

## Effect of Textual Integrity of Argumentative Texts on EFL Learners' Reading Performance: Different Levels of Language Proficiency in Focus

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### ABSTRACT

The present study aimed at investigating the effect of textual integrity of argumentative texts on EFL learners' reading comprehension performance. It also aimed at checking the extent of such an effect among learners with different language proficiency. To this purpose, 120 students learning English at Jihad Daneshgahi Institute in Isfahan were selected as the participants. They were selected from a pool of 200 available and interested students and were divided into three groups of low proficient, intermediate and high proficient learners of equal size (40), based on their scores on an OQPT proficiency test. Then, 3 reading comprehension tests (cloze tests), with an appropriate level of text difficulty, were prepared by the researcher. In making the tests, the text in each test was either kept authentic in terms of textual integrity (i.e. text organization, cohesive devices, etc.), or manipulated to lose its textual unity and, thus, be more difficult to read and understand. The results of data analysis indicated that manipulated argumentative texts negatively affect EFL learners' reading performance at all levels of language proficiency. The results additionally revealed that text manipulation, i.e. textual integrity decrease, has a more significant effect on the reading performance of the intermediate group participants. The findings of this study can have some implications for language teachers to become more alert to the effect of textual integrity of texts on reading comprehension performance of students when trying to understand argumentative texts. Furthermore, the findings might be constructive for materials developers, i.e helping them to prepare appropriate texts in terms of textual integrity and readability, in line with the needs and levels of EFL learners.

*Keywords:* Argumentative text, reading comprehension, language proficiency, textual integrity, cohesion, text organization

### RESUMEN

Este estudio buscó investigar el efecto de la integridad textual de textos argumentativos sobre la actuación en comprensión lectora de estudiantes de inglés como lengua extranjera. Buscó también comprobar dicho efecto en estudiantes con diferente conocimiento del idioma. Para estos fines, se seleccionaron 120 estudiantes de inglés en el Jihad Daneshgahi Institute de Isfahan de un total de 200 estudiantes disponibles e interesados en participar. Los estudiantes seleccionados se agruparon según su grado de proficiencia (proficiencia baja, media y alta) en grupos de cuarenta según los resultados que obtuvieron en una evaluación estandarizada (Oxford Quick Placement Test). Luego, el investigador diseñó tres evaluaciones de comprensión lectora, con un apropiado nivel de dificultad y manteniendo los textos auténticos en términos de integridad (organización, cohesión, etc.) o manipulándolos para que pierdan dicha integridad, de modo de hacerlos más difíciles de comprender. Estas evaluaciones se administraron dos veces a los tres grupos. Los resultados indican que los textos argumentativos manipulados disminuyeron la comprensión lectora en todos los niveles de proficiencia, y que tuvieron aún peor impacto en los estudiantes intermedios. Los hallazgos de este estudio pueden alertar sobre el efecto de la integridad textual sobre la actuación de los estudiantes en

términos de comprensión lectora. Además, pueden ser de interés para diseñadores de materiales para la enseñanza, ya que muestran la necesidad de preparar textos apropiados en integridad textual y legibilidad, de acuerdo con las necesidades y los conocimientos de los estudiantes de ILE.

*Palabras claves:* texto argumentativo, comprensión lectora, proficiencia lingüística, cohesión, organización textual.

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### Introduction

Reading comprehension is one of the main objectives of teaching English in an EFL context and it is the most tested construct in language teaching. The importance of reading comprehension is underscored in today's "information age" in which the ability to read easily and well has become a survival skill: reading "has been considered one of the skills required of all language learners" (Chastain, 1988, p. 2). It is both a source of information and a pleasurable activity, the one which serves as a vehicle for communication of present and past civilizations, and which many students have an opportunity to use (Rivers, 1968; Chastain, 1971). Chastain states that "one of the basic and complementary skills which need to be acquired in foreign language learning is reading" (p. 6). Anderson (2001) even goes beyond this and claims that "reading is all that is needed by learners of English as a foreign language (EFL)". In fact, there is a direct relationship between learning a new language and reading, as Bugel and Bunk (1990) assert: "where there is little reading, there will be little learning." (p.17).

Extensive research has been conducted to investigate the relationship between reading comprehension and other areas like semantics, pragmatics, syntax etc. Discourse analysis is among such major areas, with findings that can enhance reading comprehension level among EFL students. Cohesion and coherence in a text are the major topics in discourse analysis which attract many researchers. Investigating cohesiveness of a text is not a new idea, but in association with text structure and textual integrity, it can be a productive topic for research. In the present study the researcher sought to investigate the effect of cohesion, coherence and organizational degree of argumentative texts on Iranian EFL learners' performance in reading comprehension at different proficiency levels.

