The Effect of Modified Speech on Listening to Authentic Speech

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Abstract—The present study investigated the effect of controlling speech rate on listening comprehension of Iranian students majoring in English. It was somehow the application of Krashen's 'input hypothesis' (1985). There were two homogeneous groups each comprising 40 students taking 'Oral Translation 3'. In the experimental group there were 28 females and 12 males, in the control group there were 30 females and 10 males. The age of the subjects ranged from 22-28. The selected materials was authentic American English spoken by fluent native speakers in the programs such as 'Opera' and 'Dr. Phill'. The students were worked with in a well equipped language laboratory. The experimental group had the advantage of modified speech through Ulead software version 11. The control group just enjoyed the possibility of a five time repetition for each individual sentence. At the end two reliable and valid M.C. listening comprehension and cloze tests were prepared from the covered materials and administered to them. The cloze test was based on the exact word version (Chaudron, 1986). Based on the results of this study it was concluded that there were no significant differences between the mean scores of the experimental and control groups on the multiple choice and cloze tests at .05 level of significance. This implies that first, the experimental group did not do any better than the control group and second, the students were not able to apply the benefits of slowing down the speech to authentic texts and for speeches delivered at a normal rate.

Index Terms-speech modification, speech rate, connected speech, reduced forms

I. INTRODUCTION

The idea of using speech modification in case of NNSs dates back to the 1970s. Friedman and Johnson (1971) proposed using slower rates in language teaching. The idea of matching speech rate and listeners proficiency was put forward by Pimsleur, Hanckok, & Furey (1977). They proposed two methods of adjusting rates, namely, speech expansion and compression though these equipments were not available at that time. He proposed an alteration method, i.e., inserting pauses into recorded speech to expand it. Friedman and Johnson (1971, cited by Griffiths, 1990) reported on the structurally spaced pauses into orally presented Russian sentences and significantly accurate recall. Foulke (1968) found that speeding up of recording up to 260wpm had no effect on comprehension but above that it began to crumble precipitously. Foulke and Stitch (1969) and Stitch (1971) concluded that the threshold for listening comprehension is 275 wpm after which comprehension declines rapidly. Carver (1973) came up with the similar results.

Anderson-Hsieh and Koehler (1988) reported on the adverse effect of speed on listening comprehension of English native speakers but added that a non standard pronounced accent had a more deleterious effect on listening comprehension. Stanley (1978) pinpointed the adverse effect of speed rate on listening comprehension. Griffiths (1992) studied the effects of speech rates (127, 188, 250 wpm) on the nonnative speaker's listening comprehension and concluded that the slowest rate was the most comprehensible and the higher rates led to worse comprehension. Conrad (1989) and Griffiths (1990) reiterated the adverse effect of speech rate on listening comprehension. Boyle (1984), Flowerdew and Miller (1992) indicated that fast speech leads to problems in listening. In Zhao's study (1997) speech rate was measured by the recognition of the spoken word. Here the control of speech was given to the learners themselves. He experimented with four conditions, namely, listening to sentences once; repeating; modification of speed and repetition; and a speed rate of 194 wpm. He concluded that in condition three where students could modify speed and repeat the students obtained the highest scores. Grosjean (1972) showed that the increase of speed addressed to NNSs (intermediate proficiency) from 147wpm to 169 wpm led to a 14.65 decrease in listening comprehension. Nevertheless, at the slowest rate, i.e., 96 wpm the subjects were incapable to recall 56% of sentence details. Chauron (1979) held that one of the important features of listening comprehension is the great speed accompanying connected speech. At a normal speed a new word is uttered at the rate of 300msc which needs to be transformed into lexical units and then realized at the higher structural units. Chodorow (1979) attributed the decrease of comprehension in the fast speech to the loss of the processing time. Derwing and Munro (2001) conducted an experiment on the suitability of speech rate in case of Mandarin learners of English. They used a rating scale ranging from too slow to too fast. The passages were read by native English speakers in three modes: unmodified; Mean-Mandarin rate; Mean-English rate; and slow rate. The result showed that speech modifications did not lead to better ratings by the listeners. Blau (1990) conducted two experiments on the effect of input modifications in terms of speed and the insertion of pauses on Puerto Rican and Polish EFL learners and found no significant effect with mechanically slowing down the speed but significant effect with the insertion of 3-second pauses. The slowing down of the speed was effective with the lowest levels of L2 proficiency. Segalowitz and Segalowitz (1993, cited in Vandergrift, 2004) assigned importance to the word recognition in listening comprehension. Goh (2001) mentioned lack of recognition of the familiar words to the learners as their second major problem after forgetting what is heard.

