The Effect of Textual Awareness-Raising on Undergraduate EFL Learners' Reading Comprehension: A Focus on Degrees of Text Complexity

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Abstract

This study aimed to find out the effect of text awareness-raising with two degrees of complexity (linguistically and cognitively complex vs. linguistically complex and cognitively simple) on Iranian EFL learners' reading comprehension. A factorial design with the use of pretest-treatment-posttest was utilized. In this regard, 120 students in four intact classes formed the sample of the study. They were randomly divided into two experimental and two control groups. In one experimental group, the awareness of linguistically and cognitively complex texts was raised and in the other the awareness of linguistically complex and cognitively simple texts was raised. In the control groups, the same texts were employed without textual awareness-raising. The results of Two-way MANOVA revealed the significant main effect of textual awareness-raising on both types of texts. The results also showed a significant interaction effect of teaching method and text complexity. It means the effect of textual awareness-raising was high when the text was linguistically and cognitively complex and it was low when the text was linguistically complex and cognitively simple. The results can be useful for teachers, students, syllabus designers, and course book writers.

Keywords: cognitively complex texts, cognitively simple texts, linguistically complex texts, text structure, textual awareness-raising

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Introduction

Since the early 1990s, the genre-based analysis of spoken and written discourse has received increasing attention (e.g., Howatt & Widdowson, 2004; Hyon, 1996). This was motivated by the need to provide appropriate models of various genres for English language learners' disciplines. The genre-based approach is linked to the development of the English for Specific Purposes (ESP) approach and text structure (Swales, 1990). It involves the examination of text structural patterns or, as noted by Swales, the "move structure", through which the author's communicative purpose is achieved. Within genre-based pedagogy, providing awareness about text structure is important. Swales (1990) considers the consciousness-raising of text structure as important as a consciousness-raising of grammar. Research (e.g., Hall et al., 2005) has also revealed that readers who know the text organization are more successful in detecting the important ideas and associations within the text. Understanding the text structure is helpful to readers as it assists them to draw out relevant background information and schemas from memory to shape the text's meaning (Cain et al., 2004).

In addition to awareness-raising of text structure, the notion of comprehensibility which is related to text complexity is important. Kirkland and Saunders (1991) state that text complexity is a factor that is connected to the readability of a text. It is affected by information density involving the frequency and nature of vocabulary used, the extent of explanation included in the text, and the number of interrelationships between concepts. Various definitions have been generated to indicate the importance of the issue. According to (Bulté & Housen, 2012), complexity is defined as the extent to which the text includes complex structures such as long paragraphs with long sentences. The number of phrases as well as clauses in a sentence has been expressed as the metrics of text complexity (Housen et al., 2019; Housen & Kuiken, 2009). It can be cautiously assumed that the notion of text complexity can be associated with linguistic and cognitive complexity, which can be the predictor of the learners' success in academic settings.

The linguistic complexity of a reading text has an important role in the readers' comprehension of the text. Based on the standards set by World-Class Instructional Design and Assessment (WIDA) for English Language Development (WIDA ELD Standards, 2012), linguistic complexity refers to the types of

grammatical structures as well as their variety, the arrangement, and the interrelatedness of ideas. Compared to linguistic complexity, cognitive complexity contains lexical phrases related to emotional features, which might make challenges for the learners in understanding the text (Granello, 2001; Pennebaker et al, 2007). It can be claimed that the cognitive complexity of the text can be logically treated if the learners are provided with efficient instruction concerning the most common types of lexical phrases that are used in different types of texts (both academic and non-academic).

In the EFL context of Iran, teaching higher-order levels of comprehension processes to readers, for example, cognitive functions, that allow readers to be flexible with their learning in unfamiliar situations, appears to be overlooked (Fotovatian & Shokrpour, 2007; Riazi & Mosalanejad, 2010). Lacking awareness of the so-called strategies might lead to poor comprehension of the texts, especially at the university level when the students encounter an array of academic texts with different cognitive and linguistic complexities. Although teaching text structure has abundantly been investigated (e.g., Ghorbani et al., 2019; Newman, 2007; Schwartz et al., 2017), and more importantly almost all research on text complexity has been conducted regarding the students' writing ability (Biber & Gray, 2016; Kormos, 2011), there appears to be little-to-no research considering degrees of text complexity, both cognitively and linguistically, as two main components in alignment with teaching text structure. Therefore, this study intended to explore whether raising the EFL learners' awareness of the structure of informational/expository texts with different linguistic and cognitive complexities would lead to a better comprehension of the texts.

