



Role of Bottom-Up and Top-Down Pre-Listening Activities on Iranian EFL Students' Listening Comprehension

Fatemeh Karimi¹, Azizeh Chalak^{2*}

¹English Department, Isfahan (Khorasgan) Branch, Islamic Azad University, Isfahan, Iran, fatinaz.karimi@yahoo.com

²Associate Professor, English Department, Isfahan (Khorasgan) Branch, Islamic Azad University, Isfahan, Iran, azichalak@gmail.com

Article Info

ABSTRACT

Article Type:

Research Article

Received:

20/01/2020

Accepted:

14/04/2020

Pre-listening activity has a considerable role in improving listening comprehension. This research examined the effects of bottom-up and top-down pre-listening activities on Iranian EFL students' listening comprehension. It also investigated the potential interaction effects of language proficiency and gender with the treatments. Using the TOEFL (PBT) test, 270 learners were selected and grouped into three proficiency levels of elementary, intermediate, and upper-intermediate. At each level, 90 subjects were randomly distributed to one control (CG) and two experimental groups (EGs), each consisting of 30 learners. After giving the pretest, vocabulary preparation as a bottom-up pre-listening activity and content-related support as a top-down pre-listening activity were given to the two EGs for the treatment, but the learners in the CGs were demanded to listen to the audio tracks and go straight into the listening tasks without any pre-listening activities. The research lasted for six weeks and 12 sessions. At the end of the experiment, the posttest was given to the subjects to measure the effects of the treatments. The results revealed significant differences between the learners' pretest and posttest performance. The analyses of the data confirmed the positive impact of both types of pre-listening activities on the listening comprehension of Iranian EFL learners based on their proficiency levels. Further analyses revealed the interaction effects between proficiency levels and treatments. However, there was no interaction effect between the learners' gender and the treatments. The findings of the study could help practitioners in the field to assign more practical tasks to improve the listening comprehension of Iranian EFL learners.

Keywords: Bottom-up Pre-listening, Content-related Support, Iranian EFL Learners, Top-Down Pre-Listening, Vocabulary Preparation

Cite this article: Karimi, F., & Chalak, A. (2022). Role of bottom-up and top-down pre-listening activities on Iranian EFL students' listening comprehension. *Journal of Modern Research in English Language Studies*, 9(1), 53-72. DOI: 10.30479/jmrels.2020.12364.1536



© The Author(s).

Publisher: Imam Khomeini International University

1. Introduction

Listening comprehension is an active process of deciphering and making meaning from linguistic and non-linguistic sources to construe the incoming data (Nunan, 1999). Many EFL learners perceive difficulties in listening comprehension. The complexity of listening comprehension process and less out-of-class exposure to the spoken language can be the leading causes of low comprehension achievement. To be fair, as Underwood (1989) suggests, such learners need to be prepared before listening to tasks. A well-designed listening class should be segregated into sequenced sections of pre-listening, while-listening, and post-listening. The initial stage aims to help the learners and prepare them for listening.

Pre-listening activities are extra supports that a teacher can provide for the learners to facilitate their comprehension. They refer to the tasks to be done before the learners go to the while-listening stage. These activities aim to prepare the learners to achieve the most of what they will hear and provide them with a better chance of success in listening comprehension. A Pre-listening activity ought to prompt the student, activate relevant knowledge, and pre-teach central vocabularies (Richards & Burns, 2012). They are classified into two kinds of bottom-up and top-down activities. Bottom-up pre-listening activities pertain to teaching unfamiliar words and grammar that are central for listening comprehension. Top-down pre-listening activities trigger the learners' pre-existing knowledge relevant to the listening tasks.

In EFL contexts, learners experience serious limitations. They are less exposed to the foreign language and have narrow chances for authentic use. They, therefore, need to get more practice and extra support. This study, considering the importance of listening comprehension and the drawbacks of EFL contexts, examined the efficiency of top-down and bottom-up pre-listening activities on the listening ability of Iranian elementary, intermediate, and upper-intermediate EFL learners. Content-related support and vocabulary preparation were respectively chosen as two examples of top-down and bottom-up pre-listening activities. This research also tried to examine the potential interaction effects between the proficiency levels of the learners and their gender with the type of pre-listening.

The theoretical base of this study was the schema theory which was introduced by Bartlett (1932). A schema is a mental structure developed as a means of organizing and comprehending new information (Johnson & Johnson, 1999). Various models of schema have been developed by Urquhart and Weir (1998), including formal, content, cultural, and linguistic schema. This study concentrated on the role of content schema and linguistic schema in the improvement of Iranian EFL learners' listening performance. According to Richards and Schmidt (2010), content schema refers to general

background knowledge, and Linguistic schema deals with the knowledge of grammar and vocabulary. It is worth mentioning that both of them are required for effective comprehension (Eskey, 1988).