### The Study

There are many different contributive factors which make a text integrative and thus readable. Several of its aspects have been investigated over the past fifty years. Research has shown that textual integrity can vary in accordance with certain specific text variables and it can either speed or slow reading rates of the texts (Taylor 1990, cited in Weisenmiller, 1999). Textual integrity is of considerable practical significance to educators and publishers of educational materials. For those who depend upon communication through the printed word, a pertinent issue is whether the material will be read and, if read, comprehended by the target readership. The majority of research has focused on the textual integrity of the text in print. These studies have examined such factors as the effects of typeface, letter spacing, line spacing, justification contrast, resolution, inverted text, size, type, style, letter spacing, and page layout. These typographic variables have been tested in order to determine various effects upon the reader. Chief among these variables are reading rate and reading comprehension. But more importantly are the contributive factors to discourse structure of a text. "Cohesion and coherence are two important textual elements which are influential on reading a text and understanding it" (Halliday and Hasan 2007; Halliday 2000). Research on cohesion and coherence and their effect on different linguistic traits have been flourishing in recent decades, specifically since the publication of *Cohesion in English* (Halliday and Hasan (2007). Reading comprehension can be viewed as having highly interactive components; namely, the text, reader, comprehension activities, and socio-cultural context. Indeed, empirical studies of reading comprehension have uncovered some intriguing interactions among text, reader, and task variables (McNamara et al, 1996).

Considering reading as a problematic source of language input, both in academic and non-academic settings, the present study was, therefore, intended to focus on Iranian EFL learners' appreciation of the textual integrity of argumentative texts, and its possible impact on their comprehension at different levels of language proficiency. Thus, the following research questions were addressed, and the related hypotheses were tested:

*RQ1. Does textual integrity of argumentative texts affect male and female Iranian EFL learners' reading comprehension performance?*

*RQ2. Which level of language proficiency in terms of reading comprehension performance is more affected by argumentative texts textual integrity?*

### **Literature Review**

#### **The Goal of Reading Comprehension**

Kintsch and Rawson (2005) suggest a highly influential theory of comprehension. The theory sees comprehension as depending upon largely automatic processes somewhat akin to the processes subserving perception. Two major levels of representation are distinguished: a textbase representation that represents the linguistic structure of the text and its meaning, and a situation model (a mental model of the situation described by the text). The textbase representation will have a number of different levels of representation, including micro-level representations (word and proposition level representations, for example) and a macro-level representation of how ideas in a given passage relate to each other. If this were not complicated enough, for a full understanding, the textbase representation must be related to the situation model, a more abstract representation that is not exclusively verbal and includes a wide range of world knowledge that may include imagery and emotional content.

Perfetti, Landi, and Oakhill (2005) move on to consider how reading comprehension skills develop. They point to the likely critical importance of the learner's ability to identify words fluently and retrieve their meanings. In terms of Kintsch and Rawson's model (2005), processes in accurately constructing a textbase representation are critical, and one potential set of limiting factors concerns word identification and access to adequate vocabulary knowledge. Constructing a situation model, however, will require inferences to be made. There are many studies that have attempted to link inferential skills to the development of reading comprehension skills, as well as the development of comprehension monitoring strategies and syntactic skills. A great number of learners have a specific shortfall in developing reading comprehension skills. Innajih (2007) has investigated the effect of explicit instruction of textual markers such as cohesion on the reading comprehension of FL/SL learners. He advises instructors to teach the various types of cohesive devices explicitly and emphasizes their relation to reading comprehension development. Nation (1999) presents a review of the nature of the cognitive shortfalls that appear responsible for the problems displayed in these 'poor comprehenders'. Such learners have weaknesses including the limited extent of vocabulary knowledge as well as higher-level language skills such as inference making. They, therefore, appear to have problems in constructing an adequate text-based representation, though it is possible that they also have higher-level problems in constructing a situation model of what they have read.

#### **Argumentative Text structure**

Argumentative texts may be organized with different structures. But the most common structure is as follows:

1. Introducing the claim.
2. Making the introductory paragraph both interesting and informative. i.e. providing the reader with sufficient background information to be able to understand the claim. For instance, if the claim is about a theory, a brief explanation of the details of the theory should be provided.
3. Presenting the summary of works and key theories being discussed.
4. Supplying the definition of key terms.
5. Giving supporting evidence (reasons, facts, etc.) briefly and coupled with statistics, if necessary, to prove the stated claim and clearly stating how this evidence proves the focused point in the claim.
6. Making the claim very sound and objective and anticipating the readers' objections, i.e. predicting their opposing arguments against your arguments; even introducing one or more of the readers' possible anti-arguments and trying to refute them.
7. Concluding the text with the restatement of the claim in a short paragraph and in a different way from what has been stated in the introduction, to show critical thinking, the importance of the claim, and the specific, unambiguous points of the claim.

### Research on Textual Integrity

Textual integrity studies aim to find the right fit between the difficulty levels of texts and the reading abilities of students (Ulusoy, 2006). Ulusoy refers to the differences among students in terms of experience and background knowledge about the contents of their course books.

