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The Effect of Connected Speech Teaching on Listening Comprehension of Iranian EFL Learners

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Abstract

Listening comprehension is the most problematic skill among Iranian EFL learners even for those who passed high level of proficiency. The present study investigated the effects of teaching explicit instruction of connected speech on Iranian EFL learners' listening comprehension. It also investigated learners' attitudes towards this kind of training. For the purpose of the study, 52 male subjects aged 14 to 19 were purposefully selected. The Iranian EFL learners were given explicit instruction of connected speech features for five weeks. Listening comprehension tests and dictation tests were used before and after the treatment to determine if such instruction enhanced listening comprehension, and also, to determine whether the subjects were able to recognize individual words in connected speech. The subjects were asked to complete a questionnaire after the treatment in order to determine their attitudes toward the instruction. The results of the study showed significant improvement in learners' ability to recognize individual words in connected speech through the instruction of connected speech feature. On the question of listening comprehension, the instruction of connected speech features significantly enhanced listening comprehension. The learners expressed that they were able to recognize English prosody including connected speech features better after the instruction. They had positive attitude toward this instruction. This study clearly presented the importance and usefulness of teaching connected speech features. The finding of this study could help teachers and curriculum designers in the field to employ new ways to improve learners' listening comprehension.

Keywords: Connected speech, Iranian EFL Learners, Listening Comprehension, Suprasegmental Features

INTRODUCTION

Graham and Macaro (2008) believed that listening is one of the most difficult skills for foreign language learners because of the complexity of its process and different types of knowledge required for successful listening. Teaching learners listening skill may be difficult for teachers and namely difficult for learners to learn as well. For instance, even

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the learners who are adequate in speaking and reading might confront problems with listening skill when facing a record with a quick conversation (Ghaderpanahi, 2012). Considering the need to improve learners' proficiency in the listening skills, it becomes necessary to explore alternative strategy in order to boost their listening ability. Many methods have been tried in teaching and learning listening, yet learners' achievement is low. Some researchers generally believe that if more effective strategies are employed, learners' listening ability will improve. There have been some investigations into comprehension of listening and connected speeches in different parts of the world. However, less work has been done in Iranian language contexts concerning this topic. Therefore the purpose of this study was to investigate the effect of teaching connected speech on improving Iranian EFL learners' listening comprehension.

This research examined new ways in which the sub skills of listening could be taught. The approaches proposed are based on micro-listening exercises which practice individual sub skills of listening. Suprasegmental features of spoken language (involving word stress, sentence stress, rhythm, and connected speech processes) were recognized as playing a critical role in the second language classroom (Gilbert, 2012). Some researchers generally believe that if more effective strategies are employed, learners' listening ability will improve. Therefore, this study investigated this matter by obtaining some information regarding this phenomenon using a treatment and an attitude questionnaire to determine if the explicit instruction of connected speech features enhanced listening comprehension, and to determine whether the subjects had come to be able to recognize individual words in connected speech, finally to investigate learners' attitudes toward the instruction. Subjects' level of knowledge was also measured by two pre-tests and a post-test.

LITERATURE REVIEW

Unfortunately, there is not as much written about connected speech as there is about many other issues in applied linguistics: "Sadly, actual research on connected speech is hard to find", Rosa (2002). Some researchers have offered modest efforts to explain a few facets of connected speech and suggested ways to teach them (e.g. Celce-Murcia, Brinton, & Goodwin, 2004). One of the earliest studies about connected speech is Henrichsen's (1984) investigation into the role of connected speech in listening comprehension for ESL learners. Ito (2006) revealed that the presence or absence of connected speech did indeed affect listeners' perception. Generally, connected speech forms have received little attention in the ESL/EFL pedagogy literature. However, studies investigating the effectiveness of connected speech teaching showed mixed results. Some studies (Brown & Hilferty, 2006; Fan, 2003; Matsuzawa, 2006) found that connected speech teaching was effective in improving learners' perception of connected speech forms and therefore should be taught in the classroom.

