed a distinction between the writer's hedging on the one hand, and attribution to higher authority on the other (Clemen, 1996).

More recently, Martin (2003) compared Spanish and English abstracts. Jalilifar (2007a) analyzed 552 theses and dissertation abstracts from nine disciplines written by native speakers of English, Persian, and other languages. The results of these studies pointed to native and non-native diversities. For example, Martin (2003) found that in the results unit of the abstracts, English writers opted to present the main findings tentatively as a way of protecting themselves from criticism by specialists. One possible explanation is that writing is a reflection of the author's culture. Therefore, students should also be taught the characteristics of writing as it reflects the culture for which it was written. Similarly, Martin found English writers using hedges as a way of reporting the conclusion, whereas the Spanish writers relied much less so on hedging devices. Martin's explanation for this linguistic variation concerned the context of publication and the relation between the writer and the discourse community. A further explanation was that the practice of

using non-hedged style has been institutionalized by most academics as part of a long-established writing style. Similarly, Jalilifar's (2007a) study showed that in hard sciences, Persian researchers employed half as many of the hedges as used by the native speakers of other languages. Alternatively, native speakers of other languages used three times as many hedges as used by native English speakers in applied linguistics. Jalilifar's study marked variations in terms of the priority given to the various types of hedges.

In addition to exploring the characteristics of scientific articles, Wishnoff (2000) argued that mastering hedging can prove elusive for non-native speakers, especially at the graduate level. Salager-Meyer (1994) presented pedagogical implications of his research in terms of sensitization, translation, and rewriting exercises in ESP courses. Hyland (1998) also sought to relate the features of texts and communities to the needs of the students in the classrooms. He selected a corpus pertinent to second language learners and provided hands-on suggestions for teaching them. Hyland advocated completing sentence frames and attempting various types of paraphrases. He suggested explanations for hedging and providing students with more authentic tasks than currently done in most ESP textbooks. Jalilifar (2007b) found that providing explicit instruction about hedges had a positive effect on the writing performance of novice researchers whose articles had been rejected by journal editors. In fact, he argued that hedges as essential elements of academic arguments that support and advance claims should be given particular consideration in research writing classes.

Non-native English speaking university students need to make extensive use of academic texts in English. Jordan (1997) maintains that reading academic texts (such as textbooks, research articles, etc.) seems to be the greatest requirement for students in most higher education situations where English is taught and/or used as a foreign language. To read effectively, students' awareness should be raised regarding text patterning and discourse conventions of English academic texts. Hyland (2000) suggests that hedges are often unnoticed by readers. Nowadays, scholars widely recommend explicit instruction of hedging devices as pragmatic elements that improve writing (de Figueiredol Silva, 2001; Hyland, 1995, 1998; Jalilifar, 2007a; Salager-Meyer, 1997; Wishnoff, 2000). Salager-Meyer (1994) identifies two pedagogical justifications for explicitly addressing hedging as an important linguistic function and for assisting learners (even those in the earlier stages) to develop an awareness of the principles and mechanics of its use:

> (a) It has been stated that foreign language readers frequently tend to give the same weight to hedged (provisional or

> hypothetical) statements or interpretations as to accredited facts (Hyland, 1994; Skelton, 1988). Since comprehending a text entails both decoding information and understanding the writer's intention, it is of prime importance that students be able to recognize hedging in written texts.
>
> (b) The appropriate use of hedging strategies is a significant communicative recourse for students at any proficiency level, and knowledge of the functions of hedges plays an important part in demonstrating competence in a specialist register. Crismore and Fransworth (1990) go as far as saying that hedging is the mark of a professional specialist, one who acknowledges the caution with which s/he does and writes on science. The problem is that proficiency in that pragmatic area, especially in linguistically sophisticated readings of academic texts, appears to be notoriously difficult to achieve in a foreign language (Cohen & Tarone, 1994, cited in Salager-Meyer, 1994, p. 153; Hyland, 1994).

However, still few, if any, published studies, have looked specifically at the effects of explicit teaching of hedging on reading comprehension at the undergraduate level. Awareness of such epistemic markers of stance is an important consideration in a written text. Specifically, work on students' explicit knowledge of such markers in text comprehension is still at its embryonic stage. Therefore, this study draws the attention of ELT teachers, at local and global levels, to important attitudinal elements in comprehension. It also sensitizes students to lexical and structural features and the effect on meaning brought about by the use of different forms of modality.