A. Speech Modification

Comprehensible input in receptive skills was put forth by Long (1981) who endorsed the role of comprehensible input in conversational modifications. Krashen (1985) is the most theoretically-based advocate of comprehensible input who postulates the linguistic input directed to L2 learners should be a little above their current level of linguistic competence. One feature of this modification is speech rate which had been investigated by other researchers before Krashen put forth his input hypothes is (Anderson-Hsieh et al., 1988; Blau, 1990; Boyle, 1984; Carver, 1973; Chiang and Dunkel, 1992; Chaudron, 1979; Conrad, 1989; Derwing and Munro, 2001; Flowerdew and Miller, 1992; Foulke, 1968; Friedman and Johnson, 1971; Griffiths, 1990; Grosjean, 1972; Stanley, 1978; Stitch, 1971; Zhao, 1997). Saved for Blau, (1990) and Derwing and Munro (2001) the other researchers concluded that speed modification facilitates listening comprehension. It seems axiomatic that slowing down the speech rate would facilitate listening comprehension. To the knowledge of the researchers the reason/s for this facilitation has/have not been well delineated. Is it due to processing task or to the identification of words in connected speech? Blau (1990) attributed it to the provision of more time for processing in terms of the insertion of pauses in the main structural constituents. The present study tends to replicate the effect of speech modification not as an end in itself, but rather as a means to an end. That is, to see first, the beneficial effects of speech modification consistent with Krashen's input hypothesis in listening comprehension and, second, the effect of this modification for new and novel situations. It also tends to delve into the corollary repercussions of speed modifications.

B. Purpose of the Study

The present study attempts to evaluate the effectiveness of Krashen's input hypothesis (1985) in terms of speech rate for Iranian EFL learners. More importantly, the researchers tried to investigate the effectiveness of this hypothesis in situations where this modified input is no longer available when listening to authentic speech of moderately fast rate.

C. Research Questions

1) Does slowing down the speech rate facilitate perception of words and listening comprehension of Iranian EFL listeners listening to authentic American speech compared to mere repetition?

2) Is the gradual increase of speed effective in English language classes with respect to listening comprehension?

D. Null Hypotheses

Two null hypotheses were formulated:

1) Slowing down the Speech rate is not an important factor for Iranian EFL listeners at the university level.

2) The gradual increase of speed cannot be of great help in laboratory classes.

II. METHODOLOGY

A. Participants

The subjects participating in this study were senior English students majoring in English Translation at Azad University of Hamedan, Iran. They all had passed all the prerequisite courses for Oral Translation 3, namely, Laboratories 1 and 2 and Oral Translations 1 and 2. Approximately, there were a total of 140 students in the two groups but after the administration of the TOEFL test, version 1994, 80 students were included in the study. The aim of using this test was excluding the outliers and also getting four homogeneous groups on the basis of their scores. This reduction in number was also due to limitations observed in practice, restrictions in accommodating this huge number in the laboratory booths and also for the sake of precision in the procedures used. The students scored between 48 and 61out of 80 with a mean score of 54. The lowest mean score was on listening comprehension which was 10 out of 25. This indicated that they had drastic problems with listening comprehension. They were randomly assigned to two experimental and two control groups each containing around 20 students. The subjects comprised both males and females, with the majority of females in all the four groups. In the experimental groups there were 28 females and 12 males. In the control groups there were 30 females and 10 males. The age of the subjects ranged from 22 to 28.

These students had passed Oral Translations 1 and 2 with the researcher and they complained of the speech rate in the authentic oral texts. The majority of them had no access to satellite and showed no interest in watching the English broadcasts. To get the students involved in the class activities the researchers allocated some marks to the students who

were attentive and did the assigned activities appropriately. These points were not considered in the test scores of the study.

B. Materials

The materials which were used in this study were as follows:

Video-taped selections of American shows, namely,' Opera', 'Doctors', and also Talk Shows from MBC and CBS. Some of these shows were 'Overwhelmed mothers', 'Rudness', and 'Cruelty to Animals' from Opera shows. The topics of discussion in 'the early show' from CBS were general and with no specialized orientation, examples were 'Buying a House', and 'B.P.A.' from 'Health Watch'(September 16, 2008). The average speed of these materials was 215 words per minute.

