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The Impact of Discourse Signaling Devices on the Listening Comprehension of L2 Learners

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Abstract
The purpose of this study was two-fold: first, it aimed at examining the impact of expository text topics on the listening comprehension of L2 learners; second, it aimed to investigate the impact of macro, micro, and macro-micro discourse markers on the listening comprehension of expository texts by L2 learners. The participants (N =105) were male and female adult L2 learners at upper-intermediate level selected from a number of English language institutes in Iran. The materials consisted of three expository texts and three versions (i.e., micro, macro, and macro-micro) for each text, which were developed by the researchers based on Chaudron and Richard's (1986) model of discourse markers. A listening proficiency test and three sets of listening comprehension tests were the instruments of this study. The analysis of the data revealed that there was no significant difference in the participants' performance on the three expository texts. The results also showed that macromicro versions received the highest mean, while macro versions received the lowest mean. The findings of this study suggested that the combination versions of micro and macro discourse markers contributed more to the comprehension of L2 listeners than only micro and macro versions did.

Keywords: discourse markers, expository texts, listening comprehension, macromarkers, micromarkers

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Introduction

It is now acknowledged by the L2 researchers (e.g., Buck, 2001; Flowerdew & Miller, 2005; Vandergrift, 2007) that listening skill deserves equal or even more attention compared to the other three macro skills (i.e., writing, speaking, and reading) in that it is an essential part for the communicative competence. Studies on different aspects of L2 listening which result in the enhancement of listening comprehension are particularly worthwhile since listening as an input for the L2 learners is vital to their language development (Osada, 2004).

One important feature in listening, particularly in the listening to monologues, is the use of rhetorical cues known as Discourse Markers (DMs). DMs, as Hansen (1994) defines, are "organizational signals that appear at the beginning and/or end of a unit of talk and are used by the speaker to indicate how what is being said is related to what has already been said" (p. 143). Some researchers, to date, investigated the impact of signaling cues on the listening comprehension of L2 learners; however, there are no consistent results on the facilitating role of DMs in the listening comprehension process. Among those conducting studies on DMs, a majority reported support for the facilitative role of DMs (e.g., Chaudron & Richards, 1986; Eslami, 2006; Han, 2011; Jung, 2003, 2006; Perez & Macia, 2002; Rido, 2010; Smit, 2006; Taboada, 2006), while a few researchers (e.g., Dunkel & Davis, 1994; Gocheco, 2011) found no positive effects for the signaling cues on the L2 learners' listening comprehension.

In addition, although a majority of researchers (e.g., Fraser, 1999, 2006; Halliday & Hasan, 1976; Hansen, 1998; Hyland, 2000; Schiffrin, 1987) argue that DMs relate discourse segments within the text and help listeners interpret the intended speech, there is still no universal acceptance on the definition and functions of DMs. For instance, Fraser (1996) notes that DMs are one type of pragmatic markers. In his view, pragmatic markers are featured as syntactic, lexical, and phonological linguistic devices, which play no part in the semantic meaning of the content of propositions; however, they have an important role in the interpretation of utterances. On the other hand, within Halliday and Hasan's (1976) framework, DMs function as conjunctions playing important roles in creating the semantic links between the linguistic items.

Given the previous studies on DMs, it can be argued that they are questionable with respect to some methodological shortcomings such as lack of control over the learners' background knowledge of the topic, lack of control over the homogeneity of the participants in terms of listening proficiency, and lack of authentic materials (i.e., natural unscripted lectures). Inconsistencies in the previous studies on the effect of DMs on the L2 listening comprehension suggest the need for more research using a variety of texts as well s a rigorous design or procedure to gain more insight into the role and effects of DMs. Therefore, it is worthwhile to conduct more studies investigating how DMs function during the listening comprehension process, to what extent they affect the listening comprehension, and how different text topics can influence listening comprehension.

Taking a quantitative approach and following Chaudron and Richard's (1986) framework on DMs, the objectives of this study were first, to examine the impact of three expository text topics on the listening comprehension of L2 learners and second, to investigate the impact of different types of DMs (i.e., micro, macro, and the combination of micro and macro) on the listening comprehension of the expository texts by the Iranian L2 listeners.

In this study, the following research questions were formulated:

1. Is there any significant difference in the L2 learners' listening comprehension in terms of the expository text topics?
2. Is there any significant difference between the impact of micro, macro, and macro-micro DMs on the L2 learners' listening comprehension of the expository texts?