The use of modality, like hedges, can present considerable problems for linguistically unsophisticated readers of academic English texts. The complexity of modality justifies further research, and so we expect that the results of this study will have a crucial bearing on understanding how metadiscourse markers might shape comprehension. Specifically, the present study intends to illustrate the extent to which explicit instruction of hedging affects the ESAP reading comprehension performance of university students with different proficiency levels. The study poses the following research questions:

> RQ1: Does explicit instruction of hedging improve ESAP reading comprehension performance of English language texts by non-native English speaking university students?
>
> RQ2: Does language proficiency yield any difference in discerning hedging devices by ESAP students?

Methodology

Participants

The participants of this study were 100 male and female undergraduates of electrical engineering enrolled in a university in Iran. Their ages ranged from 21 to 26, and they were chosen from a population pool of about 180 students according to their performance on the Nelson English Language Proficiency Test, section 200 A (Fowler & Coe, 1976). Only those who scored between one standard deviation above and below the mean (M = 27.50) were selected as the final sample. Selected students were then divided into proficient (between 34 and 44) and not proficient (between 19 and 33) groups based on their scores. Students from each of these groups were randomly assigned to control and experimental conditions, thereby creating a total of four groups with 25 students each.

Table 1
Group and Level Division

Level	Group	No
Proficient (N.50)	Control	25
	Experimental	25
Not Proficient (N.50)	Control	25
	Experimental	25
Total		100

Instrumentation

In order to accomplish the objectives of this study, the following instruments were employed:

(a) A 50 item Nelson English Language Proficiency Test (section 200 A) ensured the homogeneity of language learners and divided them into proficient and not proficient groups in terms of language proficiency (Fowler & Coe, 1976). The test consisted of cloze passages (a standard cloze passage is a reading comprehension text in which every seventh word is deleted), structure, vocabulary, and reading comprehension in a multiple-choice format. This test was also piloted with a similar group of stu-

dents from the same population to determine the reliability of the test. As Fowler and Coe claim, all the items in the test have been validated empirically and choice distribution (selection of appropriate distractors) has been carefully checked.

(b) An ESAP reading comprehension test, consisting of 60 items in multiple-choice format, focused on whether or not readers recognized the presence of hedges and whether or not they could identify the function of hedges in the passages. The test was designed and constructed based on the students' textbook, English for Students of Electrical Engineering, (Haqani, 2001) (see Appendix for sample questions).

(c) The reading passages from the students' course book were used for the purpose of this study. This book was selected because: (a) the book has been prepared, assisted, and edited by a number of Iranian language specialists; (b) it has been taught in Iranian universities for a long time; and (c) it was the textbook selected by the Department of English for the ESAP course.

Piloting

First, the ESAP reading comprehension test was administered to about ten undergraduate students enrolled as electrical engineering majors to estimate the validity of this instrument (concurrent validity) via examining the correlation coefficient of the ESAP test and the Nelson test. Statistical analysis revealed the validity of the test to be .74. Also, the reliability of the developed ESAP test was estimated through the KR-21 formula (.79).

Procedures

The general purpose of this study was to raise the participants' awareness of the presence of hedging in the reading passages. To this end, the participants of the two experimental groups (proficient and not proficient groups) were given awareness raising instruction on hedging during an academic semester lasting 12 sessions, one session each week. First, the participants attended a three-session workshop during which they were instructed on hedges. The first session started with an introduction to the essential meaning of a hedge and its relevance to academic context. The next step focused on the use of hedging devices, that is, the functions performed by these devices. As such, the taxonomy of hedges was presented to the students and a few kinds of hedging were described explicitly. For each category of hedges, a number of examples were written on the board and the participants compared sentences. Finally, the instructor (one of the researchers) helped them elicit concluding rules

from the examples and create a set of generalized rules for each group of given examples, as illustrated in Table 2 below:

Table 2
An Example of the Method of Teaching Hedges and Eliciting Generalized Rules (The percentages offer a rough estimate of the degree of modality effect)

