



The Effect of Topicalization and Left Dislocation on Reading Comprehension of Iranian Intermediate EFL Learners

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Introduction

As reading is not a mechanical process, readers need to utilize their linguistic, cognitive, and sociocultural resources when they break the code, understand the meaning and interpret the written text (Delbridge, 2008). Therefore, knowledge of the structure through which the message is packaged has a very essential role in understanding the meaning of the writer or speaker. The way that information is ordered at the sentence-level is thought to be influenced by information structural concepts, such as topic-comment, given-new, or focus-background (Büring, 2007; Krifka, 2008).

Information-structural (IS) features of a sentence are expressed in different ways, which mainly depends on the language properties we are dealing with. In addition to certain morphemes and intonation, one of the most important tools for such procedures is the word order variations of a given sentence (Szűcs, 2014). The following examples are the two English structures, which utilize word-order variation.

- 1) Apples, I like.
- 2) Apples, I like *them*.

These examples may seem similar, but they are dealt with differently and have different names in the literature. The first one is an example of “Topicalization” (TOP), while the second one is called “Left-Dislocation” (LD). Both of these examples feature an argument in a non-canonical, left-peripheral position. The major difference between the two is that in topicalization, the canonical position of the fronted constituent is empty (or, from a transformationalist viewpoint, occupied by a trace), whereas in LD, it is filled with a coreferential resumptive pronoun (Birner & Ward, 1998).

The role of information structure, especially LD and TOP in the comprehension of reading is undeniable. These structures involve the syntax/discourse interface and thereby their study can provide answers to questions about their impact on comprehension. The present study therefore searches for the

answer to whether information structure and especially informational foregrounding such as topicalization and left dislocation influence the way that Iranian EFL learners comprehend reading texts.

Literature Review

What is Information Structure?

Many experts have tried to unravel the order through which speakers package old and new information and convey their meanings. In order to tackle the issue, we first examined the concept of information structure and then discussed topicalized and left dislocated in English. According to Féry and Krifka (2009), Information Structure (IS, here after) has been identified and in existence since the medieval Arab grammatical tradition by different linguistic schools in a number of ways. It is manifested as a partition of the sentence into two units, e.g., *focus-background*, *topic-comment*, *focus-topic*, etc. Information structure is principally concerned with the question as to why grammars of natural language offer speakers a variety of morph-syntactic and prosodic options for expressing the same propositional content. The researchers wish to point the readers to Féry, Fanselow and Krifka (2006), Prince (1997), and Gregori and Michaelis (2001) for a more comprehensive exposition of some of the points discussed here. In general, the main concepts which are important in the information structure are topic and focus. According to Lambrecht (1994, p. 118), “the topic of a sentence is the thing the proposition expressed by the sentence is about”. It is accepted that topics have to be at least referential, since without this quality they could not serve as targets for a proposition. Consider the following examples adapted from Szűcs (2014):

- 3) John is my friend.
- 4) My friend is John.

As can be seen through this example, topics are somehow the centres of attention in a discourse. In the first sentence *John* is the topic therefore it possesses the centre of attention. *My friend* in the second sentence has the centre of attention. This explains the need for the topic to be referential, in order to serve as targets for a proposition. As the other property, topics tend to be animate entities. Let us consider examples of left-dislocation used in Geluykens (1992):

- 5) This woman, she is not very well off (Geluykens, p. 43).
- 6) Dear old Sandy Paterson, oh! I want to see him (Geluykens, p. 45).
- 7) Oh good, Jean Piaget, what was the point of having a book about him around? (Geluykens, p. 47).

Focus is the presence of alternatives that are essential for the interpretation of linguistic expressions. One prominent use of focus is the identification of context questions in answers. The idea is that the meaning of a question identifies a set of alternative propositions, the answer picks out one of these, and the focus within the answer signals the alternative propositions inherent in the question.

- 8) A: Who did you invite?
B: I invited TOM (FOCUS).

Focus is the part of the sentence that contains new information. Focus is “related to the assumption that focused constituents are the ones that answer constituent questions” (Gazdik, 2011, p. 152). Tom in this example, is regarded as the focus of the utterance since it answers the constituent question (Who did you invite?).

Topicalization versus Left-Dislocation

Left dislocations (LDs) are believed to be constructions through which a phrase appears at the left edge of a clause, displaced from its expected position, and is related to some clause-internal anaphoric element (Gregori & Michaelis, 2001). Here are some examples (taken from Gregori & Michaelis, 2001), with the left dislocated phrase and the anaphoric element, if pronounced, bold-faced.