Review of the Related Literature

Discourse Markers

Within the last several decades, listening comprehension studies in general and DM studies in the area of listening in particular have extensively attracted the attention of researchers and discourse analysts. There is now ample evidence in the literature supporting the need for attention to both the listening skill and the factors which may influence it in the pedagogical studies. For instance, there have been a number of studies reporting the significant role of DMs in the listening comprehension processing (Chaudron & Ricahrds, 1986; Eslami, 2006; Halliday & Hasan, 1976; Jung, 2003, 2006; Schiffrin, 1987; Smit, 2006; Taboada, 2006). However, there is still no consensus on whether and to what extent DMs can affect the comprehension of L2 listeners (e.g., Chaudron & Richards, 1986; Dunkel & Davis, 1994; Eslami & Eslami-Rasekh, 2006; Fung & Carter, 2007; Gocheco, 2011; Jung, 2003).

To date, a number of researchers (e.g., Chaudron & Richards, 1986; Fortuno, 2006; Fraser, 1999, 2006; Hansen, 1998; Hyland, 2000; Schiffrin, 1987; Schourup, 1999) have attempted to characterize DMs in terms of definition, meanings, and functions in a general way. However, no consensus has emerged among scholars in this regard. For instance, the most frequently used word to refer to these linguistic items is discourse markers (Fraser, 1999, 2006; Schiffrin, 1987). Hansen (1998) argues that DMs are "organizational signals that appear at the beginning and/or end of a unit of talk and are used by the speaker to indicate how what is being said is related to what has already been said" (p. 143). Hansen also reiterates that although DMs do not create meaning, they semantically help the listener interpret the linguistic unit, which they are part of, pertaining to the following discourse, by creating a coherent mental representation of the discourse.

Schourup (1999) suggests connectivity, optionality, and nontruth conditionality as the three characteristics of DMs. He further states that the other feature known as multicategorality (i.e., multifunctionality) is not critical for DMs. He also argues that the primary feature of DM fundamental to its definition is that they connect information units in the discourse. This is also what other scholars (e.g., Fraser, 1996; Hansen, 1998; Schiffrin, 1987) emphasized.

There is also no general agreement on the DM meaning among the researchers. While Fraser (1999) argues that every DM has a core meaning, Schiffrin (1987) maintains that DMs such as *well* and *oh* lack meaning and act as what she calls „discourse slots', which give the speaker time to organize his/her utterances. Schourup (1999), in contrast, points out that the issue is not whether DMs are meaningless or not, but rather what type of meaning they encode. As Fraser (1999) suggests, semantically there are some aspects to the meaning of a lexical expression when it serves to function as a DM. First, a DM fundamentally relates two discourse segments and do not affect the propositional meaning of the segments. In other words, no change occurs in the message content if a DM is removed, although there are some exceptions that DMs such as *because, since, whereas* cannot be deleted due to some syntactic reasons. Secondly, a DM's meaning is regarded as procedural rather than conceptual (Fraser, 1999; Hall, 2007).

Given the literature reviewed, it can be observed that there are also different views on the functions of DMs. One function proposed by Schiffrin (1987) is to create discourse coherence. Establishing sequential relations between segments of discourse, as Fraser suggests, is another view on the function of DMs. Fraser further argues that DMs function to highlight a relationship between the discourse segments, which host and follow.

As noted previously, there is controversy among researchers on how different types of DMs should be classified, and, to date, a number of classifications on various types of DMs have been suggested by different scholars (e.g., Chaudron & Ricahrds, 1986; Fortuno, 2006; Fraser, 1999, 2006; Halliday & Hasan, 1976; Hyland, 2000). The classification used in this study is the one proposed by Chaudron and Richards (1986). They classified DMs into two broad categories: micromarkers and

macromarkers. Micromarkers indicate intersentential relations in lower-level order by either linking clauses and sentences or filling gaps, whereas macromarkers signal overall structural relations in higher-level order by either marking or sequencing major transition points (Chaudron & Richards, 1986). Chaudron and Richards then suggested a taxonomy of micromarkers under five semantic categories: segmentation, temporal, causal, contrast, and emphasis. On the contrary, they did not suggest any subcategories for macromarkers. Rather, they only listed a number of metastatements (i.e., long sentences or clauses) as the important transition points from the lecture they studied.