Word	Meaning	Example
May/might	Possibility Degree of certainty: Less than 50%	We *may* have noted at this point why iron is so very much more magnetic than other elements. (The writer is not sure)
Must	Certainty Degree of certainty: 95%	The resultant spin of all neighboring atoms in the domain *must* have been parallel. (The writer can't think of any other reason)
Can/could	Possibility/ ability Degree of certainty: Positive = less than 50% Negative = 99%	Alignment *can* have taken place in any one of six directions. (But it didn't)
Should	advisability	Conductors *should* have been large enough that the energy loss in them would not be excessive. (But they didn't)

Note. Modal auxiliaries add a degree of uncertainty to the sentences. So, they are considered as hedges in sentences.

As further practice, during the first session, the participants were asked to use the given instruction to locate linguistic expressions that may illustrate hedges in the reading passages of the students' textbook.

In the second and third sessions of the workshop, class time was devoted to presenting other kinds of hedging, which included practicing and highlighting them in the reading passages of the textbook. For the next seven weekly workshop sessions, students worked intensively on one reading passage. That is, in each 60 minute session, the instructor presented one passage, and the usual methodology of translating and

clarifying the meaning of words followed. Then, the students practiced and highlighted the linguistic expressions and determined how they were hedged.

The participants of the control group were also taught the same materials (passages from the book) using translation and clarification of the expressions that were considered stumbling blocks for students. After the semester was over, the participants of both controlled and experimental conditions received the posttest.

Design of the Study

In this study, a variation of factorial design was utilized. According to Hatch and Farhady (1982), "factorial design is not really a design type in itself: Simply, it is the addition of more variables to the other designs" (p. 28). That is, there will be more than one independent variable (i.e., moderator variables) and the variables may have one or more levels. The independent variable in this study was explicit instruction of hedging devices and the dependent variable was ESAP reading comprehension performance; the proficiency level of the students played the role of intermediary variable.

Data Analysis

A two-way ANOVA was applied to find out whether the possible differences among the mean scores of the two groups, at high and low levels of proficiency in the post test, were significant. Then, in order to determine whether explicit instruction of hedging and language proficiency affect the ESAP reading comprehension performance of students, two *t* tests were utilized—one between control and experimental conditions of the proficient group and the other between control and experimental conditions of the not proficient group.

Results and Findings

To compare the performance of control and experimental groups across the two proficiency levels on the ESAP reading comprehension (Table 3), a two-way ANOVA was conducted. Using the results of the two-way ANOVA (Table 4), three questions were investigated: (a) the main effect of the control and experimental groups, (b) the main effect of the proficiency levels, and (c) the interaction effect of the groups and the proficiency levels.

As shown in Table 5, the F-value for the effect of the group is 16.75 which was greater than the critical value (3.94), and so the difference between the mean scores of the two groups was significant. Consequently, according to the results of *t* tests and two–way ANOVA,

the answer to the first question—the explicit instruction of hedging in ESAP reading comprehension performance—was positive, although not strongly.

Table 3
Two-Way ANOVA across the Proficiency Levels

	Value	Label	N
GROUP	1.00	Experimental	50
	2.00	Control	50
LEVEL	1.00	Not Proficient	50
	2.00	Proficient	50

Table 4
Descriptive Statistics for the Effect of Group and Level Dependent Variable: Increase

Class	Level	Mean	SD	N
1.00	Control	2.720	1.35724	25
	Experimental	5.520	2.25890	25
	Total	4.120	2.36955	50
2.00	Control	1.560	1.44641	25
	Experimental	2.480	1.20961	25
	Total	2.020	1.43915	50
Total	Lower	2.020	1.64375	50
	Higher	4.120	2.53577	50
	Total	3.07	2.36	100

As indicated in Table 5, in order to answer the second research question, another two-way ANOVA was used. The F-value for the effect of the level was 21.35, being far greater than the critical value of F (3.94) and suggesting a significant difference between the mean scores of the two proficiency levels. The difference showed that language proficiency was a determining factor in giving students metadiscourse instruction. That is, the proficient students in the experimental group benefited more from explicit instruction of hedging. Moreover, the F for the interaction between group and level was 4.27, again suggesting a significant interaction between the two variables.

