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The Effect of Gender on Learners' Pronunciation through Teaching Musical Rhythm

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Abstract: *This investigation intends to seek into investigating the effect of teaching the pronunciation through a fun activity of Rhythm on the learners' pronunciation improvement. This study is to find out whether students in this group will perform a significant improvement in pronunciation comparing to the other group.*

Rhythm of English is considered as one of the biggest difficulties for many foreign learners of English. It is more important for EFL learners who have a very different system in their L1 (e.g. Persian). These learners are not usually motivated for pronunciation practice. Therefore, this study will explore the effect of musical rhythm, on pronunciation improvement. 120 Iranian EFL elementary learners in an English language institute aging from 7-9 years old will participate in this study. After the pretest they will be divided in two groups namely, control and experimental. In one group, teacher uses musical rhythm to teach as treatment of the study while in the other one, she does not. At the end of the term, a posttest will be given to both experimental groups to check any significant difference between their performances. "Rhythm, actually, is timing patterns among syllables. However, the timing patterns are not the same in all languages. There are two opposite types of rhythm in languages: stress-timed and syllable-timed. According to Mackay (1985), stress-timed rhythm is determined by stressed syllables, which occur at regular intervals of time, with an uneven and changing number of unstressed syllables between them; syllable-timed rhythm is based on the total number of syllables since each syllable takes approximately the same amount of time. English, with an alternation of stressed and unstressed syllables, is obviously stress-timed" (Chen, C. et al., 1996).

Keywords: *Gender, Learning, Rhythm, Foreign Language.*

INTRODUCTION

1.2. The Purpose and Significance of the Study

Due to the complexity and intricacy of the nature of the issue, finding a logical and appropriate answer to the questions raised in this paper can be beneficial in many ways and many aspects. This study is designed to investigate the effect of teaching the pronunciation through a fun activity of musical rhythm on the EFL young learners' pronunciation improvement. "The Angle of the North, a statue by Anthony Gormley in the north West of England, provides us with a satisfying metaphor to deal with the greatest difficulty teachers' face in terms of motivation" (Rogers 1996:61).

"Teaching word stress is one of those angles of North. So it is very essential for the teachers to overcome this problem" (Hammer, J. 2009: 57).

"English is a very rhythmical language, so that a learner who can maintain the rhythm of the language is more likely to sound both natural and fluent. The two components of the system which have the greatest influence on rhythm are sentence stress and the various features of connected speech, i.e. what happens to words when we put them in an utterance" (Darn, 2007:7).

Perception of rhythm of English is a very important step for learning a language. It can be a step toward pronunciation improvement. Correct pronunciation is a necessary factor in making a speech intelligible and comprehensible. Musical rhythm can be seen as a new and effective one.

1.3. Research Questions

Does gender of young Iranian EFL learners affect their pronunciation improvement through teaching musical rhythm?

1.4. Hypotheses

In accordance with the questions of the study, the following null hypothesizes formulated:
H1: Gender of young Iranian EFL learners does not affect their pronunciation improvement through teaching musical rhythm.

2. LITERATURE REVIEW

2.1 Introduction

Many ESL students who have attained advanced English proficiency levels are still having difficulty in communicating, due to low intelligibility. Word and sentence stress are components that contribute greatly to intelligibility. The study includes specific methodology that may be useful in many ESL classrooms. Imagine you are an advanced adolescent English language learner (ELL). Your knowledge of English grammar far exceeds that of the average graduating high school senior. You can differentiate between a gerund and an infinitive. Your use of past perfect tense is impeccable, and you can rattle off comparatives and superlatives in your sleep. You have mastered the complicated syntax, grammar, and vocabulary of English. Indeed, there seems no barrier to your social and academic success, except for one problem. Your poor pronunciation impedes your ability to communicate orally. Adolescent language learners are not likely to unconsciously "pick up" the pronunciation patterns of a new language, whereas native speakers (NSs) of English unconsciously acquire the skills to produce the rhythmic impulses of our language very early in life. It is only when another speaker fails to produce acceptable stress, intonation, and rhythm we anticipate that we become aware of these aspects at all.