Expository Texts

The comprehension of expository texts as one type of discourse structure pattern frequently found in the media, news broadcast, documentaries, educational/scientific programs, and academic places is of great importance. An expository text is a text or speech used to provide information about or explain a particular subject or procedure. It is considered as one of the four rhetorical modes of discourse along with description, narration, and argumentation. Patterns of development within an expository text, as Richards and Schmidt (2002) states, include giving examples, describing a process of doing or making something, analyzing causes and effects, comparing and/or contrasting, defining a term or concept, and dividing something into parts or classifying it into categories. In the comprehension of the expository texts, analysis and synthesis are the two mental processes, which interact with each other (Hatim & Mason as cited in Abdollahzadeh, 2009). According to Jung (2003), unlike narrative texts which describe daily events in sequence, expository texts integrate relations between a set of semantically related ideas. Thus, it is vital for the listeners to be able to discriminate the major points in the expository texts so as to be successful in the comprehension (Jung, 2003). Jung also argues that due to the nature of the expository texts, signaling cues may have more facilitative effect on the listening comprehension of such texts by making the informational relationships more explicit in the text. In addition, among the different types of texts, special attention should be paid to monologues when articulated. As Thompson (1994) states, monologues lack turn-taking mechanisms; therefore, the speaker can help the listener achieve a coherent interpretation by using the DMs. He further asserts that "cohesive devices such as discourse markers signal explicitly the coherence of a complex densely-argued text" (p. 60).

In an exploratory study, Shohamy (1991) investigated the effect of different text types and question types on the L2 learners' listening comprehension. A set of listening tests including a news broadcast, a lecture, and a consultative dialogue were administered to 150 EFL students. Participants listened to different versions of the two topics and answered the local and global questions. The results showed that the participants performed better on the items of local cues than the global ones. This was observed across topics, text types, and the participants' level of proficiency. The findings revealed that the dialogue (the most orally-oriented version) was understood best, while students had the most difficulty understanding the news broadcast, which was the most literate version of the three texts.

Previous Studies on Discourse Markers

With respect to a vast number of studies in the literature, it is evident that DMs play a positive role in the comprehension of spoken discourse (e.g., Chaudron & Richards, 1986; Eslami, 2006; Flowerdew & Tauroza, 1995; Jung, 2003, 2006; Perez & Macia, 2002; Smit, 2006; Williams, 1992). For instance, in an early study, Chaudron and Richards (1986) investigated the impact of DMs on the comprehension and recall of L2 lectures. They classified markers into macro and micro markers. They then developed four versions for a lecture (i.e., baseline, macro, micro, and macro-micro), which were about the American history. Two groups of 71 pre-university and 81 ESL university students participated in the study. Each group was divided into four subgroups and listened to four versions of the lecture. Various types of instruments were used: a cloze test, true-false statements, and a multiple-choice test. The material was a read-aloud lecture prepared by a native speaker at a normal rate of speech. The findings revealed that macro version facilitated the recall of information presented in the lecture. Micro version, by contrast, did not aid the listening comprehension of the participants.

Additionally, it was found that the combination version contributed more to the comprehension of the lecture than the macro version did.

In another study, working on the effect of micro markers, Flowerdew and Tauroza (1995) reported a significant role for micro markers in the L2 lecture comprehension. Among a number of videotapes for the lecture, they chose the one which was best suited for engineering students participating in the study. Sixty-three students were divided into two groups of control and experimental. The control group viewed the lecture containing micro markers, while the experimental group viewed the deleted version of the lecture. The lecture was on „Recursion' and included 18 main idea units. The participants were then judged on the basis of the number of words and phrases, pertaining to the main ideas, in their written protocol. It was suggested that micro markers could enhance the listening comprehension of L2 learners.

In an explanatory research, Perez and Macia (2002) investigated how the use of DMs in the spoken discourse affects comprehension of the L2 listeners. Engineering students first received a placement test. After that, they were divided into two groups; each of which listened to one version of the lecture with and without DMs, and then they were asked to fill out a questionnaire on the quality and the difficulty of the lecture. The findings revealed that both factors of language proficiency and the type of DMs influenced the listening comprehension of L2 learners. The results also suggested that metadiscourse items (i.e., textual and interpersonal markers) could enhance the listening comprehension of lower-level students better.