According to McLaughlin (cited in Paula Lissón, 2017), the prediction of textual integrity, which makes a text readable and easy to comprehend, has two main advantages: 1) it helps to decide on the number of people who can be the readers of a special style, and 2) it aids teachers to select appropriate books for their students. Second, it helps authors to understand the extent to which their writings are suitable for their intended readers (p. 69).

Different methods and definitions of textual integrity have been proposed. DuBay (2004) defines textual integrity as what makes a text easier to read. Oosten, Hoste and Tanghe (2011) define it as the degree of easiness on the part of its addressee to understand its message. Oosten et al. (2011) believe that the concept of textual integrity or unity is subjective in nature, and the easiness with which a reader can understand a text depends on his or her background knowledge more than anything else.

Quoting Abdollahzadeh and Zolfaghari (2012), to assess textual integrity, Oakland and Lane (2004) introduce three main approaches: qualitative approaches, quantitative approaches, and a combination of these two.

In argumentative texts, the need to persuade through evaluation is central, with a predominance of emotive diction and textual integrity. In such texts, "text forms have a special character, and the ordering must reflect a move from the less to the more evaluative" (Hatim & Mason 1990, p. 193, cited in Jafarinezhad & Tavakoli, 2011). Tirkonnen-Condit (1994, cited in Verzosa Cayago, 2018) views the production of argumentative text as the cognitive process of problem-solving involving the following structural units: situation, problem, solution, and evaluation. Argumentative texts deal with the mental process of judging. All argumentative texts promote certain beliefs with conceptual relations such as reason, significance, or opposition frequently.

Based on the above-mentioned statements on argumentative texts, the present study addressed the two research questions stated above.

### Methodology

#### Participants

For the purposes of this study, one hundred and twenty Iranian English language learners (male and female), aged between 16 to 22, were selected from a pool of 200 students studying general English at Jihad Daneshgahi Language Institute, Isfahan, Iran, to serve as the participants in the research. They were divided into three groups of equal size (40), i.e low proficient, intermediate and high proficient learners based on their scores in an Oxford Quick Placement Test (OQPT). See Appendix A

#### Design of the Study

This study was conducted through a causal comparative design since the causes of the possible impact of independent variable (textual integrity) on dependent variable (reading comprehension competence) were to be checked. Data was collected from the participants' responses to 6 reading comprehension cloze tests, including 3 textually-intact and 3 textually-distorted texts. Actually, the selected texts remained either authentic or manipulated, i.e their textual integrity was decreased through deleting certain cohesive devices and disordering paragraphs. The data derived from the three groups of participants' performances on the tests were then analyzed to obtain results and find answers to the research questions posed.

#### Instruments and Materials

The instruments and materials used in this study are as follows:

##### *Oxford Quick Placement Test (OQPT)*

The first step to collect the required data for the purposes of this study was the administration of a language proficiency test to the participants, i.e OQPT. It was used to divide the participants into different language proficiency levels: low proficient, intermediate and high proficient. According to Allan (2004) this test has been calibrated against the levels system provided by the Common European Framework of Reference for Languages: Learning, Teaching, Assessment (commonly

known as the CEF), which has been adopted by the Association of Language Testers in Europe (ALTE) as well as by governments and major institutions, including exam boards, throughout Europe.

The version of the test used in this study had 60 multiple-choice questions (See Appendix A) and the participants had to choose the answer from the alternatives for each question. The test evaluated the skills of reading comprehension, vocabulary knowledge, and grammar.

#### ***Reading Comprehension Tests: Authentic texts***

These cloze tests, which were constructed by the researcher in a random deletion procedure manner, comprised 3 argumentative reading comprehension texts selected from standard reading comprehension pools (i.e. Michigan Test). Efforts were made to choose texts with different subject matter to eliminate the effect of background knowledge on the participants' performance, and with different levels of language difficulty (measured by Flesch Reading Ease, described below) to fit the 3 levels of the participants' language proficiency.

#### ***Reading Comprehension Tests: Manipulated texts***

These 3 cloze tests too were constructed on the same 3 argumentative texts mentioned above. In devising them, the researcher manipulated the texts in terms of text organization, cohesive devices or ties, etc., via a purposeful deletion procedure manner, to become distorted and lose their textual integrity and, therefore, be more difficult to read and understand. Coh-metrix software program was of great help in this respect.

#### ***Coh-metrix Software***

Coh-Metrix (developed by McNamara, Louwse & Graesser, 2002) is a tool used to learn more about the language used in a passage of text. It helps to check how causal, intentional, and other types of connectives help the reader form a more coherent and deeper understanding of the text at the level of the causal situation model.

#### ***Flesch Reading Ease***

Flesch Reading Ease, developed by Flesch (1948, cited in Stone & Parker, 2013) tests the difficulty level of texts. The score on this test will tell you roughly what level of education someone will need to be able to read a piece of text easily. It generates a score usually between 0 and 100. A higher score means the text is easier to read and understand, and a lower score means the text is more difficult for the reader to read and understand.