Literature Review

Studies that work on the possible effects of teaching text structure can be divided into three parts. Some studies suggest direct instruction to make students explicitly aware of the text structure (e.g., Carrell, 1985; Duke & Pearson, 2002). ESP teachers tend to utilize this approach with non-English-speaking students, leading to criticism that the instruction of genre specifications inhibits creativity (Master, 2005). The second line of research emphasizes the use of graphic organizers to enhance students' familiarity with the text structure (e.g., Alvermann,

1986). These kinds of studies use semantic maps as a visual representation of a thought or conceptual connections within a text. The third one focuses on strategy training in reading comprehension. For instance, the use of strategies, such as making summaries, semantic mapping techniques, and predicting have been seen to develop an understanding of text structure and realization of the texts (Block & Pressley, 2002).

There have been numerous studies on genre-based instruction since 1985, which have applied this approach to students' reading comprehension (e.g., Kalali & Pishkar, 2015; Karbalaei & Hejazi, 2015; Shishehsaz, 2006). Newman (2007) investigated the impact of providing instruction on expository text structure on third-grade EFL students' comprehension of reading texts. The experimental groups were trained on text structure practicing various reading strategies; in contrast, the control group worked on traditional guided reading. Following the posttest, the experimental group had a better understanding of expository texts than the control group.

Studies on textual awareness show its significance in different learning contexts. Numerous investigations have been done in the Iranian EFL context regarding this issue. Salmani-Nodoushan (2010) conducted a study, which aimed to investigate whether explicit teaching of causative and descriptive text structure influenced the participants' reading recall. The outcomes of the immediate recall test revealed that the experimental group, in which the explicit teaching of text structures was provided, showed a better reading recall than the control group.

In line with the previous study, Chalak and Nasr Esfahani (2012) investigated the effect of providing information regarding text structure strategy on Iranian EFL learners' comprehension of reading passages. Forty advanced learners classified into two groups participated in the study. The experimental group received instruction on reading comprehension through text structure awareness-raising within four weeks and the control group practiced the traditional implicit methods of teaching. The results indicated that the experimental performed better in the reading comprehension test.

Elmianvari and Kheirabadi (2013) also explored the impact of raising text structure awareness on EFL learners' reading comprehension. The study was run with the assumption that the learners who already knew the organizational pattern of text would realize text structure and would apply it as a technique to comprehend the

text. The participants took reading comprehension tests before and after the accomplishment of the treatment. Their study revealed that the students who applied the text structure strategy outperformed those who were not exposed to the text structure training on reading comprehension. The researchers concluded that understanding text structure and the direct instruction of expository text structure could contribute to the students' comprehension.

Zarrati, et al. (2014) examined the effect of text structure awareness in improving strategic reading among EFL students. They provided 85 Iranian EFL students with training on discourse organizing signals (punctuation marks, code glosses, frame markers, and transitional words) throughout one semester. It was indicated that the explicit instruction of textual features and metacognitive realization of text structure contributed to the learners' reading comprehension.

Schwartz et al. (2017) examined whether Spanish university students could develop their reading comprehension through exposure to text structure instruction. The possibility of transferring the instruction from English to Spanish was also taken into consideration. They showed that providing instruction on text structure significantly improved the university students' reading comprehension although the researchers did not come to a logical conclusion concerning the transfer of the intervention to their L1. They concluded that "spontaneous transfer of the use of the strategy does not guarantee large gains in what or how much is recalled" (p. 13).

In a recent study, Ghorbani et al. (2019) explored the possible effects of raising text structure awareness on the reading comprehension of upper-intermediate university students. They made the participants familiar with various kinds of expository text structures. The results indicated the significant outperformance of the textual awareness-raising group in reading comprehension compared to the control group. They suggested that teaching text structures could be conducted in alignment with considering text complexity in terms of linguistic and cognitive complexity.

Research on the text structure and its influence on reading comprehension has been restricted to examining narrative and expository texts (Zabrucky & Moore, 1999). There is a scarcity of research in the literature showing the effect of text complexity in terms of linguistic complexity (LC) and cognitive complexity (CC) and/or simplicity (CS) on the comprehension of these texts. This study attempted to

look at this issue from a new perspective and focused on the role of text complexity, especially in the Iranian EFL setting. Consequently, the study intended to explore the gap in the previous research studies by uncovering the effects of the dual roles of text complexity and textual awareness-raising on EFL learners' comprehension of reading texts. In this regard, the following research questions were posed (+TAR is the group that received textual awareness-raising; -TAR reflects the group undergoing the conventional instruction; LC refers to linguistic complexity; CC is cognitive complexity, and CS points out to the cognitively simple texts).