2. Literature Review

This study examined the efficiency of vocabulary preparation and content-related support as two examples of bottom-up and top-down types of pre-listening. Vocabulary preparation refers to teach some new/unfamiliar words that will be presented in the listening tasks. Unfamiliar vocabulary in the lower level processing is the most crucial factor that blocks effective listening comprehension. A significant number of unfamiliar vocabularies may impede learners' comprehension and reduce their confidence. It is also claimed that poor vocabulary knowledge is the primary cause of problems in listening (Goh, 2000; Kelly, 1991). Sadat Madani and Kheirzadeh (2018), according to their research findings, strongly emphasized the crucial role of vocabulary preparation in the pre-listening stage. Chang and Read (2006) found that vocabulary preparation was more efficient for the lower-level language learners. Molavi and Kuhi's (2018) findings demonstrated the significant facilitative impact of lexical support on the intermediate learners. Farrokhi and Modarres (2012) examined if the unknown words had any impact on Iranian EFL students' listening comprehension. The outcomes revealed the efficiency of vocabulary preparation for the elementary learners. Pan (2012), through his study, showed that vocabulary pre-teaching improved the comprehension of Taiwanese learners. The results of Chung's (2002) studies, however, were against the efficiency of vocabulary pre-instruction. Hui (2010), in a similar survey, showed that teaching vocabulary just before actual listening could not change the listening ability of the learners significantly.

Content-related support, as one example of top-down type of pre-listening activity, through stimulating previously acquired knowledge, facilitates comprehension. The efficient role of prior knowledge on the listening performance of EFL/ESL learners is also confirmed by Long (1990). The results of Heron's (1994) research proved the positive role of pre-existing knowledge on the learners' listening performance. The findings of Jia's (2010) study also confirmed that activating appropriate prior knowledge increases word recognition and decreases miscomprehension. Many other researchers (e.g., Alavi & Janbaz, 2014; Elkhafaifi, 2008; Emami & Lashkarian, 2014; Hayati & Dastjerdi, 2012; Rejaee, 2016; Sadeghi & Zare, 2002; Zohrabi et al., 2014), by their empirical studies, also proved that comprehension was strongly dependent on content schemata. The findings of Keshvarz and Babaii's (2001) study, however, questioned the influential role of prior knowledge on listening comprehension. Jensen and Hansen (1995),

in another study, proved the negligible impact of pre-existing knowledge on the listening of the learners. In a similar study conducted by Barjesteh and Ghasemina (2019) on the effects of pre-listening task types, topic preparation slightly promoted the comprehension ability of the learners. These findings were in line with Weir's (1993) and Ur's (1984) research findings.

As revealed by the literature, there is no general agreement on the efficiency of two types of pre-listening activities on the improvement of listening comprehension. Some studies affirmed the significant impact of bottom-up and top-down types of pre-listening activities, while others questioned their efficiency on the enhancement of the students' comprehension.

This study sought to investigate the effect of bottom-up and top-down types of pre-listening activities on Iranian EFL learners' listening comprehension to remove the limitations of the previous research and arrive at valid conclusions. The potential interaction effects of gender and proficiency levels of the learners with the treatments were also investigated. On the basis of these purposes, the following questions were addressed:

1. Will the bottom-up and top-down types of pre-listening activities significantly affect Iranian elementary, intermediate, and upper-intermediate EFL learners' listening comprehension?
2. Will the learners' proficiency levels interact with the type of pre-listening activities?
3. Will the learners' gender interact with the type of pre-listening activities?

3. Method

A quasi-experimental design was applied to achieve the purposes of this research. Since the participants were not randomly selected, this study cannot be regarded as a true-experimental one. The pretest-posttest control group design was used to investigate the efficiency of both types. This study included both experimental and control groups. By using a quantitative method, this study examined how vocabulary preparation and content-related support affected the listening comprehension of the students. This research can also be considered applied research because this study was concerned with the learning and teaching process and development of theories in EFL contexts. It was run at Islamic Azad University, Isfahan Branch, Isfahan, Iran.

3.1. Participants

The convenience sample technique was used in this study. Out of all the available learners who had taken an academic course with the researcher, 270 EFL learners were chosen for this research. The subjects were studying English at the Islamic Azad University, Isfahan Branch, Isfahan, Iran. The participants were 143 female and 127 male EFL learners, and their ages ranged between 19 and 24 years old.

3.2. Materials and Instruments

Some listening units of *Tactics for Listening* (Richards & Trew, 2010) were used for this research. Two main reasons convinced the researcher to utilize these series. First, the authors took the role of pre-listening activities into consideration to provide listening tasks. Richards and Trew (2010, p.5), in the introductory sections of these books, assert that the teachers should “pre-teach vocabulary and activate students’ prior knowledge” before listening. The second reason was the widespread use of these books in Iranian universities, especially in the Islamic Azad University of Isfahan. These books are designed in accordance with the proficiency levels of the students. The researcher, therefore, used *Basic Tactics for Listening* for the elementary, *Developing Tactics for Listening* for the intermediate and *Expanding Tactics for Listening* for the upper-intermediate learners. These classifications are confirmed by the Common European Framework of Reference for Languages (CEFR). Twelve units of each book were taught in this study.