The positive effects of teaching the "reduced forms" on listening comprehension have also been announced in the Japanese EFL context. Romanko (2008) discovered that teaching English reduced forms significantly improved Japanese freshman's capability to identify "reduced forms" on a post-course test of listening ability. Cahill (2006) also elaborated

on the importance of teaching 'reduced forms' to Japanese EFL learners. He noticed that if teachers do not adequately prepare learners for authentic international situations, they are doing their learners a disservice. This lack of exposure may prevent Japanese EFL learners from developing a fuller range of listening-comprehension skills.

In fact, other studies (Carreira, 2008; Brown & Hilferty, 2006) failed to show learners' significant gains after receiving connected speech training. Some studies were not able to discover the positive effects of the instruction of connected speech features. For example, Brown and Hilferty (2006) administered UCLA English as a Second Language Placement Examination (ESLPE) listening comprehension subtest as pre- and post-listening comprehension tests. At the post-test, no significant difference was confirmed between the experimental group and the control group. Carreira (2008) measured the improvement by using TOEIC listening section, but the results obtained from *t*-test reveals that there were no significant differences between pre- and post-listening tests.

Examination of previous research generally indicated that CSP instruction facilitated learners' perception of connected speech. However, most studies failed to address the long-term effects of such training on learners' perceptual accuracy. The inconsistent research findings required more empirical studies to clarify the effectiveness of connected speech teaching. In spite of its importance, connected speech is the area on which little research has been done and is not taught in any systematic manner in EFL programs in Iran. No teaching material has been published to show a comprehensive view of connected speech,. This lack of empirical information and inconsistent research findings formed the main motivation to conduct the present study.

RESEARCH QUESTIONS

The study attempted to answer the following research questions about the instruction of connected speech perception:

- 1. Does explicit instruction of connected speech have any significant effect on listening comprehension of Iranian EFL learners?
- 2. Can EFL learners recognize individual words in connected speech through the instruction of connected speech features?
- 3. To what extent does a proper knowledge of connected speech facilitate the listening skills of Iranian EFL learners?
- 4. What is Iranian EFL learners' attitude towards explicit instruction of connected speech?

METHOD

Participants

The sample included 52 male Iranian learners between the age of 14 and 19 years enrolled for fall term 2016 in *Safahan Language Institute* in Isfahan, Iran. Convenience sampling strategy was utilized in order to select the sample, the subjects were all native speakers of Persian and had at least two years of education, no one had ever been to an

English speaking country and all were at a pre intermediate level of proficiency in English based on the result of the Oxford Placement Test.

Material and Instruments

In this stage, the subjects were divided into two groups of 27 and 25, a control and an experimental group. The classes were held in the same institute where the subjects attended ordinary school classes. A total number of 10 sessions in five-weeks teaching period and two sessions each week was held. Each session time was about 50 minutes.

The control group was taught same English lessons as experimental group from the book two of *Top Notch* book series but in the ordinary way. The subjects in the control group used workbook as class activities and exercises. The experimental group was taught the same textbook in each session, and used the same audio CD. The difference was that the experimental group was teaching explicit instruction of connected speech features, using a laptop and LCD. Every session after teaching ordinary lessons, a handout related to connected speech distributed between subjects in experimental group and taught it. And then play some native teaching clips related to that part of connected speech taught in that session. Two assessment tests were held to check how the two groups are different from each other.

Procedure

The experiment included three phases, Oxford English Language Placement Test, two pretests of listening comprehension test and connected speech dictation test, 6 sessions of teaching explicit instruction of connected speech, and two post- tests of listening comprehension test and connected speech dictation, and finally a questionnaire. The 52 subjects were purposely assigned to two groups. After 6 sessions of teaching explicit instruction of connected speech to experimental group, subjects in the both groups were provided with two tests as the post-test exam. Both tests were paper and pencil tests. The first test was a comprehension test which tested Listening skill and extracted from *Tactics for Listening* book series by *Richards*. There were 40 conversations and questions in four parts in the test.