#### **Procedure**

The following steps were taken to conduct this study: 1) the required participants (120) were selected from a pool of interested English language learners through a proficiency test (OQPT), 2) six reading comprehension tests (cloze tests - See Appendix B) based on 3 argumentative texts, with different levels of difficulty, were administered (in a counterbalanced manner - a procedure to control the effects of nuisance variables in designs where the same participants are repeatedly subjected to conditions, treatments, or stimuli) at an appropriate time interval to the selected participants, i.e. low proficient, intermediate and high proficient language learners, 3) the participants' performance was scored, 4) the elicited scores were statistically analyzed (using *Paired-Samples t Test and One-Way ANOVA*), and 5) the obtained results were discussed in terms of the posed research questions of the study as well as in line with previously-conducted similar research. Table 1 below shows the entire procedure regarding the participants and the tests:

**Table 1.** *Outline of the tests and participants*

Sessions	Session 1	Session 2	Session 3 (1 month later)
	OQPT		
Tests		<b>Cloze Tests</b> with authentic texts administered to groups 1, 2, 3 (each with 20 participants), and with manipulated texts to groups 4, 5, 6 (each with 20 participants)	<b>Cloze Tests</b> with manipulated texts administered to groups 1, 2, 3 (each with 20 participants), and with authentic texts to groups 4, 5, 6 (each with 20 participants)
No. of Participants	200	120	120

### Scoring procedure

To score the participants' performance in OQPT, each correct answer was attributed a single point. The total sum of correct answers was used to divide the participants into different English language proficiency levels. To this purpose, the standard deviation and the mean score of their OQPT results were calculated. The participants whose scores were less than one standard deviation below the mean score formed the low proficient group, those with scores falling within the range of one standard deviation above and below the mean formed the intermediate group, and finally, those whose scores were more than one standard deviation above the mean formed the high proficient group.

### Data Analysis and Results

The present study aimed to test the following 2 null hypotheses and answer the related research questions:

**HO1:** Textual integrity of argumentative texts does not affect Iranian EFL Learners' reading comprehension performance.

**HO2:** There is no significant difference between the three proficiency groups (i.e low proficient, intermediate, high proficient learners) in terms of the effect of textual integrity on their reading comprehension.

#### *Preliminary Analysis*

As outlined above, learners in three proficiency levels (each comprising 40 learners) were recruited for the purpose of the study. These 120 learners were drawn from a pool of 200 EFL learners and were selected based on their scores on the OQPT (Oxford Quick Placement Test). Information regarding the performances of the learners in these three groups on the OQPT is summarized in Table 2:

**Table 2.** *Descriptive Statistics for the Three Groups' OQPT Scores*

OQPT	<i>N</i>	Minimum	Maximum	Mean	Std. Deviation
Low Proficiency	40	18.00	29.00	24.10	3.07
Intermediate	40	30.00	47.00	39.27	4.65
High Proficiency	40	48.00	54.00	51.20	1.85

It could be seen in Table 2 that on the OQPT, the low proficiency, intermediate, and high proficiency learners obtained mean scores of 24.10, 39.27, and 51.20 as well as standard deviations of 3.07, 4.65, and 1.85, respectively. The number of learners, the minimum score, and the maximum score in each group are also displayed in the table above. In Table 4.2 below, the results of the normality test (which is a prerequisite to running the subsequent parametric tests such as *t* test and ANOVA) are presented:

**Table 3.** Results of the Normality Test

Proficiency Levels	Texts/Tests	Kolmogorov-Smirnov			Shapiro-Wilk		
		Statistic	Df	Sig.	Statistic	Df	Sig.
Low Proficiency	Authentic	.12	40	.20	.96	40	.11
	Manipulated	.14	40	.20	.93	40	.08
Intermediate	Authentic	.13	40	.20	.94	40	.10
	Manipulated	.13	40	.20	.95	40	.11
High Proficiency	Authentic	.12	40	.20	.96	40	.12
	Manipulated	.14	40	.20	.94	40	.09

Table 3 shows that for the two tests (i.e., authentic and manipulated) of all the three groups of proficiency, the assumption of normality was met since a *Sig.* value above .05 shows that a distribution was normal, and in this table, all the *Sig.* values lined up under the Kolmogorov-Smirnov test (and under the Shapiro-Wilk test as well) were found to be greater than the significance level of .05. As such, the parametric tests of *t* test and ANOVA could be safely conducted.