3.2.1. TOEFL (PBT) Test

The TOEFL (PBT) test was used to determine the learners’ proficiency levels. The final score ranges between 310 and 677 and is based on three sub scores: Reading (31-67), listening (31-68), and structure (31-68). The final score does not include the score of writing, that is, it reports separately. The score of writing, therefore, was not included in the scoring scale of this research.

This research made use of the Common European Framework of Reference for Languages (CEFR) to interpret the scores of the participants. CEFR is an international standard for describing the learners’ language ability. It organizes language proficiency in six levels: beginner (A1), elementary (A2), intermediate (B1), upper-intermediate (B2), advanced (C1), mastery (C2). This study focused on A2, B1, and B2 levels. Mapping the TOEFL (PBT) test onto the CEFR, A2 refers to 397-433 score; B1 refers to 437-510, and B2 refers to 513-547.

3.2.2. *Pretest and Posttest*

The tests designed by Richards and Trew (2010) for their books of Tactics for listening (all series) “to assess students’ ability to listen and their understanding of vocabulary and language presented” (p.4) were used as the pre- and posttests of this study. The tests completely reflected the contents of covered units. The dichotomous scoring method was used for both pre- and posttests. In other words, the correct response received one, and the incorrect response received none. The maximum score for each test was 40 for forty items. These tests, based on the language proficiency levels, were given to all the learners once at the beginning and once at the end of the research. In this study, the following reliability coefficients were calculated and obtained through the KR-21 formula for the pretests and posttests employed in this study:

Table 1

Reliability Coefficients for the Pretests and Posttests

	Pretest	posttest
Elementary	.73	.76
Intermediate	.85	.77
Upper-intermediate	.82	.86

Due to the fact that all the reliability coefficients were larger than .70, they indicated acceptable reliability indexes for the instruments used in the current study.

3.2.3. *Treatment*

This study examined the efficiency of vocabulary preparation and content-related support on Iranian English students. For vocabulary preparation, six to ten unfamiliar words were instructed in the pre-listening stage. A pilot study was run to determine the unknown words to be presented in this stage. Fifteen randomly chosen learners at each level of proficiency were demanded to read the transcription of the listening audios quickly and highlight unfamiliar words. From the highlighted words and considering the steps of Cooper (1997) for teaching words, the researcher selected those that deserved instruction. The final word lists included six to ten words for different units. The vocabulary pre-instruction lasted approximately 10 minutes.

Content-related support was performed in the pre-listening stage by constructing five to seven declarative sentences. They covered the main topic of each unit. After reading the sentences, the students were asked to discuss the subject. The discussions were directed by the researcher and lasted 10 to 15 minutes.

3.3. Procedure

This research was a quasi-experimental (the pretest-posttest control group) design. The findings were analyzed and interpreted based on quantitative data. It was run for six weeks and 12 sessions. The research procedure started with identifying the proficiency levels of the learners. Based on the TOEFL (PBT) test scores, the learners were grouped into three proficiency levels: elementary, intermediate, and upper-intermediate. Each level consisted of three groups of 30 learners. By using tables of random numbers, the subjects were randomly distributed to three groups: two EGs and one CG. In each EG, the subjects received one type of pre-listening as treatment: bottom-up or top-down, (vocabulary preparation or content-related support), and the participants of the CG received no pre-listening activity.

This study was implemented by two teachers across three proficiency levels. The researcher herself taught the elementary and intermediate learners. However, at the upper-intermediate level, the class was run by another teacher. She had an M.A. in language teaching with teaching history of more than ten years at different universities. Before starting this research, the researcher held a meeting with her fellow teacher. During this session, the clear and comprehensive information about the whole process of this research was provided by the researcher. Vocabulary preparation and content-related support were utterly defined. The method proposed by the researcher was accepted for presenting the pre-listening activities to avoid any inconsistency in teaching methodology and its potential impact on the learners' performance. Then, the provided word lists and declarative sentences were given to the second teacher. The amount of time for each type and the orders of classes were also predetermined. The research for the three levels was carried out simultaneously but on different days.

In the second step of the research procedure, the learners received a pretest. After taking the pretest, the learners in the EGs received their treatments. In the CGs, listening was taught through the traditional ways of teaching listening and without any pre-listening activities. The learners were requested to listen to the audio tracks and do the provided listening practices. At the end of the course, the learners received a posttest. They were used to measure the efficiency of the treatments.