Non-native speakers (NNS) are oftentimes painfully self-conscious of their failure to know how and when to produce these aspects of spoken English. It is a mystifying and elusive system for them. Secondary students are particularly susceptible to feelings of frustration and embarrassment when they fail to communicate successfully. Considering the enormous physiological, sociological, and psychological phases through which they are passing, it is no small wonder that being clearly understood rates very highly on their hierarchy of needs. Acceptance among peers, for instance, is of the utmost importance at this age. Teens are notorious for stigmatizing individual differences, such as a "funny-sounding accent." Limited pronunciation skills have been found to undermine learners' self-confidence and to drastically restrict social interaction (Morley, 1998).

In addition, lowered expectations from the NS listener can negatively impact their perception of the NNS. Schumann (1975) found that NNSs frequently feel demeaned or rejected by NSs of a target language. His study reveals that poor intelligibility negatively influences NS estimations of a NNS's credibility. NSs in this study perceived NNSs with poor pronunciation skills as less competent and intelligent. One can only imagine how undermined the NNS must feel after being so harshly and unfairly judged.

2.2. Neurological and Phonological Aspects of Learning Pronunciation

Neurology and brain-based applications of teaching pronunciation to second language learners are key elements in the literature reviewed for this research project. It is becoming increasingly important to understand and implement brain-based techniques into pedagogical practice (Asher, 1993; Genesee, 2000). Memory is a process, rather than a fixed entity (Jensen, 1998). The brain is a pattern-seeking device; it constantly seeks meaningful categorization and organization of input. The brain also seeks to generate patterns when they are not obvious (Herrman, Freiderici, Oertal, Maess, Hahne, & Alter, 2003). Gestalt psychologists have discovered this phenomenon in speech perception.

The inclusion of rhythm into language learning may enhance the opportunity for rehearsal and transfer of patterns into long-term memory. Currently, there seems to be great emphasis on phonological awareness in mainstream classrooms, but little upon phonological memory, which also plays a vital role in acquiring intelligible pronunciation (Hu, 2003). Acoustic patterns in English have been studied through electromyography, which produces a visual representation of rhythm. Learning activities that are based upon organization of stress-timed syllables create an auditory impression essential for the acquisition and development of English pronunciation (Adams, 1979). Since rap music is solely based upon organized stress-timed syllables, this study supports the possibility that the methods discussed in this Capstone may be valid. The rap method designed for this study includes a series of rap songs, each divulging a word or sentence stress pattern that is prevalent in NAE. The heavy percussive beats in the instrumental aspect of the raps highlight proper stress allocation. Students practice the raps in class and outside of class on their own CDs, in order to internalize the stress patterns.

As mentioned in the previous section, native listeners impose internal strategies when processing an utterance. A recent study has revealed provocative empirical evidence that the brain generates its own sentence melody during speech perception (Herrmann, Friederici, Oertel, Maess, Hahne, & Alter, 2003). The research team investigated to what extent the absence of prosodic information influences lateralization in the brain. Auditory encoding normally activates both hemispheres: analysis of prosodic clues is lateralized to the right, whereas linguistic evaluation is lateralized to the left hemisphere. When elicited stress and intonation were flattened, the brain's syntax response (linguistic evaluation) was lateralized to the right. This indicates that the brain generated the missing prosodic information automatically.

This is a Gestalt phenomenon, since it illustrates that the brain is more than simply a sum of its parts. The human brain perceives more than what is actually presented. It attempts to fill in missing information. The change in direction of lateralization indicates that cortical areas previously thought to be specialized are not necessarily absolute. The implication of this study is that the human brain may be far more malleable and adaptable than what has previously been believed. This supports the idea that improved pronunciation is possible, even in older learners.

Another core aspect of Gestalt psychology is largely based upon pattern detection. Hence, patterns are used to explain the process of learning. This research supports the notion that patterns can be taught and internalized. Once the patterns are internalized, the brain will begin to automatically recognize patterns and impose them when other information is missing. Perhaps the auditory and tactile patterns used in producing rap music may then program a more "permanent" memory of where to place stress in English words and sentences. The rhythmic patterns of rap music may prove to be excellent stimuli to induce learning.

Asher (1993) hypothesizes that no genuine language learning can occur in the absence of the hemispheric switching from left to right. According to Asher, the traditional methods using left-brain strategies are simply ineffective (e.g. dialogue memorization, "drill and kill" exercises, and grammar explanations). The evidence shows only 4% of learners taught solely through these methods ever acquire fluency (Asher, 1993). The 4% who were successful must have somehow learned to switch hemispheres automatically, through "playing" with the language outside of class time. Asher believes a playful and non-threatening environment sets the

stage for brain switching. He also advocates for practice outside of the classroom. This supports the element of practicing rap songs outside the classroom.

