



The Effect of Knowledge of Pedagogical Grammar on Word Guessing in Reading Comprehension among Iranian EFL Learners

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Abstract

The focus of the present study was to explore the effect of pedagogical grammar on the word guessing of intermediate EFL learners in reading. The participants of the present study were 30 learners at the intermediate level. They were selected based on their scores on language proficiency test. The researcher divided the learners of the present study into experimental and control groups. Then, the researcher gave the two groups a test of reading comprehension (as pretest). It consisted of an authentic text with some unfamiliar words. After administering the pretest, the treatment began. For the experimental group, the grammar was taught mainly based on the pedagogical grammar methodology. In contrast, control group was taught based on conventional methods of grammar instruction. After the instruction, the researcher gave a test of reading as posttest. In addition to this, learners answered a grammar test. After gathering the required data, they were analyzed using SPSS software (Paired and Independent Sample *t*-tests). The Pearson correlation was also used to find out the relationship between the learners' grammar knowledge and their ability to guess the word meanings in reading texts. The results indicated that the knowledge of pedagogical grammar had a significant effect on intermediate learners' word guessing in reading texts. Also, the correlation coefficient was found between knowledge of grammar and the ability to guess the words' meanings in reading texts.

Keywords: pedagogical grammar, word guessing, reading comprehension

INTRODUCTION

The ability to get the meaning of a text is one of the most important skills required of learners in both second and foreign language environments. Nowadays, students face lots of input in their daily lives. Much of this input is unknown to them, therefore they need to guess. Any knowledge of reading texts needs a number of factors. One fundamental factor in this respect is knowledge of pedagogical grammar. Knowing words is the key to understanding and to be understood and the bulk of learning a new language consists of learning new words. Since we face lots of new vocabulary in our

reading and listening, one good technique is to guess the meaning of unknown words. In many cases this attempt fails because, seemingly, we do not know the grammatical structure of the sentences. There seems to be a general consensus among experts in EFL that learners' exposure to sufficient comprehensible input is one of the requirements for learning to take place. In reality, however, learner's exposure to incomprehensible input is unavoidable. One major source of incomprehensibility seems to be related to unknown lexical items in input. In such contexts, learner's primary task is to discover the meaning of unknown words.

To illustrate how learners deal with unknown words, Read (2000) refers to initial evaluation of the unknown word in terms of its contribution to the general understanding of the texts. Learners normally evaluate the contribution of the unknown words to their general understanding. If an unknown word is not regarded as having a major impact on comprehension, it is normally ignored. On the other hand, if it is judged to have a contribution to determining the meaning, a variety of strategies is used to disambiguate it. Most often, learners tend to infer the meaning of unknown words from context. This, as Read (2000) suggests, is considered desirable on the ground that "it involves deeper processing that is likely to contribute to better comprehension of the text as a whole and may result in some learning of the lexical item that would not otherwise occur" (p.53).

Learning to read in a second language is one of the most valuable skills L2 learners should develop for social and academic purposes. This makes reading an active process and a demanding skill as readers are required to use the background knowledge, the grammatical knowledge, the situational context and the contextual clues to construct an interpretation of the meaning of a text (Pritchard, 1990; Brantmerier, 2003b). As such, a growing body of research on reading has focused on how readers

- a) Utilizing the background knowledge to construct a model of text (e.g., Pritchard, 1990; McNamara, Kintsch, Songer & Kintsch, 1996; Brantmerier, 2003);
- b) Using the L2 grammatical knowledge to understand text (e.g., Anderson, 1991; Hammandou-Sullivan, 1991; Brantmerier, 2003b) and
- c) Employing the strategies to comprehend texts (e.g., Laufer, 1997; Young & Oxford, 1997; Frantzen, 2003).

The influence of background knowledge on reading comprehension has been investigated extensively. Differences in prior knowledge impact the usefulness of different resources available to learners and result in degrees of learning. The effect of background knowledge on English learners' reading comprehension has been demonstrated.

RESEARCH QUESTIONS

The questions posed in the present research were as follows:

1. Does the knowledge of pedagogical grammar have an effect on guessing meaning from context in reading comprehension of Iranian EFL learners?
2. Is there any significant correlation between learners' grammar knowledge and their ability to guess the words' meaning in reading texts?