It is worth mentioning that the elementary learners had the highest participation in this study. Apart from a few absentees in some sessions, they took part in the whole procedures of this study. The irregularity of the intermediate learners was more so that the researcher was sometimes forced to hold some private sessions to teach what they had missed. The upper-intermediate learners, unfortunately, had the highest absence during the course. This fact compelled the teacher to hold the posttest session again to

prevent the subject loss as a confounding element and its threat to the internal validity.

3.4. Data Analysis

All statistical analyses of this study were done by Statistical Package for Social Science (SPSS). To probe the first question, a one-way analysis of variance was run on the pre- and posttests scores of the learners at each level of proficiency to measure the differences of the students' performance within and among the groups. The prerequisite assumptions for conducting an ANOVA had also been checked. The minimum alpha for confirmation of the research questions was .05. For the next two questions, factorial designs were applied.

4. Results and Discussion

4.1. Results

Before running the statistical analyses, the normality of the distribution of the scores, the homogeneity of the variances of the groups, and the continuity of the data as the preliminary assumptions (Mackey & Gass, 2016) were examined by the researcher. The normality was checked by The Shapiro-Wilk and Kolmogorov-Smirnov tests. Table 2 displays the results.

Table 2

Results for the Normality Test

	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	<i>df</i>	<i>Sig.</i>	Statistic	<i>df</i>	<i>Sig.</i>
Elementary Pretest	.142	30	.128	.949	30	.155
Elementary Posttest	.150	30	.084	.944	30	.161
Intermediate Pretest	.139	30	.141	.948	30	.152
Intermediate Posttest	.150	30	.083	.953	30	.207
Upper-intermediate Pretest	.150	30	.085	.960	30	.305
Upper-intermediate Posttest	.131	30	.199	.943	30	.110

The *p* values under the *Sig.* columns of the Kolmogorov-Smirnov and Shapiro-Wilk tests were all above the significance level of .05, indicating that the distributions for the pretest and posttest scores of the three groups at elementary, intermediate, and upper-intermediate levels were all normal. The Levene's statistics was used to check the second assumption. This test for equal variance yields *Sig.* values higher than 0.05.

Table 3*Results of the Levene's Tests*

	Test	Levene Statistic	df 1	df 2	Sig.
Elementary	Pretest	1.435	2	87	.244
	Posttest	2.311	2	87	.105
Intermediate	Pretest	1.651	2	87	.198
	Posttest	2.236	2	87	.113
Upper-intermediate	Pretest	.637	2	87	.531
	Posttest	.937	2	87	.396

As Table 3 represents, the significance values for all pretests and posttests were higher than 0.05, indicating that the groups' variances are homogeneous, and the existing differences in samples variance are most probably attributable to the random factors. The data (dependent variable), as the third assumption, should consist of interval data. This assumption was also met here. Now, considering the realization of the premises, the results of ANOVA are presented below.

For the elementary learners, the ANOVA results of the pretest scores revealed no significant difference among the comparison groups. The ANOVA results of the posttest scores of the learners, however, demonstrated significant differences among the groups $F(2, 87) = 6.98, p = .002$.

Table 4*ANOVA Results for the Posttest Scores of the Elementary Learners*

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	190.689	2	95.344	6.987	.002
Within Groups	1187.133	87	13.645		
Total	1377.822	89			

The Post hoc Tukey test was used afterward to specify the location of the significant difference(s) among the three groups.

It was shown that there were significant differences between the two EGs and the CG. Nonetheless, no significant difference was observed between the two EGs. The lack of a significant difference between the two types of pre-listening activities indicated that both types promoted students' comprehension similarly. The Listening comprehension of the learners in the CG had some improvement; however, it was far from the level of meaningful difference.

The results of ANOVA for the pretest scores of the intermediate learners indicated that the three comparison groups were homogenous at the beginning of the research ($p = 0.942$). The results of ANOVA on the posttest scores, however, demonstrated significant differences among the three groups $F(2, 87) = 8.46, p = .000$.

Table 5*Post hoc Tukey Test for the Posttest Scores of the Elementary Learners*

		Mean Difference (I-J)	Std. Error	Sig.
Bottom-up	Top-down	.667	.954	.765
	CG	3.367*	.954	.002
Top-down	Bottom-up	-.667	.954	.765
	CG	2.700*	.954	.016
CG	Bottom-up	-3.367*	.954	.002
	Top-down	-2.700*	.954	.016

* The mean difference is significant at the 0.05 level.

Table 6*ANOVA Results for the Posttest Scores of the Intermediate Learners*

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	269.289	2	148.144	8.463	.000
Within Groups	1522.867	87	17.504		
Total	1819.156	89			

Table 7 displays the results of the post hoc Tukey test to determine the precise location of the significant difference(s).