2.3. Pedagogy of Pronunciation Instruction

The basic purpose of speech is to convey intent to an interlocutor. Stress is one of the most important prosodic features in communicating meaning. The language learners' goal should be the development of pronunciation that is sufficient to allow effective communication with native speakers (Abercrombie, 1956). However, ensuing pronunciation instruction focused on perfection, through the mimicry and memorization techniques of the Audiolingual Method. Over time, it became apparent that in reality, speech is far more than the dialogues practiced and therefore the Audio-lingual Method proved insufficient. In response, pronunciation became largely ignored for a period of time. Finally, in the mid-eighties, Abercrombie's idea of adequate intelligibility came back into focus. Practitioners realized that the lack of attention directed to pronunciation had backfired. Researchers have shown that grammar and lexicon are important, but lead nowhere in the absence of a comprehensible level of pronunciation. Any level below this makes communication virtually impossible (Celce-Murcia, 1987).

There is evidence that if pronunciation is not formally taught, students will acquire the pronunciation habits of their home community. (Gabb, 2000) has found that NNSs learn English pronunciation features largely from friends and community members of their first culture. Oftentimes they internalize pronunciation habits that are resistant to adjustments. Although there is nothing inherently "wrong" with the pronunciation habits acquired, effective communication with native speakers is frequently impeded.

Many theories have evolved over time about how to best teach supra segmental to English language learners. The "drill and kill" and "listen to me and imitate" methods prevalent in the Audio-lingual phase of pedagogy have been replaced by the currently more popular Communicative Approach. The Audio lingual Method of pronunciation emphasizes patterned drills and practice of conversations. Some new components of this method are dependence on mimicry, memorization of set phrases, structural patterns taught through repetitive drills, and use of language labs and visual aids. There is great emphasis on perfect pronunciation.

Emergence of the Communicative Approach provides a more holistic method of instruction. This approach is not actually a structured method, but more of a language teaching philosophy (Parrish, 2004). The emphasis is on language as a medium of communication for a variety of purposes. Language is taught in ways that are meaningful to the learner. The Communicative Approach uses any activity that engages learners in authentic communication. Intelligibility for successful communication is paramount in both approaches of instruction (Celce-Murcia, Brinton, & Goodwin, 1996; Avery & Ehrlich, 1992). The instructional method presented in this Capstone does not completely fit into either the Communicative or Audio lingual Approach. It is actually a combination of the favorable elements of both approaches. Rehearsal and repetition of rap music (Audio lingual) are crucial elements, but the rap culture also provides authentic context (Communicative) for teenaged language learners. There is rote memorization of English word and sentence stress patterns (Audio lingual). There are activities that involve role- playing, interviewing, games, and spontaneous conversations (Communicative). The goal of the repetition and rehearsal of stress patterns is ultimately to carry over into everyday natural communication.

Collaboration is perhaps the most important foundation for effective teaching and learning. In this study, the fields of linguistics, neurology, and second language teaching come together for a common purpose. Combining these different perspectives can greatly enhance knowledge of the processes underlying second language learning. The rap approach presented in this Capstone is largely based upon the findings of previous research. The method presented in Chapter Three incorporates a combination of Total Physical Response, teaching to a variety of learning styles, auditory discrimination, pattern recognition, motivation, context, and lots of fun.

It is my sincerest desire that this Capstone may contribute to a growing body of research on the connection of brain, rhythm, and learning supra segmental such as word and sentence stress. The methods used in this research will be presented and justified in the next chapter. Included is a discussion of setting, methods, elicitation techniques and research questions, which will address the question, "Will rap-based instruction have a positive effect upon students' production of appropriate word and sentence stress?"

3. METHODOLOGY

3.1. Participants

120 Iranian EFL elementary learners in an English language institute aged from 7-9 years old will participate in this study. To ensure the homogeneity of the two groups, the Nelson Proficiency Test will be administered among 120 EFL learners. 82 students whose scores fell within the range of one standard deviation above and below the mean (scores from 26 to 38) were chosen as homogeneous participants for this study.