Following the DM studies on the listening comprehension, Jung (2003) explored the effect of contextualization markers on the lecture discourse. Sixteen high-intermediate and advanced L2 learners took part in the study. A placement test was administered to create a homogeneous group of participants. Two versions of a psychology lecture entitled „Attitudes and Behavior' were prepared. Half of the participants listened to the lecture with DMs and the other half listened to the version without DMs. It was found that the absence of contextualization markers resulted in the misinterpretation of the text by the L2 listeners. The findings also showed that participants performed significantly better on the recall of high-idea as well as low-idea units.

In another study, using an authentic lecture, Jung (2006) investigated the impact of signaling cues on the L2 listening comprehension. She controlled the language proficiency and the listening proficiency of participants in both the signaled and nonsignaled groups. To prepare the nonsignal version of the lecture, a computer software program was utilized to delete signaling cues from the original version. The participants of the study were 80 L2 learners, half of whom listened to a lecture containing DMs and the other half listened to the lecture without DMs. The instruments employed in the study were a recall and a summary task. Half of the participants in the signaled group performed the summary task and the other half did the recall task. Then, the participants were judged and scored based on the informational units they stated in their tasks. In other words, they received one point for each informational unit they recognized. The findings indicated that the lecture containing DMs helped L2 listeners recall and comprehend high-level information and low-level information better.

In a similar lecture-comprehension study, Eslami and Eslami-Rasekh (2006) examined the effect of DMs on the academic listening comprehension. Seventy-two EAP university students were divided into two experimental and control groups and were asked to listen to two versions (i.e., with and without DMs) of three lectures related to their field of study. Care was taken to make sure that both groups were homogeneous with regard to the language and listening proficiency. A multiple-choice test of listening comprehension containing 16 items was used to test both global and local understanding of the participants. DMs were found to have a facilitative impact on the participants' lecture comprehension.

In contrast to the above studies which demonstrate positive effects for DMs, there are some studies reporting no effect for the DMs on the listening comprehension. Dunkel and Davis (1994), for instance, investigated whether the existence of DMs in the lecture discourse had an impact on the

listening comprehension of L1 and L2 students. They prepared two versions of the lecture with and without markers. The structure of the lecture was planned based on the two main rhetorical patterns: narration and exposition. Twenty-six L2 and 29 L1 university students participated in this study. Half of each group listened to a lecture with DMs and the other half listened to the same lecture without DMs. Then, they were asked to perform a written recall protocol. The participants' listening comprehension was measured by counting the words and information units, which were written correctly. The findings of the study showed that DMs (both macro and micro markers) had no significant effect on the information recall of the L2 learners. They also reported no positive effect for the DMs on the quantity of notes taken by the L2 learners.

More recently, Gocheco (2011) investigated the possible impact of DMs and the other factors on the lecture comprehension of L2 learners Fifty-one local and international university students took part in the study. A listening proficiency test was first administered to ensure that the participants were homogeneous. The participants were then divided into two groups of control and experimental. Each group listened to a different version of the lecture (i.e., with or without DMs). To assess the participants' listening comprehension, the researcher developed a multiple-choice test of 35 items which were recorded by a native speaker and played to the students after the lecture. The results showed that there was no significant effect on the participants' comprehension of the lecture with and without DMs.

Given the contradicting findings of the aforementioned studies, it can be concluded that these contradictory results may be in part due to the test conditions and the experimental methods employed. It was observed that both earlier and recent studies had serious problems with respect to materials and research methodology (Chaudron & Ricahards, 1986; Dunkel & Davis, 1994; Eslami & Eslami-Rasekh, 2006; Gocheco, 2011). For example, Chaudron and Richards (1986) used a read-aloud lecture as the input material which is not the usual type of lecture occurring in the classroom. A further criticism to this study has to do with the administration of the test. In the experiment, listeners were stopped from time to time to complete tasks. This frequent interruption might have affected their comprehension. In addition, there seems to be a contradiction between their definition of DMs and their actual policy adopted. Regarding the list of macro markers in the study, only some metastatements wereselected as macro markers, and macro markers were not specified based on their function in the discourse but based on their length.