The results of the *t* tests displayed the interaction between explicit instruction and the performance of the control and experimental groups at each level of language proficiency. The following Tables present the related descriptive and inferential statistics:

Table 5
Two-Way ANOVA for Main Effects of Group, Level, and Interaction

Source	df	Mean Square	F	Sig.
GROUP	1	86.49	16.751	0.000
LEVEL	1	110.25	21.352	0.000
GROUP* LEVEL	1	22.09	4.278	0.041
Error	96	5.16		
Total	100			
Corrected Total	99			

* The F for the interaction between GROUP and LEVEL

Table 6
Lower Group Descriptive Statistics on Explicit Instruction

	GROUP	N	Mean	Std. Deviation	Std. Error Mean
Promotion	Experimental	25	2.4800	1.32665	0.26533
	Control	25	1.56	1.70	0.34

Table 7
Lower Group Inferential Statistics on Explicit Instruction

		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference
Promotion	Equal variances Assumed	2.431	0.126	2.126	48	0.039	0.9200
	Equal variances Not Assumed			2.12	45.21	0.03	0.92

As shown in Table 7, the *t* observed for the effect of instruction on the lower group was 2.12, which was greater than the critical value of *t* (2.02) at 48 degrees of freedom. That is, the treatment made a significant difference in reading comprehension of the groups with lower language proficiency.

The results of the other *t* test, run between control and experimental groups of the higher proficiency level, are also presented in the Tables that follow:

Table 8
Higher Group Descriptive Statistics on Explicit Instruction

	GROUP	N	Mean	Std. Deviation	Std. Error Mean
Promotion	Experimental	25	5.52	3.57	0.71
	Control	25	2.72	1.79	0.35

Table 9
Higher Group Inferential Statistics on Explicit Instruction

		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference
Promotion	Equal Variances Assumed	6.556	0.014	3.503	48	0.001	2.8000
	Equal Variances Not Assumed			3.50	35.35	0.00	2.80

As shown in Table 9, the *t* observed for the effect of instruction on the higher level group was 3.50, which was far greater than the critical value of *t*(2.02). In other words, explicit instruction also improved the ESAP reading comprehension ability of the higher level group $t\,(48) = 3.50$, $p < 0.05$.

Discussion

The Role of Explicit Instruction in Learning Metadiscourse

The relative effect of explicit instruction in enhancing the metapragmatic knowledge of EFL university students is an issue that merits more attention. The present study suggests that the explicit instruction of hedging could result in the improvement of metadiscourse knowledge of undergraduate students. It has been frequently acknowledged by scholars that linguistic knowledge and pragmatic awareness are essential to those students trying to gain proficiency in language (Bunton, 1999; Degand, Lefevre, & Besten, 1999; Degand & Sanders, 2002; Ozono, 2002; Roberts, 1998; Skelton, 1988; Wishnoff, 2000). Skelton (1988) claims that purposeful and explicit teaching enables speakers to communicate much more successfully. Therefore, Skelton introduced teaching exercises that he considered as helpful. These exercises included: (a) sensitization exercises, (b) rewriting exercises, and (c) commenting exercises.

Explicit instruction of elements of metadiscourse seems to be necessary because the effectiveness of readers' efforts to interpret a written text appropriately depends on how they manage to use language that best improves their knowledge of metapragmatics and polishes their understanding of the writers' ideas and social relations. In addition, instruction helps readers protect themselves against possible misinterpretations of writers' views, opinions, facts, and discussions.

The critical importance of distinguishing fact from opinion in scientific and academic texts and the need for readers to pay close attention to evaluate writers' assertions in ways that are likely to be acceptable and persuasive justify the ample use of hedges in such texts. Hedges help withhold writers' full commitment to propositions, and their significance warrants the need for explicit instruction of these devices, especially in an academic context. Explicit instruction is undoubtedly a step forward in enhancing university students' knowledge of such elements. Explicit instruction can provide students with important rhetorical knowledge and equip them with ways of making discourse decisions that are socially grounded in the inquiry patterns and knowledge structures of their disciplines. Moreover, explicit instruction makes them aware of and familiar with generic features of their academic texts and the conventions and expectations that are unique to their discourse communities. So, being equipped with these aspects of knowledge through explicit instruction can help students pursue their academic goals.