THEORETICAL BACKGROUND

The capacity to interpret the meaning of the content (both written and spoken) is a standout amongst the most essential aptitudes expected of individuals in second and foreign language situations. Nowadays we confront loads of input (written and spoken) in our routine life. An incredible measure of this input is obscure to us; along these lines, we have to figure. Any comprehending of reading writings and knowing the expressions necessitate detailed concern for various components, one principal factor of which is the information of language structure (Nassaji, 2004).

Knowing words is the way to comprehending and in addition being comprehended, and the majority of learning another language comprises of learning new words. Since we are confronted with loads of new vocabulary things in our reading and listening, one supportive system is to figure the meaning of obscure words. In many cases this endeavor fails due to the absence of our understanding regarding the syntactic structure of the sentences (Anderson, 1991).

To represent how students manage obscure words, Read (2000) alludes to primary assessment of the obscure word as far as its commitment to the general understanding of the writings. Students typically assess the commitment of the obscure words to their general understanding. In the event that an obscure word is not viewed as exerting a noteworthy influence on perception, it is regularly disregarded; then again, in the event that it is judged to incredibly add to determining the meaning, an assortment of procedures are utilized to solve the problem. Regularly students have a tendency to deduce the meaning of obscure words from setting. As Read (2000) proposes, this is viewed as alluring because "it involves deeper processing that is likely to contribute to better comprehension of the text as a whole and may result in some learning of the lexical item that would not otherwise occur" (p. 53).

Learning to read in a second language is a standout amongst the most important abilities L2 students ought to create for social and scholarly purposes. This makes reading a dynamic procedure and a challenging expertise as readers are involved to utilize the background information, the syntactic information, the situational setting and the contextual information to develop an elucidation of the meaning of a content (Brantmerier, 2003, as cited in Ranjbar, 2012).

METHOD

Participants

For objectives of the present study, the researcher selected 30 homogenous learners at the intermediate level of language proficiency from among the available classes in a

language institute located in Esfahan, Iran. Learners were selected based on their scores on proficiency test. In fact, the proficiency test was conducted in order to have the homogeneous learners. Those learners whose scores were between 40 and 50 on Oxford Placement Test (OPT) were considered as intermediate learners. The participants were divided into two groups of experimental and control randomly to examine the effects of pedagogical grammar on the word guessing in the reading texts. The participants were all female students who studied English as a foreign language in language institute. They all had already passed Four Corners 1, 2 and 3 textbooks.

Instruments

The main instruments of the present study were as follows:

Oxford Placement Test (OPT).

It consisted of 60 multiple choice questions and each question had one score. Participants had one hour allocated time to answer the questions. The participants who scored between 40 and 50 were considered as the intermediate learners. The classification of learners' level on OPT was based on the criterion of Oxford University. This was run by considering one standard deviation above and below the mean.

Reading Comprehension Test.

The main instrument of the present study consisted of an authentic and valid reading passage. It had been selected from Developing Reading Skills book for intermediate learners. It has been used as a pre-test and post-test for both control and experimental groups. The test was piloted and the Cronbach alpha index of reliability was found (0.89).

Grammar Test.

The last instrument was grammar test. It consisted of 20 multiple choice questions on grammatical rules. The test was adapted from the materials which were taught during the treatment. It was used to find out the correlation between the learners' grammar knowledge and their abilities on word guessing.

Procedure

A group of fifty participants was selected. The participants were given an Oxford Placement Test to select 30 students at the intermediate level of language proficiency. This test made the researcher certain, about the level and homogeneity of learners. After that, the researcher divided the learners into two groups of experimental and control. In fact, 15 of the learners were put in the experimental group and 15 of them were considered as the control group. Then, the researcher gave the two groups a test of reading comprehension test appropriate for their levels of language proficiency. It consisted of an authentic text with some specific difficult words. Students had to answer 20 multiple choice questions about the meaning of vocabularies in reading text. The purpose of the test was to make sure about the homogeneity of learners and for later