Dunkel and Davis's (1994) study had several shortcomings, too. For instance, like Chaudron and Richards, they employed scripted lectures rather than natural authentic ones. In addition, they did not control participants' background knowledge on the lecture topics. This may influence the comprehension of L2 listeners. Further, as Lynch (1998) criticized, the texts employed in their study were so simple and already familiar to the participants that adding DMs to them made no difference to the L2 lecture comprehension. A close review of their work also revealed that lack of homogeneity between the control and experimental groups may be another factor leading to the contradicting results. In addition, they measured the participants' comprehension by counting the information units in their protocol which was rather subjective.

In her study, Jung (2003) used a computer software program to remove the cues from the original lecture in order to provide nonsignal version. This may affect the acoustic features of the words in the connected discourse and thus the listening comprehension of the L2 learners. Another problem in the study was the small sample size (N = 16), resulting in the findings which can be hardly generalized. The other factor which may have affected the results of the study was the scoring method employed. The participants were judged on the basis of the informational units recalled in the texts. Deciding on the exact quantity of informational units in the lectures and what should be considered as an informational unit made the scores rather subjective. Eslami and Eslami Rasekh (2006) employed inauthentic texts in their study, and asked a native speaker to read aloud the lecture texts which is not what normally occurs in the academic places. Gocheco's (2011) study also suffered from several problems. The first problem is concerned with the small sample size which made it difficult to

generalize the results. Besides, all the lectures were read out loud, which was unnatural. Additionally, the multiple-choice test of listening comprehension was aural rather than written. Listening to both the lecture and the aurally-recorded tests as well as completing the listening task took about 37 minutes, and since the participants were not allowed to take notes during the lecture, it was very challenging for them.; listening to and remembering the test items may have been cognitively demanding to them and thus could have affected the results.

However, in this study much care was taken to avoid mismatch between the test condition and what participants experience in the reality. This was done by controlling some factors such as the materials, participants, procedure, and the measures. In the following section the detailed information about the methodology employed in this study is presented.

Method

Participants

To make sure that all participants were homogeneous in terms of the listening proficiency level, a listening proficiency test was administered to 194 male and female upper-intermediate students from whom 105 language learners were selected. The participants were adult L2 learners from some institutes of Tehran and Babol in which the *New Interchange English* was taught. Upper-intermediate students were selected for this study as it was assumed that such students were familiar with DMs and their functions in the spoken and written discourse.

Materials

The materials in this study consisted of three expository texts. Two texts were selected from *Active 3* and one from *Reading and Vocabulary Development 4*. The characteristics of the original texts are presented in Table 1.

Table 1. *The Characteristics of the Original Texts*

Expository texts	Topics	No. of words	Frequency of DMs	Readability Level
Text 1	Single-parent family	611	22	11.4
Text 2	Homeschooling	598	22	12
Text 3	Motor vehicles	425	12	11.6

Three versions (i.e., micro, macro, and macro-micro) of each text were also used as materials in this study. They were developed by the researchers through manipulating the texts in terms of the absence and presence of different types of DMs and on the basis of the classification suggested by Chaudron and Richards (1986). In other words, the three versions of each original text differed only in the quantity of macro and micro DMs. For example, micro versions of the texts were developed by adding some micro markers or deleting some macro markers. Similarly, by inserting both micro and macro markers to the original texts, the combination versions were constructed. More details about the texts are presented in the procedure section. Table 2 demonstrates the frequency of the different types of DMs in the text versions developed as the listening tasks in this study.

Table 2. *The Characteristics of Different Text Versions Developed in This Study*

Texts	Text Versions	Frequency of macros	Frequency of micros	Frequency of DMs	Length of the recorded versions
Text 1	Macro	6	2	8	3:50
	Micro	1	22	23	3:50
	Macro-micro	6	22	28	3:58
Text 2	Macro	7	2	9	3:48
	Micro	0	21	21	3:44
	Macro-micro	7	22	29	3:50
Text 3	Macro	7	1	8	2:43
	Micro	1	11	12	2:43
	Macro-micro	7	10	17	2:47

Instruments

Two instruments were utilized in this study. The first one was a listening comprehension test selected from the *New English Files (upper-intermediate level)* which consisted of ten items in the multiple choice format. The second instrument developed by the researchers was three sets of test containing 45 items overall. They were constructed based on the functional perspective of DMs as suggested by Chaudron and Richards (1986). In other words, each test set included 15 items, based on the three versions of each text, of which the first five items, the second five items , and the third five items were meant to test micro, macro, and micro-macro information respectively.. The reliability of each test set was then calculated using the KR21 formula which suggested the reliability coefficients of .66, .69, and .60 for test set 1, test set 2, and test set 3 respectively.

