IMPROVING READING COMPREHENSION OF ESP LEARNERS: GRAMMAR PRACTICE

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ABSTRACT
Researchers state that grammatical explanation in the classroom relies on the assumption that rules learnt consciously can be converted into unconscious process of comprehension and production. The present study aims at appraising the effect of explicit teaching of grammatical structures enhances reading comprehension of ESP (English for specific purpose) students or not. Participants in this study were of EFL (English as a Foreign language) university students majoring in computer engineering and IT (information technology). To assure the criterion of homogeneity, seventy students were selected from 150 learners based on the results obtained from a Comprehensive English Language Test (CELT) which was conducted at the outset of the study. A pretest and posttest of grammar contain multiple choices; fill in the blank, substitution, written form in composition. Two groups were randomly selected as a control group and experimental group in the study. The Experimental group was taught grammar explicitly while control one did not receive any treatment. An experimental design was utilized for the study with its treatment lasted 4 months (one semester). The results reaped out of statistical procedure such as ANCOVA bore witness to the proposed hypothesis in the paper, confirming the superiority of the experimental group to the control one, and, in the long run, spotlighted explicit grammar instruction as a scaffolding device that can provide a fertile ground for students to improve reading comprehension and also it shows that grammar pedagogy in English Language Teaching (ELT) foster consciousness-raising.

KEYWORDS: ESP learner, reading comprehension, explicit and implicit knowledge of grammar

INTRODUCTION
Theoretical framework
Language is an effective tool used in everyday communication. A widely held view in the current literature on foreign language acquisition is that one major way in which foreign language learners acquire grammatical and other kinds of language knowledge is through exposure to and comprehension of the meaning of oral and written texts in that language. Grammar constitutes a crucial concept of the language and it is a device for constructing and expressing meaning without which, effective communication would be impossible (Crivos & Luchini, 2012).

Even though reading comprehension is mostly conceptual, it still is affected by the knowledge of grammar either directly or indirectly. When the issue turns to second language reading, the role of grammar becomes more complex. Reading could be the most basic skill for second language learners, especially for EFL learners. This claim is best manifested in Chastain (1988), who states, “Reading is an important component of learning a second language for various reasons,” (p. 219). Many language learners regard reading as the first skill that should be mastered among
the academic skills (Grabe, 2001; Jalilifar, Hayati & Saki, 2002; Richard & Renandya, 2008). In recent years, there has been increased focus on the teaching of reading and other literacy skills to L2 learners. Part of this may relate to the recognition of the fact that reading is probably the most important skill for second language (L2) learners in educational contexts (Celce-Murcia, 2001; Grabe, 1991), and part of it may come from an increase in the number of learners worldwide who are learning English as a second or foreign language. The importance of reading for some researchers and methodologists is so obvious that they equal learning language to learning reading (Krashen, 1993 a & b); in other words, they claim that in order to learn (or acquire as they like to name it) a second language one has to read a lot. Krashen (1993b) maintains that reading in and of itself is almost powerful enough to result in language acquisition. He promotes the theory that reading is the foundation of language education and is the most powerful tool for increasing vocabulary and the abilities to read, write, spell, and comprehend. The approach teachers employ to teach reading to students depends on their functional definition of learning, language, and reading (Chastain, 1988).

Nunan (2006) argues that, “reading is not something that every individual learns to do. An enormous amount of time, money and effort is spent on teaching reading in elementary and secondary schools around the world. In fact, it is probably true to say that more time is spent on teaching reading than any other skills.” (p. 249). Since the 1980s, reading skill has received increased attention in terms of both research and its application to second language (L2) classrooms. Much of the study of L2 reading has concluded that readers only rely upon different sets of competencies while reading (Arens & Byrnes, 1991; Barnett, 1990; Brantmeier, 2002; Carrell, 1988; Hadley, 2001; Hosenfeld, 1984; Lee, 1997; Liontas, 2002; Omaggio Saricoban, 2002; Singhal, 2001; Scarcella & Oxford, 1992; Shrum & Glisan, 2000; Swaffar, as cited in Gascoigne, 2005). Learning to read in a second language (L2) is different from learning to read the first time around. Although people have a great deal of information about the processes involved when children learn to read in their native language (L1), we don’t have adequate empirical data or well developed theoretical models to describe what kinds of skills are involved in good English second language reading, particularly when this population is comprised of adults rather than children (August, 2002; Snow, 2002). Cook (2008) points out that "grammatical explanation in the classroom has thus relied on the assumption that rules that are learnt consciously can be converted into unconscious process of comprehension and production.” (p. 41). Explicit grammar instruction refers to those instructional strategies used to raise learners' conscious awareness of the form or structure of the target language. Through explicit instruction learners are able to notice features in the input data. Implicit knowledge, on the other hand, is a non-conscious and automatic abstraction of the structural nature of the material arrived at from experience of instances (Ellis, 2005).