comparisons. After administering the pretest, the treatment was started. It lasted 10 sessions during 3 weeks. The experimental group was taught based on the pedagogical grammar. In fact, the grammar focused in lessons 9, 10, 11 and 12 of Four Corners 4 text book was taught mainly based on the pedagogical grammar methodologies. In this method meaning (function) was emphasized, contextualization was important, language learning was learning to communicate, language was created through repeated trials and errors, and fluency was primary whereas accuracy was secondary. In contrast, there was not a special treatment for the control group and they followed the conventional methods of language teaching in Iranian EFL classroom contexts. In fact, the instruction for the control group was based on explicit approach of grammar instruction. Learners were taught rules and were given specific information about the target language. In such an approach, grammar rules were explicitly presented to students and followed by practice applying the rule. After the instruction, the researcher gave the same test of reading which had been used as posttest. This test was run in order to compare the pre and post test scores of learners in two groups to see if such an instructions had any effect on word guessing of Iranian learners or not. In addition to this, learners were given the grammar test in order to find out if students who got a better mark on the tests of grammar got a good mark on the reading test, too. They were allowed 20 minutes to answer the questions.

RESULTS

In order to select the intermediate learners, 50 learners took part in OPT. Thirty learners at the intermediate level of language proficiency were selected. Taking each learner's score, 30 learners who scored between 40 and 50 were assumed as the intermediate level students. Then the intermediate learners were divided into two groups of control and experimental randomly. Control group received no specific treatment while experimental group was taught based on pedagogical grammar. Table 1 indicates the descriptive statistics of the intermediate learners' scores on the OPT.

Table 1. Descriptive Statistics on the Intermediate Learners' Scores on OPT

	Group	N	Mean	Std. Deviation	Std. Error Mean
Placement Test	Control	15	42.93	2.154	.556
	Experimental	15	43.20	3.028	.782

According to Table 1, the mean scores of the learners in control and experimental groups on OPT are 42.93 and 43.20 respectively which are approximately the same. In addition to this, Independent Sample *t* test was run in order to make sure about the homogeneity of two groups of learners. In fact, it was run to be ensured that there was not significant difference between two groups of learners regarding their linguistic background. Table 2 indicates the results of the test for control and experimental groups.

Table 2. Independent Sample t-test for Performances of Control and Experimental Groups on OPT

	Levene's Test for Equality of Variances		t-test for Equality of Means							
	F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference		
								Lower	Upper	
Placement	Equal variances assumed	2.598	.118	-.278	28	.783	-.267	.959	-2.232	1.699
	Equal variances not assumed			-.278	25.276	.783	-.267	.959	-2.242	1.708

As Table 2 indicates, the performances of two groups of learners on OPT is the same and there is not a significant difference between their performances, as the value of significant level (Sig) is bigger than 0.05. In other words, according to the results obtained from Table 2, ($t(28) = -.278, p = .118$), it can be concluded that participants were at the same level of language proficiency.

The First Research Question

The first research question was: Does the knowledge of pedagogical grammar have an effect on meaning guessing by Iranian EFL learners?

At first, the reading comprehension test with un-known words, as pretest, was run to make sure about the learners' homogeneity and to compare with the reading comprehension post test scores of learners. Table 3 indicates the performances of two groups of learners on reading comprehension pretests.

Table 3. Descriptive Statistics of the Control and Experimental Groups' Performances on Post Tests

	Group	N	Mean	Std. Deviation	Std. Error Mean
Pre test	Control	15	12	2.187	.565
	Experimental	15	13.07	1.534	.396

As Table 3 indicates, the mean scores of the pretests of learners in control (12.73) and experimental (13.07) groups were approximately the same. In other words, learners in the control and experimental groups performed approximately the same. In order to find out if this finding was statistically significant or not, an Independent Sample *t* test was run (Table 4).

Table 4. Independent Sample t-test for the Comparison of Pre Test Scores of Learners in the Control and Experimental Groups

		Levene's Test for Equality of Variances		t-test for Equality of Means								
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference			
								Lower	Upper			
Pre test	Equal variances assumed	1.866	.183	-.483	28	.633	-.33333	.68961	-.174593	1.07926		
	Equal variances not assumed			-.483	25.092	.633	-.33333	.68961	-.175334	1.08667		

According to the results obtained from Table 4, ($\text{Sig} > 0.05$), it can be concluded that there was not significant difference between control and experimental groups' performances on pretests. Table 5 indicates the descriptive statistics of the performances of learners in control group on pre and posttests.