Table 7*Post hoc Tukey Test for the Posttest Scores of the Intermediate Learners*

(I) Group	(J) Group	Mean Difference (I-J)	Std. Error	Sig.
Bottom-up	Top-down	-2.900*	1.080	.023
	CG	1.467	1.080	.368
Top-down	Bottom-up	2.900*	1.080	.023
	CG	4.367*	1.080	.000
CG	Bottom-up	-1.467	1.080	.368
	Top-down	-4.367*	1.080	.000

The students in the top-down group significantly surpassed the students in the bottom-up and the CG. At the same time, there was no significant change between the bottom-up and the CGs. Therefore, it is safe to say that the top-down type significantly enhanced the listening performance of the intermediate learners.

On the pretest scores of the upper-intermediate learners, there was no significant mean difference among the groups. The results of ANOVA on the posttest scores, however, indicated significant differences among the three groups $F(2, 87) = 7.01, p = .001$.

Table 8*ANOVA Results of the Posttest Scores of the Upper-Intermediate Learners*

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	87.222	2	43.611	7.017	.001
Within Groups	540.733	87	6.215		
Total	627.956	89			

To identify the exact location of the significant difference(s), the results of the post hoc Tukey test are given below.

Table 9*Post hoc Tukey Test for the Posttest Scores of the Upper-Intermediate Learners*

(I) Group	(J) Group	Mean Difference (I-J)	Std. Error	Sig.
Bottom-up	Top-down	-2.000*	.644	.007
	CG	.167	.644	.964
Top-down	Bottom-up	2.000*	.644	.007
	CG	2.167*	.644	.003
CG	Bottom-up	-.167	.644	.964
	Top-down	-2.167*	.644	.003

* The mean difference is significant at the 0.05 level.

As illustrated in Table 9, the students in the top-down group significantly outperformed the learners in the bottom-up and the CGs. It's worth mentioning that the students' listening comprehension was enhanced by the bottom-up pre-listening activity but far from reaching the level of significant difference. Accordingly, the efficiency of the top-down pre-listening activity on the students' listening comprehension was approved.

The possible interaction effects between the learners' proficiency levels and the given treatments were also examined in this study. It was investigated if the effects of two kinds of pre-listening were dependent on the levels of language proficiency? A factorial design was conducted to examine this question.

The row labeled Group is the indicator of the main effect of pre-listening activities on the listening comprehension. The Sig. value for Group and Level indicates that the p -value was significant for both Treatments (bottom-up and top-down) and the Level, i.e. elementary, intermediate, and upper-intermediate. That is, there were significant differences among the posttest scores of the learners at three proficiency levels. The Group * Level row is the indicator of the interaction effects of the learners' proficiency levels with their received treatment. Given that the p -value was smaller than 0.05, one is safe to say that the learners' proficiency levels interacted with the

type of pre-listening activity and the efficiency of the types was dependent on the learners' proficiency levels. Further analysis using the Bonferroni method was done to have multiple comparisons based on the type of pre-listening activity.

Table 10

Results of the Factorial Design

Source	Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	4590.301	9	510.033	199.074	.000
Intercept	98.538	1	98.538	38.461	.000
Pretest	2584.604	1	2584.604	1008.809	.000
Group	423.079	2	211.540	82.567	.000
Level	94.772	2	47.386	18.495	.000
Group * Level	199.119	4	49.780	19.430	.000
Error	666.129	260	2.562		
Total	242412.000	270			
Corrected Total	5256.430	269			

As it is shown in Table 11, in the bottom-up pre-listening groups, the posttest scores of the elementary learners were significantly higher than the posttest scores of the intermediate and the upper-intermediate learners. Meanwhile, the intermediate learners outperformed the upper-intermediate learners. The bottom-up type of pre-listening activity had the most significant impact on the elementary learners' improvement and the least impact on the upper-intermediate learners'. That is, the lower the level of the students, the greater the efficiency of bottom-up type of pre-listening will be. The top-down type of pre-listening could improve all levels of language learners. However, its impact on the intermediate and the upper-intermediate learners was more significant. That is, learners with higher levels of language ability could benefit more from the top-down type of pre-listening.

There was no significant difference among the CGs. Considering that the learners in the CGs did not receive any specific treatment, the result seems reasonable. All in all, these results confirmed the interaction effects of the language proficiency levels and the types of pre-listening activities. A factorial design was also utilized on the posttest scores of the learners to examine the potential interaction effects of gender and the types of pre-listening activities. The final results of the main and the interaction effects of Gender and Group (bottom-up, top-down, and CGs) variables are presented below.