The effects of the knowledge of grammar and vocabulary on reading comprehension are all positive (Gelderen, et al., 2007). There are certain grammatical topics which particularly benefit from explicit, systematic instruction. To put it differently, there are some grammatical topics which particularly suffer if they merely receive fleeting mention as they arise in context, or indeed are not dealt with explicitly in instruction at all (Klapper, 2003). The grammar of a language is the description of the ways in which words can change their forms and can be
combined into sentences in that language. If grammar rules are carelessly violated, communication may suffer although a good grammar rule is extremely difficult (Harmer, 2007). L2 readers may lack knowledge of English grammar and structure and, therefore, may read word by word. They may encounter a bulk of unfamiliar vocabulary so that they would be unable to grasp the overall concept conveyed in the sentence. L2 readers are also challenged when reading idiomatic expressions and unfamiliar grammatical constructions (Mora, 2001).

To explain the difficulties of L2 reading, it can be assumed that poor L2 lexical and grammatical knowledge prevents beginning L2 readers from applying reading strategies and metacognitive knowledge they use in L1 reading. The research on syntactic processes in L2 reading raises issues germane to the assessment and diagnosis of syntactic-processing problems in L2 reading. Research points to the need to distinguish between two potential sources of difficulty in syntactic processing. One source is simply the lack of knowledge of the grammar (Carlo & Sylvester, 1996). Atai (2003) argues that “in English for Specific Purposes (ESP) context, providing readers with some knowledge about structural patterns and grammatical features of the corresponding academic or occupational discourse may enhance comprehension of ESP texts.” (p. 25).

However, the role of grammar in L2 reading has not received much attention by researchers (Alderson, Nassaji, Shiotsu & Weir, Urquhart & Weir, as cited in Grabe, 2008). On the one hand, this may be attributable to the very nature of reading as a receptive language skill for comprehending the messages of the texts. Thus, knowledge of structure was regarded to have less to do with comprehending a text than levels of other components such as vocabulary, background knowledge, and reading strategies. On the other hand, the 30-year long dominance of Communicative Language Teaching (CLT) that puts a near-exclusive emphasis on macrolanguage skills and communicative functions has somewhat downgraded the need to address the issue of the role of grammar in L2 reading (Han & D’Angelo, Urquhart & Weir, as cited in Grabe, 2008). Briefly, the role of grammar in understanding is not recognized (Grabe, 2008). Despite doubts cast over the role of grammar knowledge in reading comprehension, there are compelling reasons to consider this issue (Nagy, Nation, as cited in Grabe, 2008).

Moreover, reading is an active, fluent process which involves the reader and the reading materials in building meaning. Meaning does not reside on the printed page, nor is it only in the reader (Anderson, as cited in Ueta, 2005). As a result, both explicit and implicit instructions suit complex grammatical rules; however, explicit instruction is better suitable for difficult rules and whether explicit or implicit instruction work depends on the features of the language points. Although a large number of studies have shown the positive effect of teaching explicit grammar on general reading comprehension (see for example Atai, 2003 or Jalilifar, Hayati & Saki 2008), regarding the effect of explicit teaching of grammar on reading comprehension of ESP text, to the best of researchers’ knowledge, very little research has been conducted. Therefore the aim of this study is to examine whether or not there is a direct relationship between explicit grammar teaching and reading comprehension in ESP texts.
Statement of the problem and purpose of the study

English for specific purposes (ESP) refers to the teaching and learning English as a second or foreign language by the aim of recognizing and covering the needs of learners in a particular domain. It is said that ESP is a "reaction against conventional foreign language instruction" (Strevens, 1977, p. 145).

According to Hutchinson and Waters (1987), the approach to ESP should be based on the learner's needs in their respective specialized subjects.

The types of modifications of learning resources are made accordingly to meet the kinds of individual differences with regard to time, goals, mode, or expectations of learning (Hutchinson & Waters, 1987). The discussion of the importance of needs analysis focuses on its roles as a starting point or a guide for course design, syllabus design, materials selection, assessment or even classroom activities. With the information at hand of learner needs a course designer will be able to produce a detailed description of language skills, functions, and forms as determined in the learner needs profile, which in turn leads to design a course.

Assessment and evaluation are also two important issues that should be included in the course design process. Assessment is a process of measuring what learners know and what they can do, whereas evaluation reveals how well the ESP course works with emphasis not only on successful factors but also on modifying less successful aspects (Dudley-Evans & St John, 1998).

ESP practitioners often have to provide the material for the course. This involves selection of published material, adapting material if it is not suitable, or writing it. ESP teachers also need to assess the effectiveness of the teaching material used whether it is published or self-produced. The concern of this study is to understand the correlation between learners’ knowledge of grammar and reading comprehension.