The role of hedging knowledge in reading comprehension is another issue mentioned explicitly in the first question of this study. Previous research made known the effect of consciousness-raising on metadiscourse awareness of graduate and postgraduate students in academic contexts. The fact that advanced students read as incipient members of professional groups is often overlooked in academic reading classes for second language students, but this study suggests one way through which this connection is realized. The analysis shows that there is an intimate relationship between discourse practices, the author's culture, and the disciplinary community; readers' culture crucially influences the ways that readers typically interpret and argue with the texts. While it is true that rhetorical decisions may sometimes reflect either conscious choices or unreflective practices, the analysis of hedging patterns in reading passages indicates that effective comprehension involves a community-oriented deployment of appropriate linguistic resources to represent writers, their texts, and their readers.

The results of the present study indicate that the subjects of the experimental conditions gained positive results from the knowledge of hedging and the text treatment on the ESAP reading comprehension performance as compared with the control groups. In addition, the results of the two-way ANOVA indicated a significant interaction between explicit instruction and the students' performance on ESAP reading comprehension tests. These findings suggest that undergraduate ESAP readers may derive some benefits on reading comprehension as a result of explicit instruction in recognition and interpretation of text that contains hedging. Overt instruction could result in improving

comprehension of ideas presented in those texts. In fact, the text structure awareness strategy in reading is an effective aid in enhancing comprehension and retention of ideas presented in written discourse. Therefore, the findings of this study can be interpreted as another case supporting the positive effects of the explicit instruction of hedging on reading comprehension.

The Role of Language Proficiency in Understanding Metadiscourse Knowledge

Hedging represents a major rhetorical gap that L2 students have to cross before they effectively enter membership in a discourse community and pursue their chosen careers. Results show that the proficiency level of students plays a mediatory role. Obviously, students with higher language proficiency read more effectively, perhaps because those students having a higher level of language proficiency take better advantage of the explicit instruction of hedging. The findings of this study suggest that the combination of ESAP reading comprehension and the proficiency level of students has an interactive effect; in other words, imparting metadiscourse knowledge to the students having higher language proficiency may result in higher gains as compared to the group being less proficient in language.

Many non-native speakers develop their English language proficiency in traditional, instructional-based settings. Greater proficiency is associated with greater awareness of how language works in context. Accordingly, greater awareness of language elements guarantees greater understanding of how elements of metadiscourse function in text. Explicit instruction raises students' awareness of metapragmatic elements which subsequently improves reading comprehension. Note that explicit instruction of such devices has already been tested in writing in different contexts; however, in reading in EFL context at the undergraduate level, more research needs to be done before conclusions can be drawn. To offset the balance, the present study has shown that instruction can sensitize readers to metadiscourse characteristics, and that these features should be presented through stages of successive approximation.

From a practical viewpoint, the results of this study suggest that a careful evaluation of students' language proficiency can assist in determining the appropriate ESAP reading comprehension text, in placing students in appropriate learning environments, and in adapting instruction to specific needs. Moreover, the results suggest that ESAP learners need to be provided with enough chances of reading connected discourse to consider the nature of hedging, which signals the interaction between writer, reader, and the text.

Since the general purpose of this study was to raise the participants' awareness of hedging in reading comprehension passages, providing students with conscious knowledge of pragmatic markers can help them develop general understanding of the texts, textual constituents (linguistic knowledge), and genre related (register) knowledge. This kind of knowledge can be obtained to some extent from general English proficiency courses.

The Relationship between Group and Level Factors

The findings of this study point to a logical relationship between proficiency level and instruction, and the study argues that these two qualities have a quantitative relation with each other. Students in the proficient group benefit more from explicit instruction, and the deviation between mean scores for the proficient groups is greater than the deviation between mean scores for the not proficient groups (experimental and control), which shows the significance of competency and the interaction between these two factors. In other words, the numerical difference between performances of the proficient groups is greater than that between the non-proficient group performances in the post test. This relatively great difference shows that the effect of instruction is not the same for the two levels, even though both proficient and non-proficient experimental groups received the same instruction. The performance of the two experimental groups compared with the performance of the two control groups in their related groups is not numerically close, which points to the effect of instruction on performance.