1. Is there a significant main effect of the teaching method (+ TAR vs. -TAR) on EFL learners' reading comprehension?

2. Is there a significant main effect of text complexity (LC & CC vs. LC & CS) on EFL learners' reading comprehension?

3. Is there a significant interaction effect of teaching method and text complexity on EFL learners' reading comprehension?

Method

Participants

The main sample included 120 students selected based on the Oxford Quick Placement Test (OQPT) from among 160 undergraduate EFL students in Roudbar, Iran. The sample included both female (f= 82) and male (f=38) students who were between the ages of 18 to 40. Four intact classes of about 40 students were employed. The same teacher taught students in these four classes. To ensure the homogeneity of the students, the OPT was administered to the four classes. The students whose scores fell within the range of 40 to 49 were at the upper-intermediate level and comprised the main sample of the research (30 students in each class). The classes were randomly assigned into four groups as follows:

Group 1(Experimental 1): with textual awareness-raising of linguistically and cognitively complex texts (LC & CC + TAR).

Group 2 (Experimental 2): with textual awareness-raising of linguistically complex and cognitively simple texts (LC & CS + TAR).

Group 3 (Control 1): without textual awareness-raising of linguistically and cognitively complex texts (LC & CC - TAR).

Group 4 (Control 2): without textual awareness-raising of linguistically complex and cognitively simple texts (LC & CS - TAR).

Instruments and Materials

The following research instruments and materials were applied in the present study:

QPT. QPT (Syndicate, 2001) is a standardized English proficiency test, which was designed and validated by Oxford University Press and Cambridge ESOL (Geranpayeh, 2003). As mentioned by Geranpayeh (2003) in his review of the English Quick Placement Test, the items of this test have been checked for their quality through Cambridge ESOL and more than 6000 students have confirmed its validity in 20 countries. The reliability of this test was estimated in this study through Cronbach's Alpha and an acceptable coefficient of .82 was obtained.

Pretest and Posttest. In order to measure the participants' reading comprehension ability both at the beginning and after the accomplishment of the treatment, two pretests and two posttests were administered. Each test contained two reading passages of expository type with ten multiple-choice items that were adapted from TOEFL reading passages for the intermediate level students. The first pretest included two reading comprehension texts that were linguistically and cognitively complex while the second pretest included two reading comprehension texts that were linguistically complex but cognitively simple. The passages in the pretests 1 and 2 contained 710 and 696 words, respectively. Cognitive complexity of the reading passages was measured through Linguistic Inquiry Word Count (LIWC) developed by Pennebaker et al., (2007). The same procedure was repeated for the first and second posttests. However, the reading passages were different from the pretests but their lengths were almost the same. The first posttest included 700 words and the second posttest included 690 words. For the correct response, one point and for each wrong answer zero point was assigned. Therefore, the minimum and maximum scores for each test were 0 and 20, respectively. Cronbach's Alpha was run to estimate the reliability of reading comprehension tests, and the reliability coefficients of .81 and .85 were obtained for the pretest and the posttests, respectively, indicating the internal consistency of the items as they were higher than the minimum value required (i.e., α= .70) as suggested by Cohen et al. (2007).

Measures of Linguistic and Cognitive Complexity of the Texts. The required texts for the treatment and pre/posttests were selected from different TOEFL texts based on their linguistic and cognitive complexity. In order to measure

the linguistic complexity, an automated readability tool was used that calculates Flesch Reading Ease according to the formula as suggested by Flesch (1948). This formula considers word length and sentence length. The resulting score is between 0-100 and the criteria for determining the level of difficulty or easiness of a text are as follows: 90-100 (text is very easy), 80-89 (text is easy), 70-79 (text is fairly easy), 60-69 (text is standard), 50-59 (text is fairly difficult), 30-49 (text is difficult), and 0-29 (text is very confusing). Because this study dealt with the texts that were linguistically complex, the difficult texts with almost the same length were selected. Moreover, these texts were also measured for their cognitive complexity through Linguistic Inquiry Word Count (LIWC) (Pennebaker et al., 2007). The LIWC is an electronic software that is used for word analysis and has many applications in the social sciences (Graesser & McNamara, 2012).

There are different dimensions in the output of LIWC software. Based on LIWC criteria, the higher the resulting score, the more cognitively complex a text would be. Therefore, in this study, the expository texts with higher scores on cognitive words were selected as cognitively complex texts and those with lower scores were considered as cognitively simple texts to be used in the treatment sessions and pretests and posttests.