C. Instrumentations

New versions of the TOEFL test for pre-testing and post-testing. The TOEFL tests comprised 80 questions (listening comprehension: 30 questions; Reading comprehension: 25 questions; Structure: 25 questions). The aim of the pre test was to homogenize the experimental and the control groups.

Cloze test items based on the exact word (Chaudron, 1986). This test comprised 300 words out of which 50 words were deleted. The criterion for the exact word was based on providing the intended word or the word with negligible minor spelling errors. The reliability and validity of this test were .83 and 51.35 respectively. The words deleted from the passage were assumed to be problematic because of the speech rate and features of connected speech. Examples were " I wen to a denis" for 'I went to a dentist,' and "I had an apointmen", 'for 'I had an appointment'.

Multiple choice questions based on the oral texts. A total number of 60 questions based on the materials covered were piloted on the students of Kurdistan University and 20 questions were excluded because of the item facility and item difficulty. These materials were worked on during the term. The reliability and validity of the M.C. questions were .87 and 51.35 respectively.

D. Procedures

First, a 1994 version of TOEFL test was administered to the participants and roughly four homogeneous groups (two experimental and two control groups) were formed on the basis of their scores. This test comprised reading, listening, and structure. In the first session the students in the four groups were guided and directed with respect to what would be done and what they would be required to do.

The students in the control groups were given the written forms of some of the words which were assumed to be problematic in the oral text. These words were in the oral texts and the students were required to read them aloud individually. The aim of this activity was to appraise the students' knowledge of the segmental and suprasegmental features. So, their voices were tape-recorded. After making sure that they had problems with these features, the correct pronunciation of words together with the prosodic features read aloud by native American speakers extracted from The American Heritage Dictionary of English Language, the 4th ed. was given to them. The segmental and suprasegmental features were worked with them and they were just told to transcribe the allotted assignment for the week (around 6 to ten minutes each week) and without exerting attempt leave the indiscernible words blank. In the laboratory each problematic sentence was played up to 5 times. At the end, the teacher's own version which was exactly in accord with what the speakers said in the oral text and was read aloud. On the basis of this the students gave their own translations (though, translation was not the concern of this study).

Also, in the first session the features of connected speech were taught by the teacher and practiced by the students. Some examples of assimilation which were paramount in connected speech are as follows: The following examples are drawn from Gimson 1994: 257-60

/n/ changing to /m/ before [p,b,m] ten people changes to tem people

- /t/ changing to [p] or a glottal stop before [p, b, m] that boy changes to thap boy
- /t/ changing to[k] or a glottal stop before[k, g] that girl changing to thak girl
- /d/ changing to [b] or a glottal stop before [p,b,m] good play changing to goob play
- /d/ changing to [g] or a glottal stop before [k, g] good cause changing to goog cause

The orientation of work with the experimental groups was the rate of speech. Like the control group they were provided with the recorded materials and required to listen and transcribe the assigned work and without exerting attempt leave the indiscernible words blank. In the laboratory the speech rate was slowed down from 4-5 words per second to 3, and then to 2 words per second so that discerning the flow of speech and consequently listening comprehension would become possible. It was not obligatory to follow this route exactly, that is, slowing down from 4-5 words to 3 and finally to 2. It all depended on the sentence and how grave the features of connected speech along with the speech rate might have been. At each rate checks were made for the identification of words in the sentences. Of course, not all words were indiscernible. The problem was with some words in the sentences. We left out the sentences that were discernible and the emphasis was put on the identification of words that had undergone the process of speed and connected speech. So checks were made for those problematic words or sentences. If the students could not provide the intended word or words, it was only in that case that speed was slowed down to slower rates.

The students in the experimental groups were told to be attentive to these activities. In the following week, all groups were asked some questions on the covered materials so that they would take the course seriously .None of the four groups had the final transcription of the oral material. This was because of the researcher's concern that they might rely on their memory. In each session the same procedure was employed with this difference that the rate of speech for the experimental group was manipulated. The students in the control groups were told to check the words for their meanings, segmental, and suprasegmental features.

E. Data Gathering

Following this procedure for 16 weeks the students were given two tests from the covered materials. A 40 item MCQ, and an exact word cloze test (Chaudron, 1986). As mentioned before the reliability and validity of these two tests had been estimated. The reliability of the cloze test was .87 and that of the MCQ was, 83. The construct validity of both tests was 51.35. For the MC items 40 minutes and for each deletion in the cloze test 10 seconds were given. The MC items were read only once (the voice from the video recorded materials). The cloze was read two times. During the first time they just listened. Also a TOEFL test, version 1996 was used to assess the subjects' capabilities in listening to unheard materials after they had been exposed to speech modification.