Procedure

In the first phase, in order to find the suitable expository texts with general topics, a considerable number of textbooks available on the market were examined. In addition, to ensure that the difficulty of the texts had no effect on the results, of all the texts extracted from upper-intermediate course books, three expository texts which had the similar readability level within the range of 11 to 12 were selected. The appropriateness of these texts was further examined by a linguist and some EFL teachers. In the next step, three versions of each original text were developed and then checked for the naturalness and the appropriateness in respect of the amount and type of DMs by two English language instructors (i.e., three PhD holders, one linguist, and an English native speaker). Additionally, the topic familiarity of the texts was also taken into account so as to control the prior knowledge of the participants in this regard. It is important to note that in the process of inserting and removing DMs, care was taken not to change the meaning of the original texts. A native speaker, then, was asked to record the instructions and all the versions of the original texts.

In the second phase, in order to control the listening proficiency level of the participants, an upper-intermediate listening test was administered to 194 students to measure their level of proficiency level. Then, the participants' scores were classified into three categories (i.e., 0-3, 4-7, and 8-10). Those who received the scores within the range of 4 and 7 were selected for the study, and the ones whose scores were above 8 or below 3 were excluded from the study.

In the third phase, based on the text versions, three test sets were developed by the researchers. The test items were then checked for the content, the nature of the questions, the format, and the wording by two linguists and several experienced English language instructors, and finally based on their comments some modifications were made. In the next step, the test sets were piloted with 41 L2 learners who shared the same characteristics with the target population. In the pilot phase, item characteristics of the test sets including item facility and item discrimination were determined. All the participants in the pilot study stated that the texts were clear enough for them to understand.

Before administering the test, the researchers talked to the teachers and asked them to inform the students of how many tests they would take and how much time they would be given to complete each listening task. The instructions were also provided for students in the written and aural form. As described previously, each test set consisted of three parts. Before each part, the participants were given one minute to look at the five multiple-choice questions. Then, they were asked to respond to the questions while listening to each section. Each listening test had a maximum score of 15 points, and the students received one point for each correct response and no point for the incorrect answers.

Data Analysis

Since the participants were compared on the three test sets as well as on the three expository texts, the one-way repeated measures ANOVA was used to answer the research questions of this study. The analysis of descriptive statistics of the scores, normality tests, tests for the assumption of Sphericity**,** and test of within-subjects effects are presented in this section.

Results

The Effect of Text Topics on the Students' Listening Comprehension

Before investigating whether there was any statistically significant difference in the learners' listening comprehension in terms of the text topics, test of Kolmogorov-Smirnov was used to assess the normality of the distribution of the three texts. Kolmogorov-Smirnov test for all three texts was not significant ($p>.05$), indicating that the distribution of scores for all three text topics was normal. Therefore, to compare the learners' performance on the three expository texts, one-way repeated measures ANOVA was performed. The descriptive statistics of the scores for the three expository texts are presented in Table 3.

Table 3 Descriptive Statistics of the Participants' Performance on the Three Text Topics

Text Topics	*M*	*SD*	*N*
Text Topic 1	6.46	1.45	35
Text topic 2	6.28	1.37	35
Text topic 3	6.02	1.45	35

Table 3 demonstrates that the participants' scores of listening comprehension in text 1 gained the highest mean (M = 6.46), while their scores in text 3 received the lowest mean (M = 6.02). Table 3 also shows that the learners' performance on text 2 was more homogeneous (SD = 1.37) than their performance on text 3 and 4 (SD = 1.45).

In order to test the Sphericity assumption for repeated measures ANOVA, Mauchly's test of Sphericity was used. Since there was no violation of the assumption of Sphericity for the texts (p = .916), Sphericity assumed correction model was used for calculating the results. The results showed

that the interaction between the three text topics was not statistically significant, $F(2, 68) = .911$, $p = .407$, implying that there was no significant difference in the performance of participants in the three expository text topics.

