



A Survey on the Impact of Instructing Stress and Pronunciation Rules on the Proficiency and Effective Communication among Students of Medicine and Affiliated Fields

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ABSTRACT

It has been observed that most students in the field of medicine/medicine-related experience great difficulties in correct pronunciation. Some researchers put emphasis on teaching the phonetic features and phonological rules in order to improve the pronunciation of learners. They have presented so many techniques but unfortunately these techniques have been ignored by most Iranian EFL instructors, and instead, meaning as well as structure has been given more priority. The purpose of this study, therefore, is to determine whether teaching word stress patterns and pronunciation has any significant effect on more accurate pronunciation and consequently on the effective and meaningful communication. In this experimental study, 30 Audiology students and 30 Optometry students in their 4th semester who had passed their general English course were used as subjects. 15 out of each group were treated as control and 15 others as Experimental Group. A pre-test was administered based on 1) general proficiency and 2) A word stress test pattern. Treatment (teaching word stress rules) was given to the experimental group while the control group received none. After the treatment, the results based on the two pre-test and post-test were compared and analyzed through SPSS. Results showed that the P value before the treatment was not significant ($P=0.690$) while the post test which was administered after the treatment was of a noteworthy significance ($P<0.001$). This indicates the effect of treatment. Regarding the importance of teaching stress and pronunciation patterns, our findings revealed that teaching those rules can be the main reason for fluency and a precise pronunciation, which has been ignored in almost all of the educational syllabi used to teach English to the students of Shahid Beheshti Medical University. Analysis also indicated that subjects in the experimental group possessed a better mean compared to the controlled ones. Also based on the repeated measure analysis, the correlation between the scores before and after treatment was significant ($p<0.001$).

Keywords

Stress, Proficiency, Pronunciation, Effective Communication

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Introduction

Pronunciation and stress instruction was absent from the second/foreign language (L2) classroom for a long time due to the conventional beliefs that pronunciation is not important, cannot be taught, and can be “picked up” by learners. These beliefs have been questioned and pronunciation teaching has undergone a shift, so that nowadays, its frameworks may encompass not only linguistic competence, but also discourse, sociolinguistic, and strategic competence (Morley, 2005). But nowadays, stress and pronunciation instruction is increasingly being recognized as one of the important components of the L2 classroom. As observed by Pennington (1994, p. 105), the value of pronunciation instruction lies in the fact that it can help learners develop their interlanguage phonology by giving them “the perceptual and the productive experience they need to reconceptualize the performance targets while offering motivation to change and social experiences to develop a new value set”. A survey over the major methods used in language teaching reveals that in all of them, pronunciation and stress play an important role, since they can be recognized as the driving factor of an effective communication. Some of these methods include Direct Method, Naturalistic Approach, Reform Movement, Audiolingualism and Oral Approach, Cognitive Approach, Silent Way, Community Language Learning Approach and Communicative Approach. In all of these methods, one way or another, stress and pronunciation were emphasized and covered while curriculum writing. Most of these methods acknowledge the importance of the pronunciation component (every approach differently from the previous ones); some of them aim at intelligible pronunciation, rather than total accuracy. Traditional methods of pronunciation teaching are incompatible with the notion that language teaching should be communication-oriented. Despite recognizing the importance of pronunciation teaching, the Communicative Approach followers tended to ignore it, or focus on the suprasegmentals for some time. At present, they recognize the importance of segments and suprasegmentals in the teaching of intelligible pronunciation. Thus, pronunciation tasks should appeal to all kinds of learners and aim at an interaction between fluency and accuracy. This can be accomplished with the use of tools of other disciplines, technology developments, the consideration of sociopsychological factors, and the learners' active participation in the curriculum selection and in the

learning process as a whole. Most of the nowadays syllabi for stress and pronunciation are based on this approach; that is why Communicative Approach is regarded as the milestone for stress and pronunciation teaching patterns.

Materials and Methods

60 students (30 Audiology and 30 Optometry students of Rehabilitation Sciences Faculty) in their 4th semester were randomly selected as subjects. They all had already passed their general English Course. The treatment was administered during their ESP course (English for Specific Purposes). In each group, 15 students were considered as control and 15 others as experimental group. The treatment duration was 20 minutes at the end of each session of the class for the experimental group. The control group received no treatment. The subjects were kept the same all through the study in order to reduce the effect of extraneous variables. The instrument used as assessment tools were as follows:

1. A TOEFL exam used as homogenizing the subjects before the treatment
2. An Oral Stress Test conducted prior to treatment for the purpose of scoring the subjects' production (the whole process was recorded for future use)
3. A number of quizzes following the treatment (teaching stress and pronunciation rules to the experimental group by a single teacher)
4. A stress test administered based on the taught patterns for both experimental and control group including vocabulary test (the vocabularies were tested in two forms: first outside the context and then, within a context)