The second test was a dictation test which used for both pretest and post-test. Each dictation test consisted of 21 sentences. The sentences used in the two tests were the same, but in order to avoid the practice effect, the order of the sentences was different. The 40 sentences were extracted from *American Accent Training* book written by *Ann Cook*. In the dictation tests, the subjects were asked to listen to a CD in which each sentence with connected speech features was read, and asked to fill in the blanks with what they heard, and finally the subjects filled out a questionnaire to gather their opinions about the training, its effectiveness, advantages, and limitations.

Data Analysis Procedure

The process of scoring the subjects' papers was done. For ensuring the researcher himself was present at the exam sessions and presented the scores at once so after two days of

evaluating the subjects, the raw data that was subjects' scores was ready for further analysis. The scores of control group and experimental group were given as input to SPSS to calculate mean and SD. The questionnaire was a pencil and paper one and questionnaires was checked twice by the researcher and the frequency of each answer was calculated. In addition, because the questionnaire results were checked twice by the researcher, the intra- rater reliability was checked and it was about 0.97.

RESULTS AND DISCUSSION

The data collected were analyzed to find out the effects of explicit instruction of connected speech on listening comprehension of Iranian EFL learners, And also to investigate whether EFL learners become able to recognize individual words in connected speech through the instruction of connected speech features, and finally, to discover their attitudes towards explicit instruction of connected speech. Pretest and posttest scores of the listening comprehension test as well as the dictation test enabled the researcher to conduct the ANCOVA test in SPSS and find the answers to the research questions of the study.

Results of the Dictation Test

To find an answer to whether EFL learners can recognize individual words in connected speech through the instruction of connected speech features, the learners' dictation posttest scores in the EG and CG had to be compared. However, these two groups of learners might have had pre-existing differences before the treatment commenced (that is their pretest scores might have differed). For this reason, one-way ANCOVA was conducted to help find an answer to this research question:

Table 1. Descriptive Statistics for Comparing the Dictation Posttest Scores of the Learners in the EG and CG

Groups	Mean	Std. Deviation	N
EG	16.68	3.68	22
CG	14.50	2.81	20
Total	15.64	3.44	42

The mean score for the EG learners on the dictation posttest was larger than the dictation posttest mean score of the CG learners (16.68 > 14.50). To control for their pre-existing differences, adjust the posttest mean scores, and find out the significance/insignificance of the difference on the posttest, the p value in front of Group in the ANCOVA table should be consulted:

Table 2. Results of One-Way ANCOVA for Comparing the Dictation Posttest Scores of the Learners in the EG and CG

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	437.41	2	218.70	176.87	.00	.90
Intercept	26.92	1	26.92	21.77	.00	.35

Pretest	387.54	1	387.54	313.41	.00	.88
Groups	89.63	1	89.63	72.48	.00	.65
Error	48.22	39	1.23			
Total	10763.00	42				
Corrected Total	485.64	41				_

In Table 2, across from Groups, under the Sig. column, you can see that the p value was less than the specified level of significance (.00 < .05), indicating that the difference between the dictation posttest scores of the EG and CG learners was of statistical significance. In other words, the treatment (explicit instruction of the features of connected speech) significantly and positively affected the word recognition ability of the EG learners. Under Partial Eta Squared, the relevant value was .65, which shows that being in one group or another accounted for 65% of the variance in the dictation posttest scores of the learners in the EG and CG. In addition, in the line in the table that corresponds to the covariate (i.e. the pretest), you can see that the p value here was .00, which was lower than the significance level, implying that the covariate was significant. In fact, it explained 88% of the variance in the dictation posttest scores of the learners. Figure 1 depicts that EG learners excelled CG learners on the dictation posttest:

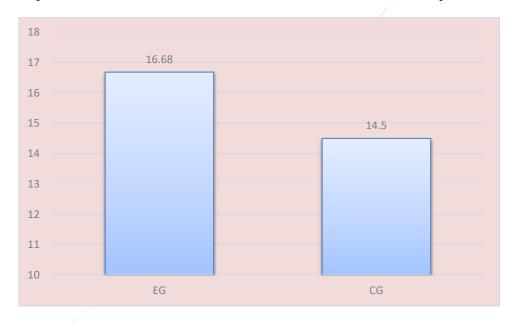


Figure 1. Dictation Posttest Mean Scores of the Learners in the EG and CG

It is clearly observed in Figure 1 that EG learners, owing to the exposure to the explicit instruction of connected speech features, could obtain significantly better results than could the CG learners on the dictation posttest, and thus could recognize individual words in connected speech more successfully than their CG counterparts.