■ *Topicalization:*

- a. **APPLES**, I don't like ___.
- b. **MOST** rap, I don't **LIKE** ___.
- c. **THAT** kind, I kind of **ENJOY** ___.

■ *Left-Dislocation:*

- a. The **SATURNS**, you can get **AIR** bags in them.
- b. And heavy **METAL**, it's **NOISY**.
- c. Well, **MY** car, it's an eighty **SIX**.

Because of the formal and functional similarities between TOP and LD, they are assumed plausible alternates. As for the structure, both sentence types comprise a preclausal noun phrase (NP) and a clause following. According to Prince (1981), the two constructions have analogous prosodic patterns. Each contains two prosodic peaks: one which falls within the preclausal NP and another which falls within the predicate expression. The problem with information-structure is that it is a multifaceted phenomenon with syntactic, semantic and pragmatic repercussions. Several researchers (Gundel & Fretheim 2004; Prince 1999) have confirmed that there is a serious lack of consistency concerning information-structure in the linguistics literature. The present study was an attempted to investigate the functional contrast between the fronting constructions and their impact on the reading comprehension of Iranian EFL learners.

Research Questions

The following research questions were addressed:

1. Does changing the information structure in sentences have any significant effect on Iranian intermediate EFL learners' reading comprehension?
2. Is there any significant difference between the comprehension of the reading texts with topicalization and left dislocation by Iranian intermediate EFL learners?

Method

Research Design

This study was experimental in nature with the aim of determining whether comprehension could be influenced with the variations in information structure caused by topicalization and left dislocation. The independent variable of this study was changing the information structure of the texts, whereas comprehension of the reading texts was regarded as the dependent variable.

Participants

Participants of this study were 60 female intermediate Iranian EFL learners at a private language institute. They were in the range of 16 to 22 years old. In order to have homogenous groups, these learners were chosen after an administration of the OQPT to 90 students. Of these 90 students, 60 were accepted in this study. They were the learners whose mean scores fell between the score range of 30 to 47. Then they were randomly assigned to three groups of A, B, and C. There were 20 participants in each group. Further information regarding the participants and the kinds of tests they were administered is depicted in table 1.

TABLE 1
Groups and Assigned Tests

Group	N	Kind of Test
A	20	Normal Word-order
B	20	Topicalization
C	20	Left-Dislocation

Instruments and Procedures

A number of test instruments besides the OQPT were utilized in this study. They were two reading comprehension tests with normal word order (SVO), and four reading comprehension tests: two tests with topicalized sentences and two tests with left-dislocated items. The following procedures were employed to collect the required data.

Two reading comprehension tests with normal word order (SVO) were administered to group A. The first test was a reading about an interview with three people eliciting their opinions towards the way that family and friends have affected their personalities. The second test was a reading with the topic of "How I got my dream job". The reading texts consisted of three paragraphs after which a 10-item true/false test was administered. The two original tests were then subjected to word order variation. To do so the same tests were first rearranged to constitute topicalized word orders and the other time to comprise left-dislocated items. Some examples of the statements in these readings with different word orders are given here.

First Reading Test (original test, SVO)

I've always had a strong relationship with my family. My grandmother Hannah had an important influence on my personality.

As can be seen from this example, the word order is typical and no variations were applied.

Second Reading Test (Topicalized, OVS)

My family, I've always had a strong relationship. Hannah, my grandmother, was an important influence on my personality.

My family, which was in the object place in the original sentence serves as the subject of the topicalized sentence, hence OVS structure. *Hannah* in the second sentence has also followed the same kind of reverse in its structure.

Third Reading Test (Left-dislocated, OVS)

My family, I've always had a strong relationship with it. An important influence on my personality

was my grandmother, Hannah.

Left dislocations (LDs) are believed to be constructions through which a phrase appears at the left edge of a clause, displaced from its expected position, and is related to some clause-internal anaphoric element (Gregori & Michaelis, 2001). Following the mentioned expectations, in the last reading test, the phrase *An important influence on my personality* which was as an object of the sentence in the original test was dislocated to the left of the sentence and served as the subject this time. *My grandmother, Hannah*, on the other hand, served as an argument-position pronoun.

Validity and Reliability of the Topicalized and Left-dislocated Reading Tests

Since the topicalized and left-dislocated tests were researcher-made tests, their validity and reliability had to be ensured. Therefore, two experts who were PhD holders of applied linguistics with more than five years of teaching and testing experience were sought. Based on their ideas some arrangements and changes were made.