Procedure

After establishing the homogeneity of the participants concerning their general language proficiency, the researchers assigned them to four groups and administered two reading comprehension pretests. The Pretest 1 had two reading passages that were linguistically and cognitively complex and the Pretest 2 had two reading passages which were linguistically complex and cognitively simple.
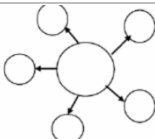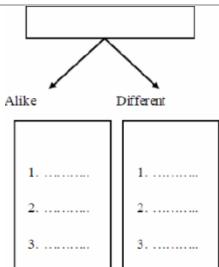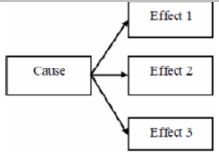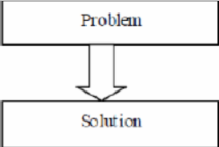
The treatment was introduced over ten weeks. In the two textual awareness-raising groups, the students in the Experimental group 1 were exposed to the cognitively and linguistically complex texts and in the Experimental group 2 to the linguistically complex and cognitively simple texts. Effective strategies were introduced to these groups to familiarize them with different textual patterns and how they can analyze different informational texts. It was attempted to develop the language learners' familiarity with the text structures using Tompkins' (1998) model.

In the first session, the students were provided with an overview of the course and the primary organizational text structure. The teacher explained that writers use text structures to organize their information. Therefore, the teacher focused on signal words and presented phrases that identify the text structure of multiple expository texts and explained and introduced the graphic organizers that had different patterns. (Figure 1).

Figure 1

Text Structures, Their Signal Words, and Graphic Organizers

Text Structure	Signal Words	Graphic Organizer
Description	to illustrate, including, is like, such as, for instance, characteristics, for example	
Sequence	first, second, third, since, when, after, later, previously, finally, then, before, next	
Comparison	yet, in comparison, likewise, just as, just like, in the same way, either/or, same as, alike, different, in contrast, also, although, similarly, but, on the other hand, nevertheless, however	
Cause and Effect	this led to, thus, due to, for, so that, since, consequently, because, therefore, as a result, reasons why, if/then	
Problem and Solution	question/answer, so that, because, if/then, dilemma is, problem is	

The first session provided some background knowledge to the students regarding the organizational patterns of different types of texts. According to

Akhondi et al. (2011), when teaching expository texts, it is better to start with the description and end with the comparison/contrast patterns, which is followed in most reading textbooks; therefore, we followed the same order in the treatment sessions. In the following sessions, the students worked on organizational pattern utilizing the texts with the specified complexities every two sessions (i.e., linguistically and cognitively complex texts for one TAR group, and linguistically complex and cognitively simple texts for the other TAR group). The teaching procedure began with the recognition part, continued with practices, and ended to production. Firkins et al. (2007) employ the concept of "cyclic strategic" to describe the teaching stages through genre-based approach, which are: (a) text modeling, (b) joint construction of a text, and (c) independent construction of a text. In modeling phase, the instructor selected a particular type of text to develop the classroom activities. Through working on thinking aloud, the teacher taught the students the way they could recognize the signal words and phrases within the text. In the think aloud strategy, the teacher read aloud a paragraph and paused at appropriate points to share her own comprehension strategies and understanding of the text. For example, she talked about the clues she used to identify the text structure. Moreover, she modeled the drawing of the related graphic organizer to reflect the structure of the text.

Next, a text was given to the students and the teacher asked them to highlight the signal words and phrases that identify the structure of the text. After that, the students applied the skills and strategies they had learned for independent practice. The teacher gave them a text with blank parts and the students were directed to fill-in-the blanks by the appropriate signal words and phrases that they had learned. While working on texts, the students were also asked to highlight the topic sentence, general main idea, and supporting sentences. To do more exercises, the teacher gave them another text and an incomplete graphic organizer related to the text. They were asked to read the text (sometimes in small groups and sometimes individually) and complete the graphic organizer with the information they got from the text. One more practice was using jigsaw activities. Some scrambled sentences were given to each group and they were asked to combine them as a whole text. They discussed and produced a cohesive text out of the jumbled sentences. Consequently, the teacher created chances for the students to encounter different texts with varied patterns of organization and helped them do the analysis for the

texts' structures.

However, the two -TAR groups worked on linguistically complex and cognitively complex texts (Group 3/Control 1) and linguistically complex and cognitively simple texts (Group 4/Control 2) in the traditional implicit instructional method without receiving any specific instruction and practice regarding textual awareness-raising. After ten weeks, the students in four groups were post-tested twice to determine the possible effects of the intervention program on their reading comprehension of texts with different complexities.

Design

The study was a quasi-experimental research with a factorial design, which included pretest-treatment-posttest. In this regard, teaching method (with two levels of with TAR and without TAR) and text complexity (with two levels of LC & CC and LC & CS texts) were the independent variables and reading comprehension in two conditions of LC & CC (pretest 1 and posttest 1) and LC & CS (pretest 2 and posttest 2) was the dependent variable of the study.