Pedagogical Implications

On a practical level, the findings of present study may be used to determine future instruction. In fact, the most important contribution of this study is its classroom application. Since students seem to have little awareness of hedging and the interactional aspects of reading in general, specific instruction should be integrated into the ESAP reading courses to help students become more successful readers. This type of instruction is a particularly crucial aspect in academic fields in which most students have subject specific backgrounds but scarce knowledge of linguistic notions. Students should be taught to use their knowledge to infer the various types of hedging in the texts. Crismore and Vande Kopple (1997) suggest that students perceive the relationships among ideas and integrate the text semantically, so that they can construct meaningful thought units.

Despite the growing demand for non-traditional instruction, ESAP courses are often still limited to learning a specific lexicon and translating

texts. With the continued cross cultural expansion and participation in the international scientific and STEM areas, more attention should be drawn to the design of courses which can help to prepare learners for future professional communication. Students are more likely to use hedging as a comprehension strategy with greater awareness of its contributive role in text organization. Activities should be designed to: (a) motivate English learners to approach an ESAP course by sensitizing them to metadiscourse markers and (b) help students voice an opinion on metadiscourse topics in a scientific discussion by sensitizing them to different types of hedges and their applications. Finally, analyzing student feedback and class activities serve to evaluate how far instruction is profitable to students in meeting learning goals.

On the other hand, in designing materials for ESAP books, rhetorical differences should be considered. Thus, on the basis of these various structures, discourse communities may need to opt for one or another rhetorical pattern, depending on readership. As a case in point, Persian writers of ESAP textbooks addressing native English readers *may* need to tone down their overuse of interactive markers and scale up their underuse of interactional metadiscourse elements in order to arrive at a balanced view of communication based on the observed standards. Of course, the standards must not be interpreted rigidly, but as *general tendencies* which could soften the interlingual differences, leading to more intelligible contexts for communication.

On the interpersonal level, students can look for hedges and reflect on why the writer has chosen to use these features. This type of research would not only heighten understanding of the reading process on a general level, but would also lead to more effective teaching methodologies and better criteria for the selection of materials for ESAP reading instruction. Unfortunately, few published ESAP reading courses discuss interpersonal aspects of writing. Once again, literacy instruction needs to focus on audience expectations, particularly the degree of precision, caution, and deference expected, by encouraging authentic reading tasks and the evaluation and manipulation of model texts.

Finally, applied linguistics can provide a platform for analyzing hedges and their role in genre construction. A major reason why students do not get systematic training in the use of hedges is because of the lack of sufficient empirical information about the rules of various speech communities. This study examined the effect of explicit instruction on systematic training in the use of hedges and observed its influence on the reading comprehension of students in real settings. Much attention given to hedging has been theoretical, refining conceptual distinctions by focusing on intuitive and decontextualized examples.

Corpus studies, on the other hand, have either included a heterogeneous range of registers, or centered on descriptions of spoken discourse or modal verbs. What is urgently needed is a more explanatory and descriptive account of the use of hedging in different registers based on analyses of authentic written sources.

Generally, the results showed that teaching hedges as a rhetorical device can have a positive influence on ESAP reading comprehension of undergraduate students. Instruction on hedging led to the better performance by the experimental groups in reading comprehension. The findings of this study indicate that hedging is a topic that deserves more attention in ESAP reading research, and perhaps most importantly, opens new vistas for further research.

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Appendix

Sample ESAP Reading Comprehension Tests

1. Both electrical and electronic components control electron flow; however, their applications are _____ different.
   a. directly
   b. publicly
   c. distinctly
   d. internally

2. If a fault persists in a circuit, the fuses _____ blow and the faulted part of the circuit _____ be de-energized.
   a. will-will
   b. may-will
   c. may-may
   d. will-may

3. After each operation, the arrester _____ capable of repeating operating cycle.
   a. can be
   b. is made
   c. must be
   d. appears

4. After a long time, it _____ that insulation may undergo very sudden change in characteristics.
   a. is true
   b. would appear
   c. seem reasonable
   d. is probable

5. The basic approach to the design of any practical controlling system will _____ involve trial-and-error procedures.
   a. practically
   b. probably
   c. credibly
   d. necessarily