### Results

#### Effects of Textual Integrity on Reading Comprehension

The first aim of the study was to find out whether textual integrity of argumentative texts had any effects on reading comprehension of such texts by Iranian EFL learners. For this reason, a reading comprehension test with authentic texts and a reading comprehension test with manipulated texts were constructed by the researcher and given to the EFL learners in this study to find out if their comprehension was influenced by textual integrity or not. This was done for all the learners in the three levels of proficiency, considering textual level of difficulty. The results for each proficiency group are presented in separate tables below:

##### Low Proficiency Learners

To compare the performance of the low proficiency learners on the tests of authentic and manipulated texts, their scores on these two tests were compared by means of a paired-samples *t* test. Table 4 shows the descriptive statistics of this comparison:

**Table 4.** Results of Descriptive Statistics for Low Proficiency Learners

Level	Texts	N	Mean	Std. Deviation	Std. Error Mean
Low Proficiency	Authentic	40	14.87	1.75	.27
	Manipulated	40	14.02	1.71	.27

The low proficiency learners obtained the mean scores of 14.87 on the tests of authentic texts and their mean score decreased to 14.02 on the test of manipulated texts. To see if the difference between these two mean scores was statistically significant or not, the researcher had to check the paired-samples *t* test table below:

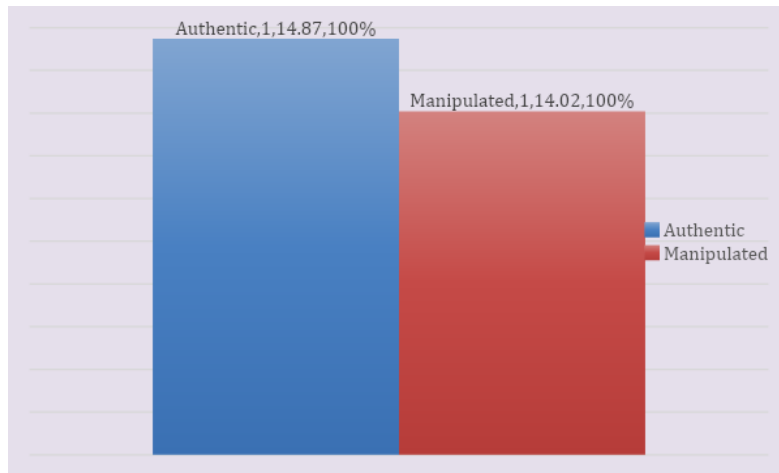
**Table 5.** Results of Paired-Samples *t* Test for the Low Proficiency Learners

	Paired Differences				<i>T</i>	<i>Df</i>	<i>Sig.</i> (2-tailed)	
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower				Upper
Authentic – Manipulated	.85	.73	.11	.61	1.08	7.30	39	.00

The single most important piece of information in Table 5 is the *p* value under the *Sig.* (2-tailed) column. This value should be compared with the significance level (i.e., .05) to see if the difference between the two sets of scores had been statistically significant or not. A *p* value less than .05 indicates



a significant difference between the two sets of scores, and a  $p$  value larger than .05 shows a difference which did not reach statistical significance. Since the  $p$  value under the *Sig.* (2-tailed) column in Table 5 was less than the significance level, it could be inferred that the difference between the authentic ( $M = 14.87$ ) and manipulated ( $M = 14.02$ ) test scores for the low proficiency learners was statistically significant. This is also shown in Figure 1 below:



**Figure 1.** Mean scores of the low proficiency learners on the two tests

Figure 1 shows that the low proficiency learners' mean score for the authentic reading test was significantly higher than their mean score on the manipulated reading test, giving rise to the conclusion that textual integrity did have an effect on their reading performance.

#### Intermediate Learners

To compare the performances of the intermediate learners on the two tests, the same statistical procedure adopted above for low proficiency learners was employed again.

**Table 6.** Results of Descriptive Statistics for the Intermediate Learners

Level	Texts	<i>N</i>	Mean	Std. Deviation	Std. Error Mean
Intermediate	Authentic	40	16.07	1.04	.16
	Manipulated	40	13.00	1.08	.17

Table 6 indicated that the intermediate learners received the mean score of 16.07 on the test containing authentic texts and the mean score of 13.00 on the test of manipulated texts. To see if this difference between the two mean scores of the intermediate learners was statistically significant or not, the following table had to be checked:

**Table 7.** Results of Paired-Samples  $t$  Test Comparing the Pretest and Posttest Scores of the PCG Learners

	Paired Differences			95% Confidence Interval of the Difference		<i>T</i>	<i>Df</i>	<i>Sig.</i> (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	Lower	Upper			
Authentic – Manipulated	3.07	.88	.14	2.79	3.35	21.89	39	.00

Results of paired-samples  $t$  test in Table 7 revealed that there was a statistically significant difference between the authentic ( $M = 16.07$ ) and manipulated ( $M = 13.00$ ) scores of the intermediate learners,  $t(39) = 21.89$ ,  $p = .00$ . This difference is shown in Figure 4.2 as well:

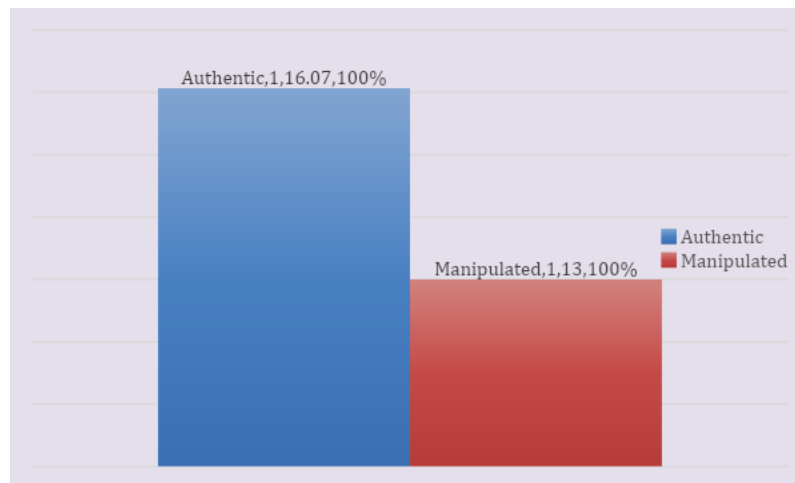


Figure 2. Mean scores of the intermediate learners on the two tests

Figure 2 above clearly shows that the intermediate learners' performance on the authentic test was considerably better than their performance on the manipulated test, leading to the conclusion that textual integrity did have an impact of their reading performance in their L2.

### High Proficiency Learners

The results for the comparison of the scores obtained from the two tests taken by the high proficiency learners are displayed below:

Table 8. Results of Descriptive Statistics for the High Proficiency Learners

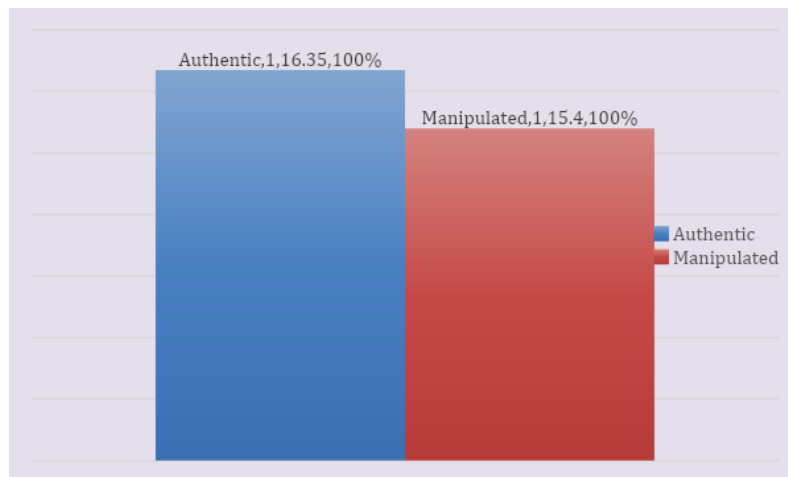
Level	Texts	N	Mean	Std. Deviation	Std. Error Mean
Intermediate	Authentic	40	16.35	.97	.15
	Manipulated	40	15.40	.67	.10

Table 8 showed that the high proficiency learners' mean score was 16.35 on the authentic texts test and 15.40 on the manipulated texts test. To figure out whether this difference between the two means scores of the high proficiency learners was statistically significant or not, Table 4.8 had to be consulted:

Table 9. Results of Paired-Samples *t* Test Comparing the High Proficiency Learners

	Paired Differences			95% Confidence Interval of the Difference		<i>t</i>	<i>Df</i>	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	Lower	Upper			
				Authentic – Manipulated	.95			

Results of paired-samples *t* test in Table 4.8 demonstrated that there was a statistically significant difference between the authentic ( $M = 16.35$ ) and manipulated ( $M = 15.40$ ) test scores of the high proficiency learners,  $t(39) = 8.41$ ,  $p = .00$ . This difference is also represented in Figure 4.3 below:



**Figure 3.** Mean scores of the high proficiency learners on the two tests

Figure 4.3 clearly shows that the high proficiency learners' performance was superior on the test of authentic texts, compared to their performance on the test of manipulated texts, indicating that textual integrity influenced the reading performance of high proficiency EFL learners.

#### *Comparing the Three Levels of Proficiency*

Another objective of the study was to find out whether textual integrity affected the learners at different proficiency levels equally or not. For this purpose, for the learners in each proficiency level, a difference score was computed by subtracting the manipulated test scores from the authentic test scores. This way, three sets of difference scores (for the learners in the three different proficiency groups) were obtained. Then, one-way between-groups ANOVA was employed to compare these three sets of scores.