Data Analysis

The collected data were analyzed using SPSS 22. Two one-way ANOVAs were conducted on pretests to check the reading comprehension of the four groups before the treatment. After checking the assumptions and confirming the equality of the groups, a Two-way MANOVA was carried out on the posttests' scores to answer the research questions. The teaching method and text complexity were the two independent variables and posttests as the dependent variables. The Alpha Level was set at .05 in all analyses. The preliminary assumption checking revealed the normality, linearity, homogeneity of variance-covariance matrices, and multicollinearity were met.

Results

Descriptive statistics were run for the results of the pretest scores of reading comprehension. The results are presented in Table 1.

Table 1

Descriptive Statistics for the Pretest Scores of LC & CC and LC & CS Texts

		N	Mean	SD	Skewness	Kurtosis
Pretest 1	Group 1: + TAR of LC & CC	30	13.10	1.91	-.121	13.81
(LC&CC)	Group 2: + TAR of LC & CS	30	12.86	1.94	.019	13.59
	Group 3: - TAR of LC & CC	30	13.36	2.14	-.740	14.16
	Group 4: - TAR of LC & CS	30	12.60	2.62	-.712	13.57
	Total	120	12.98	2.16	-.539	-.068
Pretest 2	Group 1: + TAR of LC & CC	30	15.93	1.83	-.289	16.61
(LC&CS)	Group 2: + TAR of LC & CS	30	15.06	1.77	-.029	15.73
	Group 3: - TAR of LC & CC	30	15.53	1.81	-.206	16.21
	Group 4: -TAR of LC & CS	30	15.60	2.29	.713	16.45
	Total	120	15.53	1.94	-.351	-.619

Note. LC& CC=linguistically complex and cognitively Complex; LC &CS= linguistically complex and cognitively Simple; + TAR= with textual awareness-raising; - TAR= without textual awareness-raising

As shown in Table 1, the highest mean for the pretest of linguistically and cognitively complex texts was related to the Group 3 ($M = 13.36$, $SD = 2.14$) and the lowest mean score was related to the Group 4 ($M = 12.60$, $SD = 2.62$). In the case of the second pretest, using the texts which were linguistically complex and cognitively simple, the highest and lowest mean scores were related to the Group 1 ($M = 15.93$, $SD = 1.83$) and Group 2 ($M = 15.06$, $SD = 1.77$), respectively. In order to examine if the mean differences among the four groups were statistically significant, one-way analysis of variance was run. Before running one-way ANOVA, the homogeneity of the variances was checked out through computing Levene's test (See Table 2).

Table 2

Levene's Test for Examining the Homogeneity of Variances (Pretest Scores)

	Levene Statistic	df1	df2	Sig.
Pretest 1 (LC&CC)	1.046	3	116	.375
Pretest 2 (LC&CS)	.966	3	116	.411

Note. LC& CC=linguistically complex and cognitively Complex; LC &CS= linguistically complex and cognitively Simple

*$P < .05$

The findings of Levene's statistics showed that the group variances were similar in both pretests because the *p*-values were more than the set alpha level (.05).

When it comes to the normality assumption, the results of the Kolmogorov-Smirnov as shown in Table 3 were used.

Table 3

Kolmogorov-Smirnov Test

		Statistic	df	Sig.
Pretest 1 (LC&CC)	Group 1 : + TAR of LC & CC	.150	30	.082
	Group 2: + TAR of LC & CS	.139	30	.145
	Group 3: - TAR of LC & CC	.150	30	.085
	Group 4: - TAR of LC & CS	.167	30	.057
Pretest 2 (LC&CS)	Group 1 + TAR of LC & CC	.153	30	.073
	Group 2: + TAR of LC & CS	.168	30	.055
	Group 3: - TAR of LC & CC	.135	30	.173
	Group 4: -TAR of LC & CS	.169	30	.058

Note. LC& CC=linguistically complex and cognitively Complex; LC &CS= linguistically complex and cognitively Simple; + TAR= with textual awareness-raising; - TAR= without textual awareness-raising
*$P < .05$

The *p*-values for the Kolmogorov-Smirnov test were higher than alpha level ($\alpha = .05$). Therefore, the assumption of normality was met. After establishing the main assumptions of parametric tests, two one-way ANOVAs were run on the results of the pretests (See Table 4).