F. Data Analysis

1. Is the speech rate modification more facilitative than mere repetition?

The subjects took a M.C.Q. test comprising 40 items and a cloze test (exact word, Chaudron, 1986) in their booths in the laboratory.

An independent t-test was run to compare the mean scores of the experimental and control groups on the multiple choice test. The t-observed value is .099 (Table 1). This amount of t-value at 70 degrees of freedom is lower than the critical value of t, i.e. 1.99.

 TABLE 1:

 INDEPENDENT T-TEST MULTIPLE CHOICE TEST BY GROUPS

		Levene for Equ Varia	s's Test ality of ances	t-test for Equality of Means						
							Mean	Std Error	95% Co	nfidence Interval of the Difference
		F	Sig.	t	Df	Sig.(2-tailed)	Difference	Difference	Lower	Upper
MC	Equal variances assumed	5.081	.027	.099	78	.921	.07500	.75781	-1.433	1.58369
	Equal variances not assumed			.099	70.80	.921	.07500	.75781	-1.436	1.58611

Based on these results it can be concluded that there was not any significant difference between the mean scores of the experimental and control groups on the multiple choice test. The mean scores of the experimental and control groups are displayed in Table 2. The mean scores for the two groups are 18.92 and 18.85 respectively.

It should be noted that the two groups did not enjoy homogeneous variances. The Levene's F of 5.08 has a probability of .027 (P < .05). That is why the second row of Table 1 "Equal variances not assumed" are reported.

TABLE 2:	
DESCRIPTIVE STATISTICS MULTIPLE C	HOICE TEST BY GROUPS

	GROUP	Ν	Mean	Std. Deviation	Std. Error Mean
MC	EXPERIMENTAL	40	18.9250	3.89205	.61539
	CONTROL	40	18.8500	2.79698	.44224

An independent t-test was run to compare the mean scores of the experimental and control groups on the cloze test. The t-observed value is 1.60 (Table 3). This amount of t-value at 78 degrees of freedom is lower than the critical value of t, i.e. 1.99.

TABLE 3: INDEPENDENT T-TEST CLOZE TEST BY GROUPS

		Levene's Equality of	t-test for Equality of Means							
						Sig. (2-	Mean	Std. Error Difference	95% Confidence Interval of the Difference	
		F	Sig.	Т	df	tailed)	Difference		Lower	Upper
CLOZE	Equal variances assumed	3.380	.070	1.603	78	.113	2.46875	1.54045	59804	5.53554
	Equal variances not assumed			1.603	76.04	.113	2.46875	1.54045	59928	5.53678

Based on these results it can be concluded that there was not any significant difference between the mean scores of the experimental and control groups on the cloze test. The mean scores of the experimental and control groups are displayed in Table 4. The mean scores for the two groups are 17.87 and 15.40 respectively. Although the experimental group performed better than the control group on the cloze test the difference between their mean scores is not statistically significant.

DESCRIPTIVE STATISTICS CLOZE TEST BY GROUPS							
	GROUP	Ν	Mean	Std. Deviation	Std. Error Mean		
CLOZE	EXPERIMENTAL	40	17.8750	7.42052	1.17329		
	CONTROL	40	15.4062	6.31306	.99818		

TABLE 4: Descriptive Statistics CLOZE Test by GRO

It should be noted that the two groups enjoyed homogeneous variances. The Levene's F of 3.38 has a probability of .07 (P > .05). That is why the first row of Table 3 "Equal variances assumed" are reported.

Correlation Coefficient between MC and Cloze

The Pearson correlation coefficient between the MC and cloze tests is .51 (P = .000 < .05). Since the r-observed value is greater than the critical value of .21, it can be concluded that there was a statistically significant relationship between the MC and cloze tests.

	TABLE 5:						
CORRELATION BETWEEN MC AND CLOZE							
		MC					
CLOZE	Pearson Correlation	.514**					
	Sig. (2-tailed)	.000					
	N	80					
**. Correlation is significant at the 0.01 level (2-tailed).							

Based on the Effect Size criteria developed by Cohen (1988), the Pearson correlation coefficient is itself an effect size with the following values:

R = .1 WEAK

R = .3 MODERATE

R = .5 STRONG

Based on these results it can be concluded that the relationship between the MC and cloze tests are both statistically significant and meaningful.