**Table 10.** Descriptive Statistics Results Comparing Learners' Difference Scores

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Low Proficiency	40	.85	.73	.11	.61	1.08	.00	2.00
Intermediate	40	3.07	.88	.14	2.79	3.35	1.00	5.00
High Proficiency	40	.95	.71	.11	.72	1.17	.00	2.00
Total	120	1.62	1.29	.11	1.39	1.85	.00	5.00

The mean difference scores of the low proficiency ( $M = .85$ ), intermediate ( $M = 3.07$ ), and high proficiency ( $M = .95$ ) learners are shown in Table 4.9 above. This shows that the difference between authentic and manipulated scores was highest for intermediate learners and lowest for low proficiency learners. To figure out whether the differences among these mean scores were significant or not, one needed to check the  $p$  value under the *Sig.* column in the ANOVA table below:

**Table 11.** Results of One-Way ANOVA for Comparing the Learners' Difference Scores

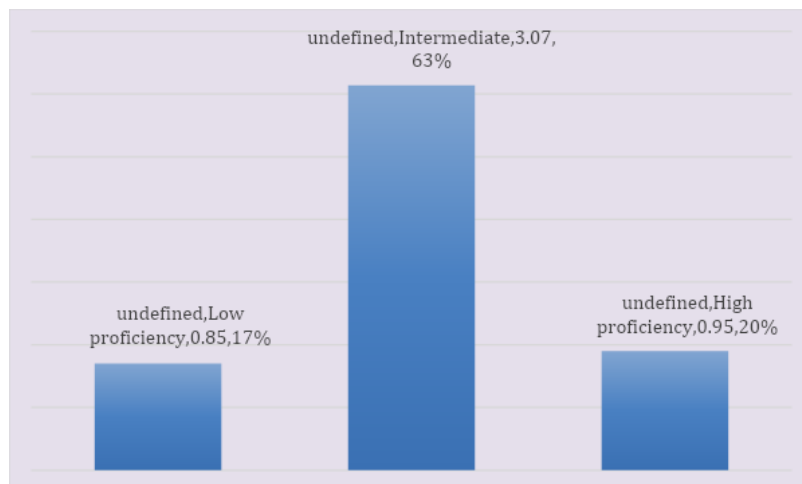
	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	126.35	2	63.17	102.98	.00
Within Groups	71.77	117	.61		
Total	198.12	119			

As is displayed in Table 11, there was a statistically significant difference in the difference scores for low proficiency ( $M = .85$ ), intermediate ( $M = 3.07$ ), and high proficiency ( $M = .95$ ) learners because the  $p$  value under the *Sig.* column was lower than the specified level of significance (i.e.,  $.00 < .05$ ). To pinpoint the exact location of the difference(s), the post hoc test table (Table 12) had to be checked:

**Table 12.** Scheffe Post Hoc Test Results for Comparing Learners' Difference Scores

Groups		Mean	Std.	Sig.	95% Confidence Interval	
		Difference	Error		Lower Bound	Upper Bound
Low	Intermediate	-2.22*	.17	.00	-2.65	-1.79
Low	High	-.10	.17	.85	-.53	.33
Intermediate	High	2.12*	.17	.00	1.69	2.55

Based on the information presented in Table 12, the difference between low proficiency ( $M = .85$ ) and intermediate ( $M = 3.07$ ) learners was statistically significant ( $p < .05$ ), but the difference between low proficiency and high proficiency learners ( $M = .95$ ) failed to reach statistical significance. Besides, there was a significant difference between intermediate and high proficiency learners. All this implies that the effect of textual integrity on the comprehension of argumentative texts was significantly obvious for intermediate learners, but less obvious for low proficiency and high proficiency learners. This result is also graphically represented through the bar graph in Figure 4:



**Figure 4.** The mean difference scores for the three groups of proficiency

The bar graph in Figure 4 shows that intermediate learners had the highest difference score compared to the low difference scores of the low proficiency and high proficiency learners. This implies that textual integrity had the highest effect on the comprehension of argumentative texts by intermediate EFL learners.

### Discussion

The first research question of study was: “Does textual integrity of argumentative texts affect Iranian EFL Learners' reading comprehension performance?” In line with this question, the first null hypothesis posited: “Textual integrity of argumentative texts does not affect Iranian EFL Learners' reading comprehension performance.” In order to investigate this issue among the three levels of proficiency, three separate paired-samples  $t$ -tests were run. The results of the data analysis presented in Chapter 4 indicated that for all the three levels of proficiency there was a statistically significant difference between the authentic and manipulated test scores of the EFL learners. In fact, the first null hypothesis of the study was rejected, showing that textual integrity of argumentative texts has a significant effect on Iranian EFL learners' reading comprehension performance. This finding is in line

with that of Innajih (2007) who investigated the effect of explicit instruction of textual markers on the reading comprehension of FL/SL learners. In line with our finding, he demanded that instructors teach the various types of cohesive devices explicitly and emphasized their relation to reading comprehension. Also, in a similar study involving cloze tests, Smith (2004), found a significant relationship between reading comprehension and the comprehension of discourse markers.

Moreover, stressing the importance of textual integrity for reading comprehension, Moradan (1995) suggested that explicit instruction of connectors and linking words should be involved in language courses to help learners take advantage of their knowledge of them in reading comprehension and other language uses. Another study that lends further support to our finding is the study by Basaraba et al. (2011). In their study, they claim that reading passages that are rich in textual integrity or employment of appropriate discourse connectors help free up additional cognitive resources that can be applied by EFL learners to understand the meaning of words, phrases, and sentences within text, and thus making L2 comprehension happen more easily and rapidly.