Results of the Listening Comprehension Test

In order to investigate to what extent a proper knowledge of connected speech facilitate the listening skills of Iranian EFL learners, the researcher had to compare the pretest scores EG and CG learners, and then the posttest scores of the learners in these two groups, for which independent-samples t test could be the statistic of choice. However, to

control for any possible differences between the EG and CG prior to the treatment, one-way ANCOVA was conducted. This way the researcher could control for any possible differences between the two groups on the pretest and then compare their posttest scores. The results of the ANCOVA tests are presented below.

Table 3. Descriptive Statistics for Comparing the Posttest Listening Comprehension Scores of the Learners in the EG and CG

Groups	Mean	<i>Std.</i> Deviation	N
EG	75.04	8.48	22
CG	70.05	8.07	20
Total	72.66	8.57	42

Such descriptive statistics as mean and standard deviation are shown for both EG and CG young learners in Table 3. The listening comprehension posttest mean score of the CG (M = 70.05) learners was less than the listening comprehension posttest mean score of the EG (M = 75.04) learners. To determine whether this difference was a statistically significant one or not, the researcher needed to look down the Sig (2-tailed) column in the ANCOVA table below.

Table 4. Results of One-Way ANCOVA for Comparing the Listening Comprehension Posttest Scores of the Learners in the EG and CG

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	2694.13	2	1347.06	164.58	.00	.89
Intercept	113.02	1 /	113.02	13.81	.00	.26
Pretest	2432.70	1	2432.70	297.23	.00	.88
Groups	667.29	/ 1	667.29	81.53	.00	.67
Error	319.19	39	8.18			
Total	224792.00	42				-
Corrected Total	3013.33	41				

In Table 4, if you find Groups in the leftmost column and read across this row, under the *Sig.* column, you can find the p value, which should be compared with the significance level. The p value here was smaller than the specified level of significance (.00 < .05), indicating that the two groups in this study differed significantly with respect to their listening comprehension posttest scores. This means that the treatment (i.e. explicit instruction of the features of connected speech) significantly facilitated the listening comprehension of the EFL learners in the EG. In other words, the learners in the EG (M = 75.04) had a significantly higher listening comprehension posttest mean score compared to their counterparts in the CG (M = 70.05).

Under Partial Eta Squared, the value corresponding to Groups was .67, which shows that being in different groups (EG vs. CG) accounted for 67% of the variance in the listening comprehension posttest scores of the EG and CG learners. Another noteworthy piece of information in Table 4.4 concerns the influence of the covariate (i.e. the pretest). If you find the line in the table that corresponds to the covariate (i.e. the pretest), and read

across to the Sig. level, you can see that the p value here was .00, which was lower than the significance level, meaning that the covariate was significant. In fact, it explained 88% of the variance in the listening comprehension posttest scores of the subjects. The obtained results of the analysis above are graphically represented in Figure below:

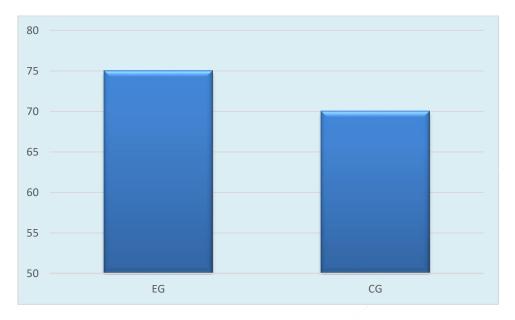


Figure 2. Listening Comprehension Posttest Mean Scores of the Learners in the EG and CG

As it could be seen in Figure 2, the EG learners considerably outperformed their CG counterparts on the listening comprehension posttest, and this superior performance could be attributed to their exposure to explicit instruction of the features of connected speech.