In order to determine the reliability of the test, the revised test was piloted on 20 EFL students who had similar characteristics to the learners of the main study in terms of age, gender, and proficiency level. The level of difficulty of the test items (*p*) and the discrimination index (*D*) were first calculated. The results of Cronbach’s alpha analysis showed that the test was reliable ($r = 0.86$). As a result, the researcher decided to include these tests in the study.

Findings

The First Research Question

The first question attempted to find whether topicalization and left dislocation could influence the reading comprehension of the learners. The findings were statistically tested by conducting two independent-samples t-tests. The first independent-samples t-test was conducted on the reading comprehension of groups A and B of the study. This was to detect any significant differences resulting from these two types of information structure variations. The results are discussed in the next section.

TABLE 2
Descriptive Statistics for the Mean Comparison of the Reading-tests between Groups A & B

	Group	N	Mean	Std. Deviation	Std. Error Mean
Reading-test	GA	20	13.9	1.84015	.36088
	GB	20	10.05	2.02987	.39065

As is shown in Table 2, the reading test mean for GA is 13.9, which is greater than that of GB, 10.05, having a mean difference of 3.85. In order to ascertain that the mean difference between the reading comprehension tests of the two groups is significant, an independent sample t-test was run between these scores. Table 3 illustrates the results.

TABLE 3
Independent Samples t-test between Reading Comprehension Test Scores of Groups A & B

		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
Reading-test	Equal variances assumed	.752	.719	9.624	39	.002	3.85	.53283	3.4938	5.7879
	Equal variances not assumed			9.621	39.72	.002	3.85	.53183	3.5130	5.78687

Since t-value is equal to 9.621, with an alpha = .002 < 0.05 and df = 39; therefore, the difference is statistically significant and that shows that Group A outperformed Group B. As a result, it can be concluded that group A did much better on the reading comprehension tests with normal word order than group B on the topicalized reading comprehension tests. In other words, changing the information structure of the texts to topicalized texts made them more difficult for the learners to deal with.

Independent-Samples t-test; Comparing Reading Comprehension Tests of Groups A and C

The same procedure of data analysis was followed to test the effect of left-dislocated tests on the comprehension of the learners. Another independent-samples t-test was conducted on the reading comprehension scores of groups A and C of the study. The results are discussed below.

TABLE 4
Descriptive Statistics for the Mean Comparison of the Reading-tests between Groups A & C

	Group	N	Mean	Std. Deviation	Std. Error Mean
Reading-test	GA	20	13.9	1.84015	.36088
	GC	20	9.15	1.37823	.16538

As is depicted in Table 4, the reading test mean for Group A, being 13.9 is again greater than that of Group C, or the group which took the left-dislocated reading test being 9.15 showing a mean difference of 4.75. Table 5 illustrates the results of the t-test.

TABLE 5
Independent Samples t-test between Reading Comprehension Test Scores of Groups A & C

		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
Reading-test	Equal variances assumed	.832	.841	11.817	39	.000	4.75	.43827	3.1324	4.1563
	Equal variances not assumed			11.817	39.722	.000	4.75	.43157	3.1324	4.1567

The t-value of 11.817, with an $\alpha = .000 < 0.05$ and $df = 39$, means that the difference is statistically significant and shows that Group A surpassed Group C on the reading test scores. As a result, it can be concluded that Group A did much better on the reading comprehension tests with normal word order than Group C on the left-dislocated reading comprehension tests. In other words, similar to the topicalized tests, changing the information structure of the texts to left-dislocated texts made them more difficult for the learners to handle. The results discussed so far could be the means to claim that changing the information structure in sentences does have a significant effect on Iranian intermediate EFL learners' reading comprehension.

The Second Research Question

The second question attempted to see whether the difference between the comprehension of reading texts with normal, topicalization and left-dislocation was significant. In order to answer this question, a one-way ANOVA was run to compare the three groups' means on the three different reading comprehension tests. As displayed in Table 6, Group A ($M = 13.9$, $SD = 3.14$) showed the highest mean on the tests of reading comprehension. It was followed by Group B ($M = 10.05$, $SD = 2.40$) and finally Group C ($M = 9.15$, $SD = 2.57$).