Table 5. Descriptive Statistics of Control Group's Performances on Pre and Post Tests

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pretest	12.73	15	2.187	.565
	Posttest	13.67	15	2.526	.652

As Table 5 indicates, the mean scores of the pre and posttests of learners in the control group were approximately the same. In order to make sure about this finding, a Paired Sample *t* test was run its results are shown in Table 6.

Table 6. Paired Sample t-test for the Comparison of Pre and Post Test Scores of Learners in the Control Group

		Paired Differences					T	Df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
						Lower	Upper		
Pair 1	Pretest - Posttest	-.933	2.344	.605	-2.232	.365	-.1542	14	.145

According to the results obtained from Table 6, ($t(14) = -1.542$, $p = .145$), it can be concluded that learners in the control group did not show significant development on reading comprehension ability.

In addition to these, the researcher compared the obtained scores of pre and posttests of learners in experimental group in order to investigate the effectiveness of pedagogical grammar on word guessing in reading comprehension tests. Table 7

indicates the descriptive statistics of the performances of learners in experimental group on pre and posttests.

Table 7. Descriptive Statistics of Experimental Group's Performances on Pre and Post Tests

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pretest	13.07	15	1.534	.396
	Posttest	16.07	15	3.150	.813

As Table 7 indicates, the mean scores of the pre and posttests of learners in the experimental group were not the same. In order to make sure about this finding, a Paired Sample *t* test was run (Table 7).

Table 7. Paired Sample *t*-test for the Comparison of Pre and Post Test Scores of Learners in the Experimental Group

		Paired Differences					<i>t</i>	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Pretest - Posttest	-3.933	2.987	.771	-5.588	-2.279	-5.100	14	.000

According to the results obtained from Table 7, ($t(14) = -5.100, p = .000$), it can be concluded that learners in the experimental group showed significant development on reading comprehension ability and pedagogical grammar affected on learners' word guessing in reading texts. After comparing the pre and post test scores of each group, it was needed to compare the performances of control and experimental groups on posttests in order to find out if there was a significant difference between their achievements on their posttests. Table 8 indicates the descriptive statistics of the performances of learners in control and experimental groups on posttests.

Table 8. Descriptive Statistics of the Control and Experimental Groups' Performances on Post Tests

	group	N	Mean	Std. Deviation	Std. Error Mean
Posttest	pedagogical grammar	15	16.07	3.150	.813
	Conventional	15	13.67	2.615	.675

As Table 8 indicates, the mean scores of the post tests of learners in control and experimental groups were not the same. In other words, learners in the experimental group outperformed the learners in the control group. In order to find out if this finding was statistically significant or not, an Independent Sample *t* test was run (Table 9).

Table 9. Independent Sample t-test for the Comparison of Post Test Scores of Learners in the Control and Experimental Groups

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper	
Posttest	Equal variances assumed	1.952	.173	2.460	28	.020	2.600	1.057	.435	4.765
	Equal variances not assumed			2.460	27.082	.021	2.600	1.057	.431	4.769

According to the results obtained from Table 9, (Sig<0.05), it can be concluded that there was significant difference between control and experimental groups' performances on post tests and learners in the experimental group achieved better than the learners in the control group on posttests.

The Second Research Question

The second research question was: Is there any significant correlation between learners' grammar knowledge and their ability to guess the words' meaning in reading texts?

In addition to these, it was needed to find out the relationship between learners' grammar knowledge and their ability to guess the words' meaning in reading texts. To do this, Pearson correlation was used. Table 10 indicates the results of One-Sample Kolmogorov-Smirnov test to investigate the normality of grammar and reading comprehension test scores' dispersion.