Table 11

Paired Comparison of Groups by Bonferroni Method

Group	(I) Level	(J) Level	Mean Difference (I-J)	Std. Error	Sig. ^b
Bottom-up	Elementary	Intermediate	3.163*	.544	.000
		Upper-Intermediate	4.562*	.705	.000
	Intermediate	Elementary	-3.163*	.544	.000
		Upper-Intermediate	1.398*	.564	.045
	Upper-Intermediate	Elementary	-4.562*	.705	.000
		Intermediate	-1.398*	.564	.045
Top-down	Elementary	Intermediate	-.329	.494	1.000
		Upper-Intermediate	1.478	.622	.060
	Intermediate	Elementary	.329	.494	1.000
		Upper-Intermediate	1.806*	.497	.001
	Upper-Intermediate	Elementary	-1.478	.622	.060
		Intermediate	-1.806*	.497	.001
Control	Elementary	Intermediate	.565	.297	.182
		Upper-Intermediate	.068	.390	1.000
	Intermediate	Elementary	-.565	.297	.182
		Upper-Intermediate	-.497	.312	.346
	Upper-Intermediate	Elementary	-.068	.390	1.000
		Intermediate	.497	.312	.346

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

Table 12*Results of the Factorial Design*

Source	Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	4306.566	6	717.761	198.735	.000
Intercept	576.101	1	576.101	159.512	.000
Pre-test	3851.418	1	3851.418	1066.387	.000
Group	423.669	2	211.834	58.653	.000
Gender	.883	1	.883	.245	.621
Group * Gender	1.091	2	.546	.151	.860
Error	949.864	263	3.612		
Total	242412.000	270			
Corrected Total	5256.430	269			

The Group * Gender row is the indicator of the interaction effects of the learners' gender and their treatments. Given that the p was higher than 0.05, it can be concluded that the differences among comparison groups cannot be attributed to the learners' gender. This fact is evident in the marginal means of the posttest scores, as there were no significant differences between males and females' scores in the same groups of pre-listening (Table 13).

Table 13*Marginal Mean Values*

Group / Gender	Male	Female
Bottom-up task	29.682 ^a	29.834 ^a
Top-Down task	31.127 ^a	31.071 ^a
Control Group	27.913 ^a	28.162 ^a

4.2. Discussion

This study investigated the possible impacts of pre-listening activities on Iranian EFL learners' listening performance at different levels. At the elementary level, the results disclosed that the type of pre-listening was not influential since both types significantly promoted the learners' listening comprehension. At the intermediate level, the students of the top-down group significantly outperformed the students of the bottom-up and CGs. However, vocabulary preparation could not affect the comprehension of the learners significantly; it was more efficient than no pre-listening activity. At the upper-intermediate level, the results revealed that content-related support was a more facilitative pre-listening task than vocabulary preparation.

Learners' levels of language proficiency interacted with their pre-listening activities. It was proved that the efficiency of pre-listening activities was dependent on the proficiency levels of the students. Therefore, the language level of the learners was a curtail factor. The elementary

participants benefited more from the bottom-up pre-listening. They prefer to concentrate on the details of the language and accordingly enjoy more vocabulary preparation. The top-down pre-listening, however, was more efficient for the proficient learners. The faster processing skills and increased linguistic knowledge of the intermediate and the upper-intermediate learners can be the reasons for the efficiency of the top-down pre-listening activity. In other words, proficient EFL learners require less contextual support than elementary learners. The analysis of the learners' scores in three CGs indicated no difference among the learners' posttest scores across the three proficiency levels. Given that the learners in the CGs received no treatment, this result seems reasonable.

This study also examined the possible interaction effects between gender and treatment. No significant change was found between the males' and females' performance with the same pre-listening activity. That is, the changes in the listening performance of the learners after treatment cannot be attributed to their gender.

The results of this study proved the efficient role of pre-listening in the comprehension of listening. The empirical evidence revealed that vocabulary pre-teaching, as one form of bottom-up pre-listening, could help the elementary learners. This result is in line with studies that confirm the decisive role of vocabulary instruction at elementary level. EFL elementary learners rely more on the bottom-up processing (Osada, 2004). In the bottom-up model of processing, poor lexical knowledge is the main cause of hindering successful comprehension because they are connected to each other (Rost, 1990). Widdowson (1983) believes that lack of linguistic or formal schemata can be compensated by vocabulary preparation. By Lexico-grammatical knowledge, learners can extract the literal meaning of what they heard. According to Vandergrift (2003), less-proficient listeners use the bottom-up approach and segment the message word by word. Lynch (2002) also claims that less proficient listeners are weak at the bottom-up level. Therefore, increasing the linguistic knowledge of the learners through pre-teaching unfamiliar vocabularies in the pre-listening stage can enhance comprehension of the learners. Elementary learners focus more on the details of language and hence, may benefit more from the bottom-up activities because of their needs for foundational skills like vocabulary building. Therefore, pre-teaching unfamiliar vocabularies in the pre-listening stage seems to be necessary.