Significance and Justification of the study

Because English language teaching plays an important role in educational curriculum in Iran and special attention is given to it, the findings of the present study can be both theoretically and practically significant. Such a study provides information to be taken into consideration by language-planners and test takers.

Hopefully, the results of the study will be useful for ESP teachers. Finding the type of relationship between learners’ knowledge of grammar and reading comprehension. It will provide us with opportunities to look differently at the curriculum, instruction, and assessment.

RESEARCH QUESTION AND HYPOTHESIS

In keeping with the purpose of this study, which was specified above, the following question can be then:
Does grammar practice explicitly have any impact on Iranian ESP learners reading comprehension skill?
In order to investigate the above mentioned research question empirically, the following null hypothesis can be stated:

**H0:** Grammar practice explicitly does not have any impact on Iranian ESP learners’ reading comprehension skill.

**METHODOLOGY**

**Participants**

This sample consists of both male and female undergraduate junior EFL university students majoring in computer engineering and IT (information technology), the participants were 150 Iranian ESP students from four intact classes who had low-intermediate to intermediate level of English. They were then randomly assigned to two groups. Group A was considered as the experimental group and received explicit grammatical instruction, and group B was considered as the control group and received no explicit grammatical instruction.

**Instrumentation**

Two parallel reading comprehension tests were constructed consisting of 30 items and contain multiple choices; fill in the blank, substitution, written form in composition. One was given to both groups as a pre-test at the start of the course before giving any instruction. The other one was given to both groups as post-test at the end of the course of instruction. The pre-test aimed to determine the current level of the participants’ reading comprehension and their homogeneity or heterogeneity in terms of reading comprehension ability. The post-test aimed to determine the degree of reading comprehension after the experimental group received treatments in the course. To check the participants’ reading comprehension ability, a pre-test containing technical text of computer science information was constructed before starting the course. An attempt was made to construct the passages which included computer information that students had not encountered before by their own accounts. That is, the passages were constructed to include thoroughly new information of computer science.

**Procedure**

Prior to the intervention training program, a pilot study was conducted by the researcher to ensure that the subsequent formal study ran smoothly. In order to develop the pilot study, the researcher conducted the test to determine its reliability and equivalence. It was conducted at a university that similarly ranked with the university selected for the purpose of this study. The proficiency levels of these pilot participants were also similar to the target population of the formal study. The pilot test illustrated reliable and equivalent test results.

Thereafter filling out the background questionnaire, the proficiency of 70 participants was determined by CELT proficiency test. Based on the result of this test, participants were divided into two groups.

The questions were prepared by a mixture of multiple choices; fill in the blank, substitution, written form in composition. It is necessary to explain about this factor now that as was
mentioned in tests section, the content of the pre- test and post- test are the same. After determining two groups in experimental and control group, the researcher gave pre-test to both groups to see their performance before training the explicit grammar instruction to the experimental group. Next phase of the experiment started with some treatment sessions that included a demonstration of given explicit grammar instruction to experimental group and there is no instruction for control group. The students practiced the grammar exercises and familiar tasks which were provided for them by the instructor after the treatment sessions. For clarity of the effectiveness of applying the explicit grammar instruction, it is necessary to add that here, instructor explained the aforementioned grammar subjects by using those techniques in short and brief explanation and then immediately asked them to apply those explicit grammars to their tasks to observe the result of training consequently to compare control group performance (without taking explicit grammar instruction) which lasted roughly four months, the participants went through the post-test phase, which included the same written task test as the pre-test. All participants were to answer the questions. After the treatment sessions come to an end, the same grammar test (post-test) was given to the students in both groups in order to see whether there is any significant difference between students’ scores on the acquisition of explicit instruction before and after treatment or not (pretest and posttest). In the long run, the results, reaped out of both pretest and posttest, were compared for data analysis.

RESULTS AND DISCUSSION
This study explores the effect of explicit teaching of grammar on the Iranian EFL learners reading comprehension. To achieve this goal, the following research question was raised;

Does grammar practice explicitly have any impact on Iranian ESP learners reading comprehension skill?

The data were analyzed through analysis of covariance which has four main assumptions; normality, homogeneity of variances, linear relationship between the dependent variable (posttest) and the covariate (pretest) and homogeneity of variances.

The present data enjoyed normal distribution. As shown in Table 1, the ratios of skewness and kurtosis over the standard errors were lower than the absolute value of 1.96.