Results of the Attitude Questionnaire

At the end of the project, the subjects were asked to express their attitudes towards explicit instruction of connected speech, answering an attitude questionnaire. Subjects completed a questionnaire to gather their opinions about the training, its effectiveness, advantages, and limitations. The questionnaire included both open-ended and close-ended questions in order to employ a combined methodological approach for analyzing data using both quantitative and qualitative data. Results of the close-ended questions suggested general trends in the subjects' opinions, and answers to the open-ended questions may contribute to explaining the close-ended quantitative descriptions, as well as add depth to the major findings of the study. The first section of the questionnaire included the close-ended questions including 11 Likert scale questions (see Appendix D for questionnaire).

For every question, learners were asked to read a statement and indicate the extent to which they agreed or disagreed with it. Each question offered four response choices: agree, somewhat agree, somewhat disagree, and disagree. The questions revolved four categories in order to present results in a clearer and more accessible manner. The categories were: (a) 'training satisfaction' to evaluate the overall effectiveness of the

training and the time allotted to such training, (b) 'task features' to rate the usefulness of several aspects of the training such as authenticity of materials, (c) 'teacher's role' to examine the extent of teacher's support in conjunction with materials (d) 'training outcome' to examine perceived gains in connected speech perception, Table 5 shows the questionnaire categories and their corresponding Likert scale questions.

Table 5. Connected s	neech training	questionnaire of	questions and	categories
	P	1	1	

Categories	Questions				
Training	1. Overall, I liked the past pronunciation training sessions.				
Satisfaction	3. I would like more training similar to this training.				
	5. Training materials were appropriate for our level.				
	6. The number of practice sessions was appropriate.				
Task	10. The clips were easy to understand				
Features	11. I'd like to have more examples of clips (Authenticity).				
Teacher's	8. The teacher's explanation of connected speech helped				
Role	me comprehend them.				
	9. this course motivates me to work independently				
	On my listening comprehension and CSs				
Training	4. This training helped me notice how I connect words.				
Outcome	2. I can understand connected words better in speech				
	after this training.				
	7. This training help me improve my listening comprehension.				

The second section of the questionnaire included five open-ended questions that were designed to collect more detailed accounts of the learners' perspectives of the training sessions. The first question asked learners to reflect on the progress of their listening comprehension skill after the training. The next three questions asked the subjects to provide feedback on the training indicating the features they liked the best/least, and to pinpoint any problematic or confusing aspects in the training. Finally, the questionnaire solicited suggestions from the learners on how to improve the training further.

To answer the fourth question, 22 of the 27 subjects in the experimental groups filled out the questionnaire (two learners eliminated through the placement test and three were absent). The questionnaire responses were analyzed using the statistical software SPSS. For Likert-scale questions with four response choices, differential weights of 1 to 4 were assigned, with 1 being (disagree), 2 being (somewhat disagree), 3 being (somewhat agree) and 4 being (agree). Then all learner answers were entered into an Excel spread sheet and later imported into SPSS to calculate descriptive statistics for survey item (mean and standard deviation).

For learners' narrative responses to the open-ended questions, responses were listed and grouped into categories. In this process, key statements in every question were

highlighted, and then corresponding responses were underlined and categorized in a similar fashion. A descriptive account of the most common and interesting responses is provided and discussed in the following sections.