Content-related support, on the other hand, as one sample of top-down pre-listening activity, was efficient for all the learners at three proficiency levels. The critical role of prior or pre-existing knowledge in listening comprehension has been widely accepted. Nunan (2007) states that background knowledge is a prerequisite for successful comprehension. It is

important to allow students to use their prior knowledge (Brown, 2006). The new material will need activation of preceding knowledge acquired through various experiences (Harden & Dent, 2005). Intermediate and upper-intermediate learners have a better foundation of the language and may benefit more from top-down activities which focus on the whole comprehension.

These findings can also be explained by the schema theory, which directed this research. Activating relevant schema was significantly influential since it built absent or insufficient schemata of the learners. This schema activation is essential for teachers to maximize the readiness of the learners. Pre-listening activities can activate existing schemata, and, hence, facilitate comprehension. Exposing the EFL learners to pre-listening activities can also compensate for their insufficient linguistic schema and aids comprehension. Providing pre-listening activity in time before actual listening, therefore, found to be substantially important.

5. Conclusion and Implications

This study, by examining the role of pre-listening activities, aimed to promote listening instruction and enhance the comprehension of EFL learners. The results proved the essentiality of the pre-listening stage since pre-listening activities could improve the listening comprehension of the learners efficiently. It was uncovered that both types of pre-listening were better than no pre-listening activity. However, the more preference tends to be given to top-down type of pre-listening activities. Therefore, the pre-listening stage should undoubtedly be an integral part of the listening classes for EFL learners.

The results can offer constructive comments for teachers in EFL contexts. The more significant impact of content related support than vocabulary preparation should change the old belief of teachers about too much interest in linguistic knowledge and give much more attention to background knowledge. The students should also be informed about the positive impact of pre-listening activities on their listening comprehension in order to play their role properly and optimize their learning. Textbook developers can also incorporate pre-listening practices and provide efficient sources.

Although the present research would contribute to the relevant literature, it had some limitations that may raise a number of further studies. In this study, two forms of pre-listening activities were examined. Many other forms falling under the top-down and bottom-up types can be used. They can also be combined or manipulated in other studies. This study was also limited to the participants of the Islamic Azad University of Isfahan, so

the participants' selection was not based on the random sampling approach. Therefore, these conclusions may not be generalizable to the other EFL situations, and the samples may not accurately reflect the characteristics of all Iranian EFL learners. More diverse participants may produce different results. The samples also did not contain an equal mix of genders to reflect the possible interaction between treatment and gender accurately. Another limitation of this study was the potential inconsistency of teachers' behavior that could reduce the reliability of the results. It is also unclear whether the vocabulary lists and accordingly, the content related support sentences included enough items or content for the participants. Further research may show how much information would be enough to achieve the appropriate results. The outcomes can be validated by obtaining qualitative data. This study is also limited by the fact that it is impossible to completely control all the other variables such as fatigue, unwillingness to participate, and affective mood, which might influence the results. The mentioned limitations restrict the generalizability of the findings. The researcher hopes more researchers join in this subject and conduct further empirical research to arrive at more scientific and efficient results for teaching listening.

Acknowledgements

Once again, we would like to take this opportunity to express our deepest gratitude and heartfelt appreciation to the esteemed and honorable Editorial board and reviewers. Had it not been for their meticulous, insightful and constructive comments on our manuscript entitled:

Role of Bottom-up and Top-down Pre-listening Activities on Iranian EFL Students' Listening Comprehension

The manuscript would have never been in its current shape and quality.

References

- Alavi, S. M., & Janbaz, F. (2014). Comparing two pre-listening supports with Iranian EFL learners: Opportunity or obstacle? *RELC Journal*, 45(3), 253-267.
- Barjesteh, H., & Ghaseminia, M. (2019). Effects of pre-listening task types on the development of EFL learners' listening comprehension ability. *International Journal of Listening*, 1-15.
- Bartlett, F. C. (1932). *Remembering*. Cambridge University Press.
- Brown, S. (2006). *Teaching listening*. Cambridge University Press.
- Chang, A. C-S., & Read, J. (2006). The effects of listening support on the listening performance of EFL learners. *TESOL Quarterly*, 40, 375-397.
- Chung, J. M. (2002). The effects of using two advance organizers with video texts for the teaching of listening in English. *Foreign Language Annals*, 35, 231-241.
- Cooper, J.D. (1997). *Literacy: Helping children construct meaning*. Houghton Mifflin.
- Elkhafaifi, H. (2008). The effect of prelistening activities on listening comprehension in Arabic learners. *Foreign Language Annals*, 38(4), 505-513.
- Emami, R., & Lashkarian, A. (2014). The Effect of Pre-reading Activity on the listening comprehension of intermediate EFL learners. *International Journal of Education and Research*, 2(8), 111-122.
- Eskey, D. E. (1988). Holding in the bottom: An interactive approach to the language problems of second language readers. In C. Devine, & D. Eskev, *Interactive approach to second language reading* (pp. 93-100). Cambridge University Press.
- Farrokhi, F., & Modarres, V. (2012). The effects of two pre-task activities on improvement of Iranian EFL learners' listening comprehension. *Theory and Practice in Language Studies*, 2(1), 144-150.
- Goh, C. (2000). A cognitive perspective on language learners? Listening comprehension problems. *System*, 28, 55-75.
- Harden, R. N., & Dent, J. A. (2005). *A practical guide for medical teachers*. Churchill Livingstone.
- Hayati, S., & Dastjerdi, H. (2012). The relationship between prior knowledge and EFL learners' listening comprehension: Cultural knowledge in focus. *Mediterranean Journal of Social Sciences*, 3(1), 122-143.