Table 4

One-Way ANOVA for the Pre-Test Scores of Reading Comprehension

		Sum of Squares	df	Mean Square	F	Sig.
Pretest 1 (LC&CC)	Between Groups	9.633	3	3.211	.679	.566
	Within Groups	548.333	116	4.727		
	Total	557.967	119			
Pretest 2 (LC&CS)	Between Groups	11.467	3	3.822	1.011	.390
	Within Groups	438.400	116	3.779		
	Total	449.867	119			

Note. LC& CC=linguistically complex and cognitively Complex; LC &CS= linguistically complex and cognitively Simple

The significance values of the F test were more than alpha level (.05) for both pretests. This indicated that the four groups were homogeneous regarding their reading comprehension of texts with linguistic complexity and cognitive complexity/simplicity at the beginning of the study ($F_{pretest\ 1}(3, 116) = .679$, $p=.566 > .05$ and $F_{pretest\ 2}(3, 116) = 1.011$, $p=.390 > .05$).

The First Research Question

To see the effect of teaching method (with and without TAR) on EFL learners' reading comprehension, the descriptive statistics were carried out for the posttests 1 and 2 (See Table 5).

Table 5

Descriptive Statistics for the Posttest Scores

		N	Mean	SD	Skewness	Kurtosis
Posttest 1	Group 1: + TAR of LC & CC	30	15.80	1.84	-.038	-.973
(LC&CC)	Group 2: + TAR of LC & CS	30	15.36	2.10	-.070	-.938
	Group 3: - TAR of LC & CC	30	13.50	2.08	-.850	-.108
	Group 4: - TAR of LC & CS	30	12.70	2.46	-.679	-.029
	Total	120	14.34	2.47		
Posttest 2	Group 1: + TAR of LC & CC	30	18.06	1.52	-.429	-.787
(LC&CS)	Group 2: + TAR of LC & CS	30	17.16	1.57	-.181	-1.517
	Group 3: - TAR of LC & CC	30	15.73	1.94	-.103	-.385
	Group 4: - TAR of LC & CS	30	15.70	2.33	-.393	-.712
	Total	120	16.66	2.10		

Note. LC& CC=linguistically complex and cognitively Complex; LC &CS= linguistically complex and cognitively Simple; + TAR= with textual awareness-raising; - TAR= without textual awareness-raising

The normality of the scores in the posttests was established since Skewness values were within the range of ±2. The experimental groups had the highest mean scores and the control groups had the lowest mean scores. The highest mean score for the posttest 1 was related to the Group 1 ($M = 15.80$, $SD = 1.84$) in which linguistically and cognitively complex texts were introduced with TAR during the treatment period. The lowest mean score was related to the Group 4 ($M = 12.70$, $SD = 2.46$) in which linguistically complex and cognitively simple texts were introduced

without TAR. In the case of the second posttest, the highest mean score was related to the Group 1 ($M = 18.06$, $SD = 1.52$) and the lowest mean score was related to the Group 4 ($M = 15.70$, $SD = 2.33$). The multivariate test was run to inspect the effect of teaching method ($\pm$ TAR) on learners' reading comprehension (Table 6).
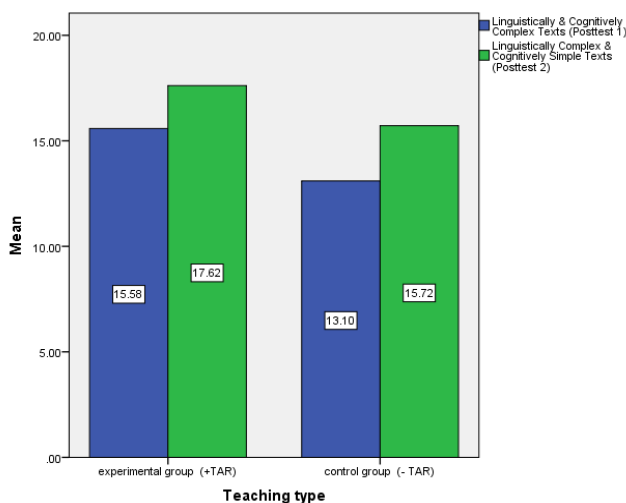
Table 6

Multivariate Tests for the Posttest Scores

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Teaching method	Pillai's Trace	.357	8.41	6.00	232	.00	.179
	Wilks' Lambda	.666	8.64	6.00	230	.00	.184
	Hotelling's Trace	.467	8.86	6.00	228	.00	.189
	Roy's Largest Root	.373	14.42	3.00	116	.00	.272

*$P < .05$

The significance value of the main effect for the "Teaching method" was less than the determined alpha level (.05), indicating that the effect contributed to the model. Partial eta squared for "Teaching method," compared to Cohen's (1988 as cited in Cohen et al., 2007) criteria (.01= small, .06 = moderate, .14= large effect) suggested a large effect size ($\eta^2 = .184$). About 18% of the variance in the reading comprehension was explained by the teaching method (See Figure 2).