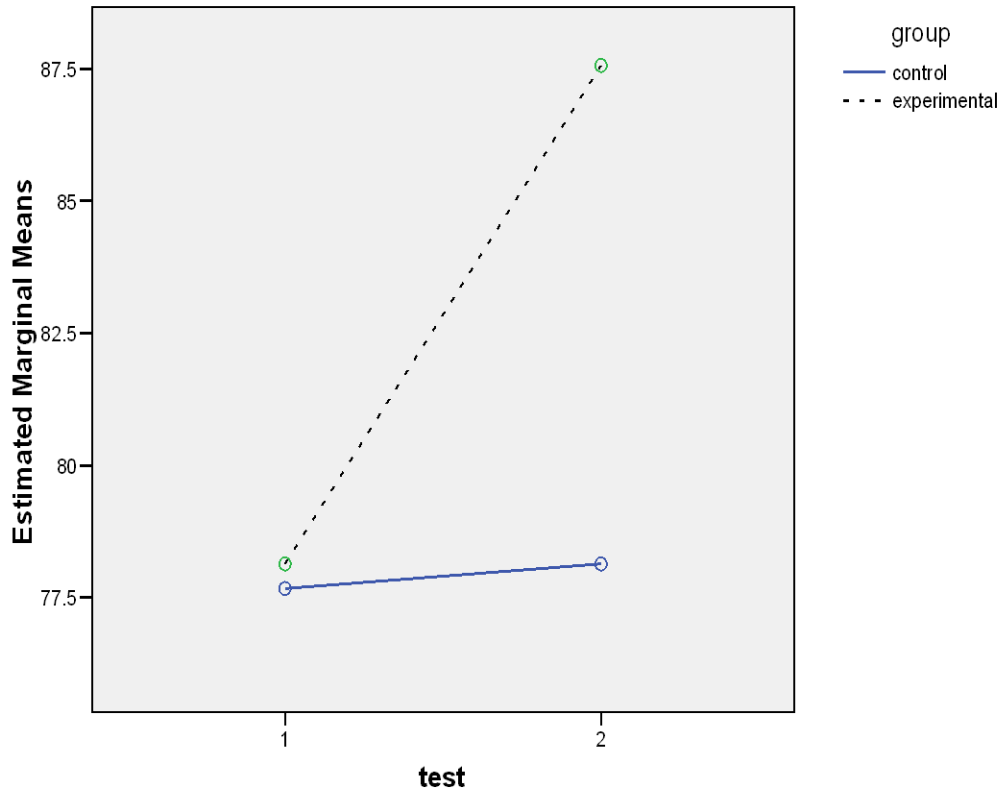
After the rendering the treatment to the experimental group, both groups undergone the oral tests of stress patterns and pronunciation. The aim was to keep the original pattern of the pre-tests and post-tests identical.

Results

An independent T-Test was administered before the treatment for the purpose of comparing the control and experimental group. The result showed a $P = 0.690$, indicating a non-significant difference between the two groups. Table 1 shows the statistical measures of the stress test before and after the treatment in both groups. Based on the Repeated Measure Analysis, the subjects' scores before and after the treatment showed significant difference ($P < 0.001$). According to table 1, the mean score before the treatment was $77.9(\pm 4.859)$, which turned into $82.85(\pm 6.56)$ after the treatment. As seen in Chart 1, an ordinal interaction between the two variables of time of treatment and the groups were observed. This indicates that the means of the control group before and after treatment were somehow stable, whereas in the experimental group, a significant increase in the mean of the scores after the treatment was observed.



Estimated Marginal Means of MEASURE_1



Group Statistics

group	N	Mean	Std. Deviation	Std. Error Mean
pre control	30	77.67	4.859	.887
pre experimental	30	78.13	4.125	.753

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
pre	Equal variances assumed	1.739	.192	-.401	58	.690
	Equal variances not assumed			-.401	56.512	.690



Within-Subjects Factors

Measure: MEASURE_1

test	Dependent Variable
1	pre
2	post

Between-Subjects Factors

group	Value Label	N
1	control	30
2	experimental	30

Descriptive Statistics

group	Mean	Std. Deviation	N
pre control	77.67	4.859	30
pre experimental	78.13	4.125	30
pre Total	77.90	4.475	60
post control	78.13	4.890	30
post experimental	87.57	4.216	30
post Total	82.85	6.566	60

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	
test	Sphericity Assumed	735.075	1	735.075	153.683	.000
	Greenhouse-Geisser	735.075	1.000	735.075	153.683	.000
	Huynh-Feldt	735.075	1.000	735.075	153.683	.000
	Lower-bound	735.075	1.000	735.075	153.683	.000
test * group	Sphericity Assumed	603.008	1	603.008	126.072	.000
	Greenhouse-Geisser	603.008	1.000	603.008	126.072	.000
	Huynh-Feldt	603.008	1.000	603.008	126.072	.000
	Lower-bound	603.008	1.000	603.008	126.072	.000
Error(test)	Sphericity Assumed	277.417	58	4.783		
	Greenhouse-Geisser	277.417	58.000	4.783		
	Huynh-Feldt	277.417	58.000	4.783		
	Lower-bound	277.417	58.000	4.783		

**Tests of Between-Subjects Effects**

Measure: MEASURE_1

Transformed Variable: Average

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Intercept	775216.875	1	775216.875	21313.825	.000
group	735.075	1	735.075	20.210	.000
Error	2109.550	58	36.372		

Discussion

The present study and its results revealed the importance and effectiveness of having stress and pronunciation patterns in the syllabi of general and ESP courses of English for the students of medicine/medicine-related fields. The results lead us to the fact that including these patterns of teaching in the class syllabus can help students acquire a better fluency over the spoken language, and consequently it results in effective communication. There were many instances in the post test in which the control group lacked the necessary communicative skill due to the absence of a proper teaching approach towards stress/pronunciation. Since this problem is observed numerously among the faculty members as well as the students, and again, since this lack can cause huge career/academic failures (as in international conference presentations), incorporating the proper methods for teaching stress/pronunciation patterns to the students can be quite helpful in their class courses, future careers, and academic achievements.

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