TABLE 6
Descriptive Statistics; Tests of Reading Comprehension by Groups

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Group A	20	13.9	3.014	.615	10.02	14.56	9	15
Group B	20	10.05	2.407	.481	9.29	11.27	9	12
Group C	20	9.15	2.574	.515	8.22	11.14	7	11
Total	60	11.033	3.112	.362	9.176	14.00	7	15

TABLE 7
One-Way ANOVA; tests of Reading Comprehension by Groups

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	200.002	2	100.001	14.003	.000
Within Groups	507.038	58	7.141		
Total	707.040	60			

These results indicated significant differences between the three groups' means on the tests of reading comprehension. More specifically, the F-value of 14 and the significant value of smaller than .05 ($.000 < .005$), confirm that there is a significant difference somewhere among the mean scores or the dependent variable for the three groups. Having received a statistically significant difference, we can now look at the results of the Scheffe's post-hoc tests provided in Table 8 to be able to locate the source of significance in our data.

TABLE 8
Post-Hoc Scheffe's Tests; Tests of Reading Comprehension by Groups

(I) Proficiency	(J) Proficiency	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Group A	Group C	4.75*	.764	.000	.10	3.92
Group B	Group A	-3.85*	.764	.002	.08	3.90
	Group C	.9	.756	.136	2.11	5.89

Based on the results displayed in Table 8, it can be concluded that;

- A: Group A (M = 13.9) significantly outperformed group B (M = 10.05) on the tests of reading comprehension (Mean Difference = 3.85, $p < .05$).
- B: Group A (M = 13.9) significantly outperformed group C (M = 9.15) group on the tests of reading comprehension (Mean Difference = 4.75, $p < .05$).
- C: The observed difference between group B and Group C was not significant (Mean Difference = .9, $p > .05$).

According to these findings, the answer to the second question is *yes*, since there exists a significant difference between the comprehension of the three different reading texts with normal word order, topicalization, and left dislocation by Iranian intermediate EFL learners. Even though the difference for the first two groups was significant (on behalf of normal word order comprehension) the difference for the second and the third groups was not significant. It could be then concluded that both topicalization and left-dislocation negatively and equally impacted the reading comprehension of the learners. In other words, the comprehension of topicalization and left-dislocation is similarly difficult for the learners.

Conclusions

In this report we analyzed the possible outcome of changing the information structure of sentences with a twofold aim. The results indicated that our learners have difficulty in the comprehension of the tests with variations applied to their original formats. Iranian intermediate EFL learners could not comprehend these texts effectively. As a result, their comprehension rate diminishes when they encounter texts with these formats. For example, if the information structure of a sentence like: *At just 14, my uncle began his first job as a fisherman* is changed to *Working as a fisherman at age 14, my uncle began to work*, or *Working as a fisherman at age 14, my uncle began his first job*, our learners face a greater difficulty in their comprehension. Specifically speaking, the participants of the study could not interpret the change in the structure of the main sentence and it was difficult for them to understand this kind of variation of information structure. To put it other way, embedding the data in appropriate and longer contexts might eliminate the difference.

One possible reason could be the nature of the Persian language as the students' mother tongue in which not many topicalized or left-dislocated sentences are used. In Persian, speakers are inclined more to use normal word order and they do not use topicalized sentences a lot. This could result in the students' difficulty in comprehending texts with these information structure formats. The findings of the study are partly in line with findings of the study by Colonna, Schimke, and Hemforth (2012) who tested the influence of information structural factors like topicalizing versus focusing potential antecedents of the ambiguous pronoun. They observed interpretational preferences for ambiguous intra-sentential pronouns in parallel structures in German and French. Results replicated a baseline difference between the two languages: a subject preference in German and an object preference in French (Hemforth et al., 2010). They further argued that the object preference in French is because speakers take into account an alternative non-ambiguous construction. In addition, they found that in both languages, topicalization enhances, but focusing reduces the accessibility of antecedents for pronouns in the same sentence.

Pedagogical Implications

The results of the study showed valuable facts about EFL learners' knowledge of information structural variations in different texts. Overall, the inability of the students in comprehension of the texts with different information structure could be regarded as their lack of knowledge in analysing and comprehending these texts. This explains the fact that our learners should spend more time and exert

more effort to improve their knowledge of different information structure to overcome the difficulty of these types of texts. Taking the results of the study in account helps students become better, more discerning readers. These results thus invite students to look at the big picture and encourage them to analyse texts in ways that bring their hidden meanings to the surface. This could not be done if they do not pay attention to the information structure and agent patient relationships.

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