The questions in the training questionnaire were grouped into four categories to present results in a clear thematic manner. The categories were: training satisfaction, task features, teacher's role, and training outcome. Details of the analysis of the questionnaire are presented in Table 6 and 7 below:

Table 6. Results of the Attitude Questionnaire

Categories	Statements	Mean
	Overall, I liked the past pronunciation	
	training sessions.	3.31
	3. I would like more training similar to	
	this training.	3,18
	5. Training materials were appropriate	
Training Satisfaction	for our level.	3.13
Sausiaction	6. The number of practice sessions was	
	appropriate.	3.30
	10. The cline ware constant and arretard	
	10. The clips were easy to understand.	3.13
Task	11. I'd like to have more examples of	
Features	clips (Authenticity).	3.68
	8. The teacher's explanation of	
	connected speech helped me	3.50
	comprehend them.	3.30
Teacher's	9. This course motivates me to work	
Role	independently on my listening	3.55
	comprehension and CSs.	3.33
/	4. This training helped me notice how I	
	connect words.	3.22
	2. I can understand connected words	
Training	better in speech after this training.	3.73
Outcome	7. This training help me improve my	
Outcome	listening comprehension.	3.32

Because the questionnaire items had four choices of differing weigh (agree = 4; somewhat agree = 3; somewhat disagree = 2; and disagree = 1), the average value of the choices was calculated (1+2+3+4=10 divided by 4=2.5). A mean score was then calculated for each of the questionnaire items, and those mean scores were compared with 2.50. A mean score above 2.50 would indicate the learners' agreement with that given statement, and a mean score lower than this average value would show the respondents' disagreement.

It could be seen in the table above that all the mean scores for all the questionnaire items were above the average value of the choices. In fact, the learners agreed with all the statements in the questionnaire. More precisely, they found the training satisfactory as they agreed that they liked the past pronunciation training sessions, they would like more

training similar to this training, they thought the training materials were appropriate for their level, and they believed the number of practice sessions was appropriate.

Moreover, they found the features of the task (e.g., authenticity) satisfactory because they expressed that he clips were easy to understand, and that they would like to have more of those materials and clips. Additionally, they were pleased with the teacher's role as they were of the opinion that the teacher's explanations of connected speech helped them comprehend the listening texts better, and they believed the course motivated them to work independently on their listening comprehension. Finally, the learners were happy with the training outcome due to the fact that they believed the helped them notice how they connected words in English, they could understand connected words better in speech after the training period, and they thought the training helped them improve their listening comprehension.

After considering the learners' agreement with all the statements in the questionnaire, a one-sample t test was conducted to see if the extent to which the learners held positive attitudes towards their course was of statistical significance or not.

			Te	st Value = 3		
Overall Mean	T	df	Sig. (2-tailed)) Mean the Di		nce Interval of ference
меан				Difference	Lower	Upper
3.68	13.42	10	.00	/.86	.72	1.01

Table 7. One-Sample t Test Results for the Attitude Questionnaire

As the table 7 shows, the overall mean of the questionnaire was 3.68, which is well above 2.50; the p value under the Sig. (2-tailed) column appeared to be less than the significance level (.00 < .05), which means that the respondents' agreement with the statements in the questionnaire reached statistical significance.

CONCLUSION

The study attempted to determine whether the instruction of connected speech features could develop EFL learners' ability to recognize individual words in connected speech, whether it could enhance listening comprehension, and what the learners' attitudes are toward the instruction of connected speech features. The findings obtained from the study were about listening skills. As far as the results of the dictation tests and listening comprehension tests have shown, the effectiveness of teaching connected speech features in the development of listening skills, was supported.

It is difficult to make broad claims in language learning based on the findings of one study. Therefore, before drawing any recommendations for future research, it is important to consider some of the methodological limitations that may have affected the results of this study.

One limitation was the small sample size of the study, from only one institution. Further investigation with a larger sample from a greater number of educational institutions should allow for some preliminary generalizations to be made. The duration of training was another limitation that needs to be taken into account. The training lasted for four

50-minute sessions over the period of five weeks. The results of the previous research have showed significant improvement after training that lasted for much longer periods of time (Kuo, 2009; Melenca, 2001; Sardegna, 2011).

Another limitation of this research was that the gender of subjects was limited to male learners because male learners were available to the researcher. The next limitation was practice effect. The dictation test, used as pre-test and post-test were the same. In order to reduce the practice effect as much as possible, the order of the sentences in pre and posttests was completely different.

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