The positive impacts of knowing and using the markers of textual integrity have also been reported on other skills. For instance, Aidinlou (2012), Emmanuel (2013) and Jalilifar (2008) reported that cohesive devices are fundamental linguistic devices which lead the readers to the direction of the flow of text. In general, these studies also conclude that there is a significant relationship between the higher use of cohesive devices and the quality of students' written production. Nevertheless, the findings of the present study run counter to the findings of Castro, (2004) who concluded that the use of cohesive devices and quality of writing are not soundly consistent.

The second research question of the study was: "Which level of language proficiency in terms of reading comprehension performance is more affected by argumentative texts' textual integrity?" In line with this question, the second null hypothesis argued: "There is no significant difference between the three proficiency groups (i.e low proficient, intermediate, high proficient learners) in terms of the effect of textual integrity on their reading comprehension." In order to examine this second hypothesis, three sets of difference scores (for the learners in the three different proficiency groups) were obtained through the procedures stated in Chapter 3, and one-way between-groups ANOVA was employed to compare these three sets of scores.

The results of ANOVA showed that the difference between authentic and manipulated scores was highest for intermediate learners and lowest for low proficiency learners. Moreover, the difference between low proficiency ( $M = .85$ ) and intermediate ( $M = 3.07$ ) learners was statistically significant ( $p < .05$ ), but the difference between low proficiency and high proficiency learners ( $M = .95$ ) failed to reach statistical significance. Besides, there was a significant difference between intermediate and high proficiency learners. All this leads us to reject the second null hypothesis of the study, claiming that the effect of textual integrity on the comprehension of argumentative texts was significantly obvious for intermediate learners, but less obvious for low proficiency and high proficiency learners. These findings lend further support to the findings of other researchers who have emphasized the importance of different instructional activities including the teaching of textual integrity markers to intermediate EFL learners (Block & Pressley, 2002; Duke & Pearson, 2002). These studies frequently present isolated instructional practices that influence intermediate L2 students' reading achievement.

It can be claimed based on previous literature that reading represents a form of thinking (Kurland, 2000; Paul, 1995), and accordingly researchers argue that certain levels of reading comprehension require acts of cognition, such as analysis, synthesis, and interpretation (Roe, Smith, & Burns, 2005). One justification for the findings related to our second research question might be attributed to the fact that learners with an intermediate level proficiency in this study benefited from these thinking resources more than those with low and advanced levels of English proficiency.

Nevertheless, there are other researchers (Basaraba et al., 2011) who have claimed that reading comprehension improves when student thinking abilities improve. In other words, improved cognition enables improved comprehension. This is opposed to our findings because based on such claims we expected the learners in the advanced group to benefit most from textual integrity for better reading comprehension performance.

### Concluding Remarks

One of the objectives of the present study was to examine the effect of textual integrity of argumentative texts on Iranian EFL learners' reading comprehension performance. Another objective was to determine whether there is a significant difference between the three proficiency groups (i.e. low proficient, intermediate, high proficient learners) in terms of the effect of textual integrity on their reading comprehension performance.

The analysis of data resulted in two major conclusions drawn from the study. Firstly, the reading comprehension of all the three groups of proficiency were significantly influenced by textual integrity; in other words, it was found that the texts that were authentic in terms of textual integrity (i.e. text organization, cohesive devices, etc.) were easier to comprehend for all the three groups at different levels of proficiency, compared to those texts which were manipulated to lose their textual unity. Secondly, textual integrity had the highest effect on the comprehension performance of intermediate learners rather than low proficiency or high proficiency learners. This fact demonstrated that learners at the intermediate level proficiency in this study benefited from textual integrity for higher L2 comprehension more than low and advanced proficiency levels.

The findings of the present study have implications for EFL learners, teachers, and materials developers in the realm of FL and SL teaching in particular and education in general. Moreover, the findings of this study could enrich the literature in the area of foreign language learning, especially Iranian EFL learners' reading comprehension performance. Also, the findings of the study can be used by language practitioners and curriculum developers to consider students' needs for reading passages that are rich in markers of textual integrity. In fact, in choosing instructional materials for reading comprehension classes, passages which enjoy higher levels of textual integrity can be used to create a better educational context in which EFL learners' reading competence can be developed. Based upon this fact, syllabus designers should realize that including these elements, i.e. cohesive ties and/or connectors as well as text organization, in textbooks and materials is essential.

Another implication which can be drawn from the study is to require teachers to explain thoroughly certain aspects of textual integrity and cohesive devices for their delicacy and subtlety (substitution reference, some adversative conjunctions, etc.). As it is evident that the learners' reading comprehension improved when they received texts that were authentic in terms of textual integrity, it is suggested that the teaching and use of such elements be intensified in-class and out-of-class alongside the assignment of reading passages to motivate students for extensive reading.

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