The results of the factor analysis indicate that the MC and cloze tests tap on the same underlying construct hence their construct validity is approved. The SPSS extracted one factor which accounts for 51.35 percent of the total variance.

	TABLE 6: Total Variance Explained									
		Initial Eigenva	lues	Extraction Sums of Squared Loadings						
Factor	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %				
1	1.514	75.724	75.724	1.027	51.350	51.350				
2	.486	24.276	100.000							
	Extraction Method: Principal Axis Factoring.									

Table 7 displays the factor loadings of the MC and Cloze test. Since they fall under the same underlying construct, the construct validity of the tests can be inferred.

TABLE 7: Factor Loadings						
	Factor					
	1					
CLOZE	.717					
MC	.717					
Extraction Method: Principal Axis Factoring.						

2. Can the gradual increase of speed be effective in English language classes with respect to listening comprehension? Another version of a reliable and valid MC, and a cloze test of the parts of the materials that had not been worked on in the laboratory along with a TOEFL test, version 1996 were administered to the same subjects at the interval of one month after they took the first tests. Again there were 40 MCQ items and a cloze passage comprising 300 words with 50

deletions. The allotted time was the same as the first tests (1 minute for MC, and 10 second after each stop for the provision of the exact word.

A repeated-measures ANOVA was run to compare the mean scores of the experimental and control groups on the listening comprehension tests of multiple choice (MC), cloze and TOEFL. The F-observed value for the grouping variable, i.e. comparing the experimental and control groups' overall mean scores on the three tests is 3.70 (Table 8). This amount of F-value is lower than the critical value of F at 1 and 77 degrees of freedom, i.e. 3.96.

	Type III Sum of					Partial Eta
Source	Squares	Df	Mean Square	F	Sig.	Squared
Intercept	160551.195	1	160551.195	5733.648	.000	.987
GROUP	103.870	1	103.870	3.709	.058	.046
Error	2156.122	77	28.002			

TABLE 8:	
REPEATED-MEASURES ANOVA LISTENING COMPREHENSION TESTS OF MC, CLOZE AND TOEFL	BY GROUP

Two other statistics supports the non-significant F-value; the probability of .058 which is higher than the significance of .05 and the effect size (partial eta squared) of .046 which lower than .10. Based on the criteria developed by Cohen (1988 cited from Cohen and Brooke Lea; 2004) an effect six of .10 or lower is considered weak.

The statistically non-significant F-value indicates that there was not any significant difference between the mean scores of the experimental and control groups on the listening comprehension tests of MC, cloze and TOEFL.

As displayed in Table 9 the overall mean scores of the experimental and control groups on the three listening comprehension tests of MC, cloze and TOEFL are 26.69 and 25.36 respectively.

TABLE 9: Descriptive Statistics Listening Comprehension Tests of MC, Cloze and TOEFL by Group							
			95% Confidence Interval				
GROUP	Mean	Std. Error	Lower Bound	Upper Bound			
EXPERIMENTAL	26.692	.483	25.730	27.654			
CONTROL	25.368	.489	24.393	26.342			

		95% Confidence Interval	

Based on these results it can be concluded that the null-hypothesis as the gradual increase of speed cannot be of great help in laboratory classes is supported. That is to say there was not any significant difference between the mean scores of the experimental and control groups on the listening comprehension tests of MC, cloze and TOEFL.

III. CONCLUSION

This study tended to investigate the influence of speed rate on word identification and listening comprehension of Iranian EFL students. The underlying psychological building block of this study was the application of Krashen's Input Hypothesis (1985) which postulates i+1 input for the learner in the learning and teaching settings. This study was conducted on Iranian EFL learners of English majoring in translation. There were 80 subjects and the majority were females. They had enrolled for Oral Translation 3 two hours a week and thirty two hours during the term. They all were at the seventh term and had passed all the prerequisite courses for Oral Translation 3. They had been homogenized on a TOEFL test, version 1994. Their mean score on this test was 410 out of 600. They were divided into two homogeneous groups.