Figure 2

The Groups' Marginal Mean Scores in the Posttests 1 And 2

As Figure 1 reflects, textual awareness-raising groups did better than the control groups in both posttests. The mean scores of the experimental groups were higher than their counterparts in the control groups. The multivariate test showed the positive impact of textual awareness-raising on learners' reading comprehension.

The Second Research Question

In order to examine the main effect of text complexity (LC & CC vs. LC & CS) on EFL learners' comprehension of reading, the results of multivariate tests for text complexity are given in Table 7.

Table 7

Results of Multivariate Tests for the Effects of Text Complexity on Posttest Scores

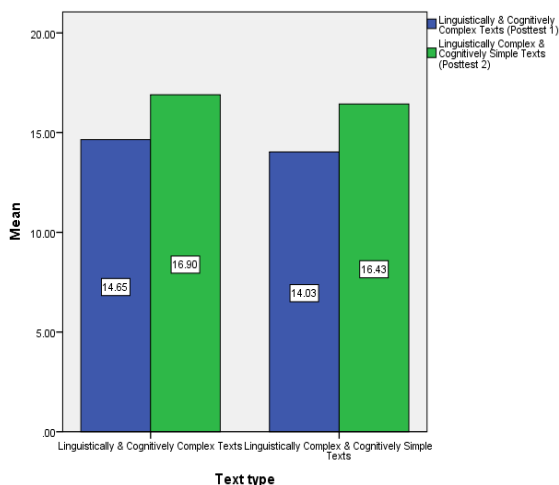| Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Text complexity	Pillai's trace	.021	1.23	2	115	.294	.021
	Wilks' lambda	.979	1.23	2	115	.294	.021
	Hotelling's trace	.022	1.23	2	115	.294	.021
	Roy's largest root	.022	1.23	2	115	.294	.021

Note. LC& CC=linguistically complex and cognitively Complex; LC &CS= linguistically complex and cognitively Simple

The Wilks' Lambda value (.979) was not significant (p=.294) with a small effect size (partial eta squared= .021) for the text complexity. This meant that only 2% of the test scores is explained by the degree of text complexity which is negligible. Therefore, the second question was answered negatively. Figure 3 also showed clearly the marginal means for the text complexity.

Figure 3

Experimental and Control Groups' Marginal Mean Scores in the Posttest 1 and 2

In Figure 3, no difference is seen in the effects of text complexity on the participants' mean scores in the posttests 1, $M_{LC\&CC}$= 14.65, $M_{LC\&CS}$= 14.03, and posttests 2, $M_{LC\&CC}$= 16.90, $M_{LC\&CS}$= 16.43.

The Third Research Question

In order to examine the effects of teaching method and text complexity on EFL learners' comprehension of reading texts, the results of interaction from the multivariate tests were used (See Table 8).

Table 8

Results of Multivariate Test for the Interaction Effect between Teaching Method and Text Complexity

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
teaching method * text complexity	Pillai's Trace	.087	5.499	2	115	.035	.087
	Wilks' Lambda	.913	5.499	2	115	.035	.087
	Hotelling's Trace	.096	5.499	2	115	.035	.087
	Roy's Largest Root	.096	5.499	2	115	.035	.087

Note. LC& CC=linguistically complex and cognitively Complex; LC &CS= linguistically complex and cognitively Simple

The interaction effect was statistically significant for the teaching method and text complexity (Wilks' Lambda= .913, p= .035 < .05) with a moderate effect size (partial eta squared= .087).

Discussion and Conclusion

The main concern of the present study was to explore the effects of two teaching methods (+TAR vs. –TAR) and two degrees of text complexity (LC & CC vs. LC & CS) on EFL upper-intermediate learners' reading comprehension. The results of two-way MANOVA revealed three points: (1) there was a significant main effect of teaching method, (2) there was no significant main effect of text complexity, and (3) there was a significant interaction effect of teaching method and text complexity.

Regarding the teaching method, it was found that textual awareness-raising group outperformed the control group in which no textual awareness-raising was used. In the experimental groups (+TAR), the teacher used different strategies including graphic organizer, teaching text structure and signal words, and thinking aloud to raise the learners' awareness of text structure. In contrast, for the control groups (-TAR), the teacher did not use any strategies or awareness-raising methods. In the case of text complexity, there was no significant difference between the effects of texts that were LC & CC and LC & CS on the learners' reading comprehension. Although cognitively complex texts appeared to be more demanding on their own for the language learners to comprehend than cognitively simple texts, providing language learners with textual awareness prepared them to infer the intended meaning and enabled them in responding to the cognitively challenging texts. On the other hand, cognitively simple texts required little in the way of analyzing and comprehending the passages. Therefore, learners in the two groups performed the same in the tests of reading. However, language learners who worked on cognitively complex texts needed more support to enhance their understanding of the texts, and the instruction on textual awareness-raising simplified the demand of cognitively complex texts. Considering the interaction effect, it was found that the effect of one teaching method was dependent on the kind of the text, that is, textual awareness-raising was more effective, in the students' reading comprehension, with the treatment of LC & CC text than the LC &

CS text in both tests and mainly in the posttest 2.