3.2. Instrumentation

The following instruments are employed in order to conduct the study:

1. First, to ascertain the homogeneity of the participants of the study in terms of language proficiency, a general language proficiency test named Nelson Proficiency Test will be utilized.
2. An oral pretest and posttest using some observation cards to determine the differences in each groupbefore and after the instruction will be employed.

3.3. Procedure

To ensure the homogeneity of the two groups, the Nelson Proficiency Test is administered to 120 EFL learners. Afterwards, reliability of Nelson proficiency test is calculated through K-R 21 Method. 82 students whose scores fell within the range of one standard deviation above and below the mean (scores from 26 to 38) were chosen as homogeneous participants for this study. In control group and experimental one 42 and 40 students are assigned with 45 male participants and 37 female ones respectively. After that Pearson test of English is handed to students as the oral pre-test. Next, reliability of pre-test is computed through Cronbach's Alpha formula. Then, Levine's test for equality of variances is employed to demonstrate that four sets of scores (control & experimental, male and female) have equal variances and therefore are homogeneous at pretest. Two-way AVOVA is employed after that to show statistically significant effect for gender and pronunciation improvement. In experimental group, teacher uses musical rhythm to teach as the treatment of the study while in the other one she does not. At the end of the term, a posttest is given to both experimental group and control one to check any significant difference between their performances. Later, Reliability of post-test is computed through Cronbach's Alpha. Levine's test for equality of variances is also employed to demonstrate that four sets of scores (control & experimental, male and female) have equal variances and therefore are homogeneous at post-test. Finally, Two-way ANOVA is utilized to testify the veracity of null hypotheses.

4. Results and Discussion

4.1. Homogeneity process through nelson Proficiency Test

To ensure the homogeneity of the two groups, the Nelson Proficiency Test was administered among 120 EFL learners. Those students (N = 82) whose scores fell within the range of one standard deviation above and

below the mean (scores from 26 to 38) were chosen as homogeneous participants for this study. Descriptive statistics for this homogeneity test is represented in Table 4.1.

N	Range	Min.	Max.	Mean	Median	Mode	Std. Error	Std. Deviation
120 120	26	20	46	32.27	32.00	30	.558	6.109

Table 4.1 Descriptive Statistics of Nelson Proficiency Test

The mean score of participants was 32.27 with standard deviation of 6.109, the mean of students was 20 and the median of the group was 32.00.

Reliability of Nelson Proficiency Test	Valid	Number of Students	%	Number of Items	K-R 21 Method
	Excluded	30	0	50	.86
	Total	30	100.0		

Table 4.2 Reliability of Nelson Proficiency Test

4.2. Pretest

Between-Subjects Factors

		Value Label	N
Group	1	Control	42
	2	Experimental	40
Gender	1	Male	45
	2	Female	37

Table 4.3 Between-Subjects Factors

Reliability of Pretest	Valid	Number of Students	%	Number of Items	Cronbach's Alpha
	Excluded[a]	0	0	30	.89
	Total	18	100.0		

Table 4.4 Reliability of pre-test

The mean score of participants in control group for men was 19.61 with standard deviation of 5.639 and mean for female was 19.47 with standard deviation of 6.177, for experimental group the mean score of male

participants was 18.45 with standard deviation of 5.096 and for female the mean was 19.28 with standard deviation of 5.410.

Group	Gender	Mean	Std. Deviation	N
Control	Male	19.61	5.639	23
	Female	19.47	6.177	19
	Total	19.55	5.815	42
Experimental	Male	18.45	5.096	22
	Female	19.28	5.410	18
	Total	18.83	5.188	40
Total	Male	19.04	5.351	45
	Female	19.38	5.737	37
	Total	19.20	5.496	82

Table 4.5 Dependent Variable: Pronunciation at Pretest

Levene's Test of Equality of Error Variances

F	df1	df2	Sig.
.057	3	78	.962

Levene's Test for Equality of Variances demonstrates that the hypothesis of equal of variances was supported because Sig. was .96 at pretest, which is greater than the .05 significance level for this study ($p>a$). Therefore it was concluded that four sets of scores (control & experimental, male and female) have equal variances and therefore are homogeneous at pretest.