- Herron, C. (1994). An investigation of the effectiveness of using an advance organizer to introduce video in the foreign language classroom. *The Modern Language Journal*, 78(2), 190-198.
- Hui, L. (2010). Chinese cultural schema on Education. *Issues in Educational Research*, 15(1), 17–36.
- Jensen, C., & Hansen, C. (1995). The effect of prior knowledge on EAP listening-test performance. *Language Testing*, 12(1), 99-119.
- Jia, L. (2010). How word recognition is affected by schema activation: An investigation through listening. *Chinese Journal of Applied Linguistics*, 33(4), 64-76.
- Johnson, K., & Johnson, H. (1999). *Encyclopedic dictionary of applied linguistics*. Blackwell publishers.
- Kelly, P. (1991). Lexical ignorance: The main obstacle to listening comprehension with advanced foreign language learners. *International Review of Applied Linguistics in Language Teaching*, 29(2), 135–149.
- Keshavarz, M. H., & Babaii, E. (2001). Incompatibility of schema with input in listening comprehension. *Indian Journal of Applied Linguistics*, 27(1), 57-83.
- Long, D. (1990). What you don't know can't help you: An exploratory study of background knowledge and second language listening comprehension. *Studies in Second Language Acquisition*, 12, 65-80.
- Lynch, T. (2002). *The Oxford handbook of applied linguistics*. Oxford University Press.
- Mackey, A., & Gass, S. (2016). *Second language research*. Routledge.
- Molavi, S., & Kuhi, D. (2018). A comparative study of the effects of three different pre-listening tasks at intermediate and advanced levels. *Journal of Advances in English Language Teaching*, 6 (1), 1-16.
- Nunan, D. (1999). *Second language teaching and learning*. Heinle & Heinle Publishers.
- Nunan, D. (2007). Listening in language learning. *Sino-US English Teaching*, 1(6), 32-33.
- Osada, N. (2004). Listening comprehension research: A brief review of the past thirty years. *Dialogue*, 3, 53-66.
- Pan, Y. C. (2012). Effects of multi-faceted lexical instruction on the TOEIC listening performance of Taiwanese EFL college students. *International Journal of English Linguistics*, 2, 71-79.
- Rejaei, Z. (2016). The Role of pre-listening activities on EFL learners' listening comprehension. *International Journal of Foreign Language Teaching and Research*, 3(10), 35-43.

- Richards, J. C., & Trew, G. (2010). *Basic tactics for listening (3th ed.)*. Oxford University Press.
- Richards, J. C., & Trew, G. (2010). *Developing tactics for listening (3th ed.)*. Oxford University Press.
- Richards, J. C., & Trew, G. (2010). *Expanding tactics for listening (3th ed.)*. Oxford University Press.
- Richards, J. C., & Burns, A. (2012). *Tips for teaching listening: A practical approach*. Pearson Education ESL.
- Richards, J. C., & Schmidt, R. (2010). *Longman dictionary of language teaching & applied linguistics (4th ed.)*. Routledge.
- Rost, M. (1990). *Listening in language learning*. Longman.
- Sadat Madani, B., & Kheirzadeh, Sh. (2018). The impact of pre-listening activities on EFL learners' listening comprehension. *International Journal of Listening*, 1-15.
- Sadighi, F., & Zare, S. (2002). Is listening comprehension influenced by the background knowledge of the learners? A case study of Iranian EFL learners. *The Linguistics Journal*, 1(3), 110-126.
- Underwood, M. (1989). *Teaching listening*. Longman.
- Ur, P. (1984). *Teaching listening comprehension*. Cambridge University Press.
- Urquhart, A. H., & Weir, C. (1998). *Reading in a second language: Process, product, and practice*. Longman.
- Vandergrift, L. (2003). Orchestrating strategy use: toward a model of the skill second language listener. *Language Learning*, 53(3), 463 - 496.
- Weir, C. (1993). *Understanding and developing language tests*. Prentice-Hall.
- Widdowson, H. G. (1983). *Learning purposes and language use*. UP.
- Zohrabi, M., Farrokhi, F., & Ravasani, S. (2014). The effect of topic familiarity on Iranian EFL learners' listening comprehension. *International Journal of Language Learning & Applied Linguistics World*, 7(1), 15-33.