The experimental group were provided with speech modification using Ulead Vidio Studio 11, version 2007. The control group was just provided with correct pronunciation and stress in isolation. Both groups were required to prepare themselves for the assigned weekly assignment of the oral passage. They all were supposed to transcribe the allotted assignment. The work with the experimental group began with the normal speed, and then the speed gradually slackened. The minimum discernible speech on this software was 49 (about 95 words per minute) and the maximum 180 (approximately 240 words a minute). As long as there were questions with the identification of words this slowing down continued. In fact, the slower the speech became, the fewer words remained unidentified. At three speed rates this was done and at each rate the problematic sentences were played three times. Although at the minimum rate a considerable number of words became discernible, there were still some words that remained unidentified. The same procedure was applied to the control group with one difference and it was that the problematic sentences were played three times with the unmodified speed.

The results showed that slowing down the speech affected listening positively for the identification of words to some extent. This identification is based on the encoding and storing of" the source information and the message in memory for later retrieval of word recognition, lexical access and listening comprehension" (Frauenfeldere, & Floccia, 1999). Still, some words remained obscure despite slowing down the rate to the maximum level possible. The researchers believe this was due to the features of fast connected speech that had blurred the speech. These findings corroborate the results of Zhao (1997), Griffiths (1991), and Chaudron (1980). What this study tended to contribute further to the previous studies was whether what the course had accrued could be applied to new situations and authentic materials with normal and in some cases with moderately fast speech rate. Though the experimental group outperformed the control group marginally, this difference was not statistically significant. The implication being that slowing down the speech rate did not work with normal speed for unheard and unseen passages and even for the practiced materials satisfactorily. Using Ulead software for speech modification may be helpful in case of the beginners adhering to Krashen's input hypothesis.

IV. PEDAGOGICAL IMPLICATIONS AND SUGGESTIONS FOR FURTHER RESEARCH

This study can have implications for the researchers interested in the effect of speed modification on listening comprehension and word identification. Studies like this dealing with the effect of speech rate on listening can help teachers use speed modification in their classes provided differing rates of speech are worked on simultaneously. Providing listeners just with ungraded materials may not prove helpful.

The findings of this research may warn teachers to be concerned about their speaking in the classrooms and may prompt them to adopt a mode of speaking similar to that of native speakers of English. They should try not to articulate and enunciate words and more importantly they should adhere to the conventions of connected speech. If violations of correct connected speech with moderate speed mean lack of understanding by the learners, then what can be achieved from using a non standard English? This does not mean that they should not be concerned about the feedbacks they would get from the learners; rather, they should adhere to the principles of concatenated speech but with graded chain of speech consistent with the norms of the native speakers of English.

This study showed that connected speech is different from the articulated speech in terms of the alterations the words undergo in connected speech. Lass (1984), Brown (1990), and Roach (1991) believe explaining the features of connected speech can help the learners (cited in Cauldwell, 1996). The results of this study did not confirm such a claim. Making the EFL learners familiar with the features of connected speech through exposure to oral English from the beginning of listening activity is of utmost importance. As the results of this study revealed, the students knew the words and to a lesser extent they knew the correct pronunciation of words in isolation but the picture became dramatically reversed in connected and fast speech. This may somehow support the result of Goh's study (2000).

Adhering to all principles of connected speech simultaneously and not subsuming one or more elements means that these features should be practiced with moderately fast speed and not separated from each other. Exposing the learners to the authentic oral English seems to be a dire need by the learners as they encounter live and recorded oral English in their daily lives.

V. SUGGESTIONS FOR FUTURE RESEARCH

This study was conducted on a group of Iranian EFL learners on whose brains many items might have become fossilized and the eradication of which might be difficult. To acclimatize them with this new technique the researchers observed a sense of reluctance and indifference. To some of the learners this technique was degrading even if they had problems with some features of connected speech. It is recommended that future researchers adopt this technique in case of the advanced beginners and intermediate-level students.

It is recommended that future researchers adopt this technique with simultaneous practicing of differing rates, that is, fast, moderate, slow; moderate, slow, fast; slow, fast, moderate so that they would realize the alteration of speech sounds in different versions of speed and at the same time expose them to the unheard and unseen oral materials using the above procedure.

This study was conducted on a two hours a week basis totaling 32 hours during the term on ninety students. The increase of two to four and six hours a week with a larger number of students is recommended. In order to economize on time it would be much better if differing rates of speech are pre-recorded, prepared and played consecutively and alternatively.

Candidate areas of research in future might be thorough examination of Persian as a syllable-timed language versus English as a stressed-timed language and also meticulous studies of syllabifications in English and Persian, the impact of working memory and its relationship with fast connected speech on listening comprehension in case of Iranian EFL learners.

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