<table>
<thead>
<tr>
<th></th>
<th>Group</th>
<th>N</th>
<th>Skewness</th>
<th>Kurtosis</th>
<th>Statistic</th>
<th>Standard Error</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pretest</td>
<td>35</td>
<td>-.181</td>
<td>.398</td>
<td>-.45</td>
<td>.333</td>
<td>-.43</td>
</tr>
<tr>
<td></td>
<td>Posttest</td>
<td>35</td>
<td>.059</td>
<td>.398</td>
<td>-.15</td>
<td>.784</td>
<td>-.15</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>35</td>
<td>-.422</td>
<td>.398</td>
<td>-1.06</td>
<td>.801</td>
<td>-1.03</td>
</tr>
<tr>
<td></td>
<td>Posttest</td>
<td>35</td>
<td>-.297</td>
<td>.398</td>
<td>-0.75</td>
<td>.719</td>
<td>-0.92</td>
</tr>
</tbody>
</table>

The assumption of homogeneity of variances was also met. The results of the Levene’s test (Table 2)(F (1, 68) = 1.16, p = .285) rejected the null-hypothesis that the groups did not enjoy homogenous variances.
The relationship between the dependent variable (posttest of reading comprehension) and the covariate (pretest) was linear. As displayed in Table 3, the results of the linearity test \((F (1, 50) = 121.82, p = .000)\) rejected the null-hypothesis that the relationship between dependent variable and the covariate was not linear.

The probability associated with the interaction between groups and the covariate was not significant \((F (1, 66) = 1.25, p = .266)\) (Table 4). Thus it can be claimed that the assumption of homogeneity of regression slopes was retained.

As shown in Table 5, the experimental group \((M = 16.05, SE = .14, 95\% CI [15.76, 16.33])\) had a higher mean on the posttest of reading comprehension than the control group \((M = 12.96, SE = .14, 95\% CI [12.67, 13.25])\) after controlling for the possible effect of their entry reading comprehension ability as measured through the pretest.

Based on the result displayed in Table 6 \((F (1, 67) = 229.03, p = .000, \text{ Partial } \eta^2 = .774\) representing a large effect size) it can be claimed that there was a significant difference between the experimental and control groups’ means on the posttest of reading comprehension after controlling for their performance on the pretest. Thus the null-hypothesis was rejected.
Table 6: Tests of Between-Subjects Effects; Posttest of Reading Comprehension by Group (Controlling for Pretest)

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
<th>Partial Eta Squared</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest</td>
<td>416.308</td>
<td>1</td>
<td>416.308</td>
<td>572.00</td>
<td>.000</td>
<td>.895</td>
</tr>
<tr>
<td>Group</td>
<td>166.695</td>
<td>1</td>
<td>166.695</td>
<td>229.036</td>
<td>.000</td>
<td>.774</td>
</tr>
<tr>
<td>Error</td>
<td>48.763</td>
<td>67</td>
<td>.728</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>15365.250</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 1: Mean scores on posttest of reading comprehension by groups after controlling for pretest

CONCLUSION
The study reported in this research investigated the effect of explicit teaching of grammar on enhancing reading comprehension of ESP students. As the results indicated, explicit teaching of grammar improved the comprehension of reading ESP text. Current grammar pedagogy in English Language Teaching (ELT) foster consciousness-raising (CR) approaches (Batstone, Celce-Murcia, Thornbury, as cited in Nitta & Gardner, 2009). Consciousness-raising is a cognitive approach to grammatical instruction developed by Sharwood-Smith (as cited in Walsh, 2005). It is a learner-centered orientation, with emphasis on learning processes and strategies where the learners rely on their intellectual capacities and use their cognitive modes to learning. Richards and Schmidt (2002) defined consciousness-raising as: …techniques that encourage learners to pay attention to language form in the belief that an awareness of form will contribute indirectly to language acquisition.

Some linguists such as Krashen (1982) believed that formal instruction in grammar would not lead to the acquisition of knowledge. Prabhu (1987) also argued that by practicing in meaning-focused tasks, learners can acquire L2 grammar naturalistically. According to Crivos and Luchini (2012), "An effective grammar teaching model should be compatible with a communicative framework that emphasizes learners’ understanding of classroom input through meaningful, negotiated interactions" (p. 149). Such a model should integrate explicit grammar instruction with communicative language teaching. It should aim at helping students become aware of how grammatical features work. This awareness can facilitate and trigger learning and help students in
the process of becoming active participants and less dependent on teachers. Learning a language, and hence its grammar, is a lifetime commitment and the contact between teacher and learner is just a short phase in this undertaking. Therefore, it is essential to give learners the means and motivation to take part in their own learning processes.

Limitation and Delimitations of the Study
Researcher will select the sample concerned only with the following; the conclusions will not be extended beyond it.
1- The study is delimited to Iranian ESP learners
2- The study is delimited to junior ESP learners at BA level
3- The study is delimited to Iranian universities

REFERENCES