The Effect of DMs on Students' Listening Comprehension of Expository Texts

Before investigating whether there was a statistically significant difference in the participants' listening comprehension on the different versions of expository tests (i.e., macro, micro, and macro-micro), a normality test for micro, macro and macro-micro DMs was calculated. The Kolmogorov-Smirnov test for all three types of DMs was not significant ($p > 0.05$), indicating that the distribution of scores in all three sets of DMs was normal. As a result, to compare the students' performance on micro, macro, and macro-micro test versions, one-wayrepeated measures ANOVA was performed. Table 4 presents the descriptive statistics of the students' scores on the micro, macro, and macro-micro test versions.

Table 4. Descriptive Statistics of the Participants' Scores on Micro, Macro and Macro-micro Test Versions

	M	*SD*	*N*
Macromarkers	5.64	1.26	35
Micromarkers	6.20	1.35	35
Macromicro markers	7.22	0.99	35

As seen in Table 4, macro-micro version received the highest mean ($M = 7.22$), while the lowest mean belonged to macro version ($M = 5.64$). Table 4 also demonstrates that the learners' performance on macromicro test versions was the most homogeneous ($SD = 0.99$), while their performance on micro marker test version was the most heterogeneous (SD= 1.35). Therefore, it can be concluded that the participants were best able to answer the listening comprehension questions for the expository text versions containing both macro and micromarkers. The results in Table 4 also showed that micromarkers have more facilitative effect on the listening comprehension of the participants since micro marker test versions gained the higher mean (M=6.20) compared to macro marker test versions (M=5.64).

Mauchly's test of Sphericity was used to check the Sphericity assumption required for repeated measures ANOVA. Since there was no violation for the assumption of Sphericity for the three versions of DMs ($p = .213$), Sphericity assumed correction model was used for reporting the results. The results demonstrated that there was a statistically significant difference in the participants' listening comprehension of the text versions containing macro, micro, and macro-micro markers, $F(2, 68) = 21.652$, $p = .000$, indicating that the learners performed differently in the three versions of the expository texts.

In order to compare the mean scores of learners' performance on the three versions of DMs, pairwise comparisons was calculated. Table 5 presents the results of this analysis.

Table 5. *Pairwise Comparisons*

					95% Confidence Interval for Difference	
(I) DMs	(J) DMs	Mean Difference (I-J)	Std. Error	*P*	Lower Bound	Upper Bound
Macro	Micro	-0.56	.27	.152	-1.260	.136
	Macromicro	-1.58	.22	.000	-2.135	-1.027
Micro	Macro	0.56	.27	.152	-.136	1.260
	Macromicro	-1.01	.22	.000	-1.597	-.441
Macromicro	Macro	1.58	.22	.000	1.027	2.135
	Micro	1.01	.22	.000	.441	1.597

As Table 5 shows, the interaction between Macromicro and Macro markers was significant (p = .000). A significant interaction was also found between learners' performance on macromicro and micro markers (p = .000). It can be concluded that the participants significantly performed better in the presence of both macro and micro DMs compared to texts containing only micro or macro markers. In other words, the second null hypothesis was rejected.

Discussion

The findings of this study provided evidence for the facilitating role of DMs in L2 listening comprehension which coincides with the most previous studies (e.g., Chaudron & Richrds, 1986; Eslmi, 2006; Han, 2011; Jung, 2003, 2006; Williams, 1992; Smit, 2006; Wei, 2009; Rido 2010)s. For instance, in a study by Eslami (2006), DMs were found to have a facilitative effect on participants' listening comprehension. Similarly, Jung (2003, 2006) found that the lecture containing DMs significantly assisted L2 listeners' recall.

The current findings, however, contradict those of Dunkel and Davis (1994) and Gocheco (2011) who claimed neither macro nor micro discourse markers had positive effect on the listening comprehension of the L2 learners. The contrasting findings of their study with the positive common-sense expectations of DMs' effect on the text comprehension might be due to the nature of the texts and the procedures they employed. Dunkel and Davis (1994) used a scripted unnatural lecture as the input material. They also did not control the background knowledge of the participants in the control and the experimental groups. Similarly, the input material in Gocheco's (2011) study was an inauthentic read-aloud lecture. In addition, the sample size in the study was small, leading to the outcomes difficult to be generalized. Furthermore, the multiple-choice test items which were recorded and played to the participants were so cognitively demanding for the L2 listeners that they might have affected the results. In the present study, on the other hand, possible influential factors on the listening comprehension (i.e., homogeneity in language and listening proficiency level, normal speech rate of delivery, authenticity of materials, prior knowledge of the topic, text difficulty level, and appropriateness of measures) were controlled in order to achieve more reliable results.