The findings disclosed that making students familiar with text structure helped them in different steps of reading comprehension. In fact, the students' familiarity with the text structure assisted them in actively constructing meaning from the reading passages through using their background knowledge and integrating the meanings inferred with their existing knowledge. The results are in accord with the literature of textual awareness-raising indicating the major role of familiarity of the students with the text structure in improving their comprehension ability (e.g., Aghasafari & Aziz Malayeri, 2015; Block & Pressley, 2002; Cain et al., 2004; Carrell, 1985; Chalak & Nasr Esfahani, 2012; Hall et al., 2005; Hebert et al., (2016); Meyer & Ray, 2011; Rabini et al., 2015; Roehling et al., 2017; Roller & Schreiner, 1985; Salmani-Nodoushan, 2010; Simonsen, 1996; Newman, 2007; Vahidi, 2008; Williams, 2018). Thus, the explicit instruction of a text by the use of certain strategies mentioned above leads to an increased comprehension (Williams, 2018). In line with these studies, this study highlighted the structure of informational/expository texts, through different strategies, to the students and the results verified that conscious and close attention to the structure of texts with different patterns and difficulty levels could enhance reading comprehension of EFL learners. The results indicate the positive role of engaging students with complex texts in their comprehension of both cognitively complex and cognitively simple texts. The results also verify the view that if the students encounter more challenging texts they gradually become strong readers and increase their reading comprehension (Lapp et al., 2015).

Williams et al. (2004) and Hall et al. (2005) believe that the numbers of instructional programs that have been designed for teaching expository text structure are very limited; therefore, there is a need for research to develop and assess instructional programs. Since applying expository text structure in text processing can improve readers' comprehension, recall, and retention of text (Mayer& Moreno, 1998), the information relating to the expository text structures and the effective use of these structures as a reading strategy need to be explicitly taught. Because teaching text structure facilitates memory for textbook information and makes the reader ready to form a mental representation of the information and to see the logical relationships offered by the authors (Ogle & Blachowicz, 2002).

The study implies different useful findings for implementation in the EFL reading classroom. The students should be encouraged to differentiate between different types of texts, especially, expository texts that are mostly encountered at the university level. For this reason, the teacher can explicitly teach and highlight the structure of the texts with different patterns. This can be practiced in different ways such as (a) analysis of the text for signal words and phrases, (b) use of graphic organizers, (c) synthesis of scrambled sentences to form a complete text, and (d) completion of the text with missing signal words and phrases. Therefore, awareness-raising about text structure can be applied as an effective strategy to improve readers' comprehension and recall of the text (Namjoo & Marzban, 2014; Pearson & Duke, 2002; Simonsen, 1996) because when the learners understand how a text is structured they can create a mental representation of the text information and find relationships between different ideas of the author (Hall et al., 2005; Ogle & Blachowicz, 2002).

In this regard, Pearson and Gallagher (1983) note that while students may develop their reading comprehension over time without receiving instruction on implementing strategies, training on strategies may help them enhance their reading comprehension faster. Almasi (2003) advocates provision of explicit strategy instruction and indicates that it is difficult for learners to discover comprehension strategies by themselves. Thus, explicitly instructing a text by the use of certain strategies can help students learn how to analyze the text and enhance their comprehension (Presley & McCormick, 1995). Based on the findings of the study, the informational texts can be introduced to the students at different levels of complexity. The texts can be linguistically or cognitively complex or both linguistically and cognitively complex to challenge the students' cognitive capacity since it is believed that providing the students with increasingly complex and challenging texts enhances their comprehension ability (Lapp et al., 2015).

The results of the study can be useful for teachers since they can focus on awareness-raising strategies as the most proficient strategies to enhance EFL learners' reading ability. It can also be useful for the students because being aware of the strategies and using them when reading texts enhance their knowledge of text structure, which can later be used as schemas in their future readings. It has been indicated that good readers are aware of text structures and they are strategic readers

(Block, 1992; Sheorey & Mokhtari, 2001).

Several suggestions are proposed for future research studies. This study was conducted on upper-intermediate level students; future studies can be conducted on other levels. The study did not consider gender as a variable, future studies could replicate the study across gender. The text awareness-raising was conducted on expository texts; future research can be done on different types of texts including argumentative and narrative texts.

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