Table 10. The Results of One-Sample Kolmogorov-Smirnov Test for Normality of Grammar and Reading Comprehension Test Scores

		Grammar	Reading
N		30	30
Normal Parameters ^{a,b}	Mean	15.2667	15.4333
	Std. Deviation	2.16450	2.22344
Most Extreme Differences	Absolute	.182	.176
	Positive	.182	.174
	Negative	-.118	-.176
Kolmogorov-Smirnov Z		.999	.963
Sig		.271	.312

As Table 10 indicates, the value of significant level is bigger than 0.05, therefore, the normality of the scores is assured. Table 11 indicates the results of Pearson correlation in order to find out the relationship between learners' grammar knowledge and their ability to guess the words' meanings.

Table 11. The Results of Pearson Correlation for Relationship between Grammar Knowledge and Word Guessing Ability

		Gramer	Reading
Gramer	Pearson Correlation	1	.620**
	Sig. (2-tailed)		.000
	N	30	30
Reading	Pearson Correlation	.620**	1
	Sig. (2-tailed)	.000	
	N	30	30

** . Correlation is significant at the 0.01

According to Table 11, the correlation between two variables of grammar knowledge and word guessing is positive, as $r = .620$ and $\text{Sig} < 0.01$.

CONCLUSION

The focus of the present study was to explore the effect of pedagogical grammar on the word guessing of intermediate EFL learners in reading texts. It was found that pedagogical grammar had significant effect on word guessing in reading texts. The results also indicated that there was a significant difference between the two groups of intermediate students regarding their achievement of word guessing in reading texts. The last conclusion was that there was a significant correlation between learners' grammar knowledge and their ability to guess the words' meaning in reading texts. In general, the results of this study support the use of pedagogical grammar on the EFL learners' word guessing. Intermediate learners who were taught the pedagogical grammar did better on the posttest than learners who learned the same material with no special treatment.

The posttest mean scores of the two groups were compared through implementing an Independent Sample *t* test to determine if the difference between the means was statistically significant or not. The comparison between the mean scores of two groups on the post tests showed that the experimental group's mean, who received instruction based on pedagogical grammar, was significantly higher than that of the control group. Therefore, it could be concluded that there was a significant difference between the two groups' mean scores on the posttests.

Based on the present findings it is understood that grammar has an important role in learning a second or foreign language. It helps students to guess the meanings of unknown words in reading texts. The knowledge of word is essential to read the authentic texts and a lack of this knowledge is an obstacle to learning.

Reference

- Anderson, N. J. (1991). Individual differences in strategy use in second language reading and testing. *Modern Language Journal*, 75, 460-472.
- Brantmeier, C. (2003). Does gender make a difference? Passage content and comprehension in second language reading. *Reading in a Foreign Language*, 15 (1), 1-27.
- Frantzen, D. (2003). Factores affecting how second language Spanish students drive meaning from context. *The Modern Language Journal*, 87, 168-199.
- Hammandou-Sullivan, J. (1991). Interrelationship among prior knowledge, inference, and language proficiency in foreign language reading, *Modern Language Journal* 75, 27-38.
- Laufer, B. (1997). The lexical plight in second language reading: Words you don't know, words you think you know, and words you can't guess. In J. Coady & T. Huckin (1997). *Second language vocabulary acquisition: a rationale for pedagogy*. Cambridge University Press, Cambridge.
- McNamara, D. S., Kintsch, E., Songer, N. B., & Kintsch, W. (1996). Are good texts always better? Text coherence, background knowledge, and levels of understanding in learning from text. *Cognition and Instruction* 14, 1-43.
- Nassaji, H. (2004). The relationship between depth of vocabulary knowledge and L2 learners' lexical inferencing strategy use and success. *The Canadian Modern Language Review*, 61, 107-134.
- Pritchard, R. (1990). The effect of cultural schemata on reading processing strategies. *Reading Research Quarterly*, 4, 273-295.
- Ranjbar, M. (2012). The relationship between grammatical knowledge and the ability to guess word meaning: The case of Iranian EFL learners with upper intermediate level of proficiency. *Theory and Practice in Language Studies*, 2 (6), 1305-1315.
- Read, J. (2000). *Assessing vocabulary*. Cambridge: CUP.
- Young, D. J., & Oxford, R. (1997). A gender-related analysis of strategies used to process input in the native language and a foreign language. *Applied Language Learning* 8, 43-73.