The findings of this study also revealed that the participants best comprehended the listening text in the presence of both macro and micro markers. This is what Chaudron and Richards (1986) reported in their study. They found that the combination version of micro and macro DMs contributed more to the comprehension of the L2 listening than only micro and macro version. Additionally, the descriptive statistics of this study showed that macro discourse markers were not as facilitative as micro markers, contrary to the findings of Chaudron andRichards (1986) who reported that L2 learners performed better in the presence of macro markers than micro markers. As an explanation for the conflicting results, it is assumed that as the frequency of micro markers was considerably more than the frequency of macro markers in the expository texts, and micro markers were also scattered all over the text linking supporting ideas and example sentences, they might provide better understanding of the whole text by L2 listeners compared to macro discourse markers. Such result is also in line with what Flowerdew and Tauroza (1995) found that the presence of micro markers had significant effect on the listening comprehension.

For another reason, Chaudron and Richards's (1986) study also suffered from problems with respect to materials and research methodology that may have affected their findings. In their study, there was mismatch between the test conditions and that of a normal lecture setting. For example, they used a scripted read-aloud lecture as the input which is not the usual type of lecture occurring in the classroom. Additionally, the participants in their study were interrupted from time to time to complete the tasks. This frequent interruption might have influenced the participants' comprehension and consequently the results of the research. In the present study, however, the intervening variables such as materials, procedures, and instruments were controlled. To do this, the three authentic texts with general topics were selected. Also, in order to keep the testing conditions as natural as possible and to reduce pressure and anxiety among the participants, the researchers asked the instructors themselves to administer the tests in their classes.

Conclusions

The main objectives of this study were (a) to examine the impact of three expository text topics on the listening comprehension of L2 learners and (b) to investigate the impact of macro, micro, and macro-micro DMs on the listening comprehension of L2 learners. In the present study, it was done to best control as many influential factors on the listening test condition as possible. One limitation, however, was the lack of control over the participants' background knowledge in terms of DMs. The assumption was that upper-intermediate students to some extent were familiar with the classifications and functions of DMs in texts. Nontheless, the students' lack of awareness of different types and functions of DMs might influence the results. The analysis of data showed that there was no significant difference in the L2 learners' listening comprehension across the three expository texts. The results also showed that the L2 listeners performed differently on the micro, macro, and micro-macro versions of the texts. In other words, macro-micro versions received the highest mean, while macro versions received the lowest mean. The findings of this study suggested that the combination versions of micro and macro DMs contributed more to the comprehension of L2 listeners than only micro and macro versions did. It can be concluded that micro and macro DMs are facilitative in the listening comprehension of L2 learners.

Pedagogical Implications

The primary responsibility appears to lie with language teachers in a sense that they can positively influence their students' learning through effective use of DMs in their own speech. Teachers should also know how an effective way of DMs instruction followed by a number of clear examples can enhance students' learning of the second or foreign language. In addition, L2 instructors should familiarize students with the different classifications of DMs and their functions, especially in listening monologues where there is a lack of interpersonal signaling cues. Furthermore, they should try to develop effective ways of teaching DMs in order to enhance the L2 learners' comprehension and

production. Moreover, material designers can develop textbooks in which different types of examples, functions, and information on DMs are presented to learners so that it can assist them to become equipped with the linguistic devices, which may facilitate their comprehension in real listening tasks.

Suggestions for Further Research

This study was carried out based on the classification proposed by Chaudron and Richards (1986). It would be valuable to conduct studies in order to find out more about the effect of other classifications of DMs on the listening comprehension of L2 learners. For instance, the impact of textual and interpersonal or their subcategories such as additive, adversative, and consecutive can be investigated. Moreover, the main focus of this study was on expository texts; other studies can investigate the impact of DMs on the other text types. The participants who took part in this study were upper-intermediate L2 learners studying in English language institutes. It is suggested to replicate this study with university students, particularly those taking ESP courses to compare their performance in order to gain more insights into the impact of different types of DMs on their listening comprehension. It is also suggested to conduct research investigating the effects of various types of DMs on L2 learners with different proficiency levels (i.e., pre-intermediate, intermediate and advanced).

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