Two-way AVOVA

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	17.597	3	5.866	.188	.904	.007
Intercept	29933.545	1	29933.545	961.114	.000	.925
Group	9.246	1	9.246	.297	.587	.004
Gender	2.403	1	2.403	.077	.782	.001
Group * Gender	4.658	1	4.658	.150	.700	.002
Error	2429.281	78	31.145			
Total	32660.000	82				
Corrected Total	2446.878	81				

Table 4.6 Two-way AVOVA

ANOVA failed to detect a statistically significant effect for group, (F= .29 p = .58, p> .05, Effect size = .004). Moreover, ANOVA results found no statistically significant effect for gender (F= .07 p = .78, p> .05, Effect size = .001). Accordingly, there was no significant difference between the pronunciation improvement of participants in control and experimental groups, and also between male and female participants before facing any treatment.

Also, the interaction effect of Group * Gender was not significant (F= .15, p = .70, p> .05, Effect size = .002)

4.3. Post test

Two-way ANOVA

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	333.221	3	111.074	3.414	.021	.116
Intercept	43257.257	1	43257.257	1329.695	.000	.945
Group	301.521	1	301.521	9.269	.003	.106
Gender	4.404	1	4.404	.135	.714	.002
Group * Gender	12.398	1	12.398	.381	.539	.005
Error	2537.474	78	32.532			
Total	46479.000	82				
Corrected Total	2870.695	81				

Table 4.7 Two-way ANOVA

A) **Null Hypothesis**

Additionally, ANOVA results revealed no statistically significant effect for gender (F= .13 p = .71, p> .05, Effect size = .002). Accordingly, the second null hypothesis which predicted that gender of Iranian students does not affect their pronunciation was not rejected. Also, the interaction of Group * Gender was not significant (F= .38, p = .53, p> .05, Effect size = .005)

5. Conclusion

5.1. Reflections

This entire Capstone project has been an exciting labor of love for numerous reasons. I had been musing about the notion of rap music as a vehicle for pronunciation instruction for several years. Having experimented with rap beats in the classroom in previous years increased my belief in and desire to develop a method that could be used by other ESL teachers. Now, this methodology has emerged out of my imagination and onto paper.

Once other ESL teachers implement the techniques laid out in the teacher's guidebook, I will receive affirmation and ideas for expansion and further development of this method. Hence, this project is a work in progress, with no end point in sight. This excites me, because I do not feel finished with this in any way. I wish to delve further into this type of education, as I encounter new materials that relate to my topic.

The results obtained show promise for the potential of this method. Five of the six subjects demonstrated improvement when speech samples were compared before and after the course. The raters were impartial, objective, and were non-ESL practitioners. This contributes to the validity of this study.

The most exciting aspect of this study stemmed from the students' enthusiastic response to the method. Learning became playful, creative, and innovative to all of us involved. The students arrived to class each day eager to find out what activities would take place. We laughed, played games, and got to know each other on an entirely different level than before. As we worked together, a strong feeling of community emerged and grew with time. There were hugs and tears when the four weeks ended. There is no greater reward for teachers than moments like those.

My vision of improving pronunciation became a secondary result of the great level of bonding and trust that took place within this class. It was rewarding to see the pride in the students' faces as they correctly identified suprasegmental and segmental aspects of speech, stress patterns of English, and anatomical terms of the speech mechanism. Their greatest pride, however, was in the daily communicative successes they experienced and reported. They would burst into the room, exclaiming! "My friend told me they could tell I have been doing something different! Now, they want to borrow my CD!" "Can you help me when I have to speak in front of a class next year?" "I'm not afraid to go to my job interview now." Although these results are difficult to measure according to scientific parameters, they are the most gratifying to me.

The students expressed increased confidence in speaking to NSs as well as NNSs. Confidence is not easily measurable, but I was impressed with the level of enthusiasm expressed regarding communication outside of class. The amount of time students spent listening to and practicing along with the rap CD is also a good indication that they are headed in the direction of improving their pronunciation.

5.2. Summary

This experience has ignited tremendous professional growth and a hunger for further answers. The students' and instructor's enthusiasm and dedication throughout the course triggered considerable motivation from both sides. The results of this study urge me to forge ahead and to share this instructional method with as many other ESL professionals as possible. I believe the motivating nature of music can also be applied to many other areas of speech and language.

Once again, imagine that you are an advanced adolescent English language learner. You have excelled in your ability to take standardized tests, write reports, and change registers of social communication. Now there is hope that intelligible speech is within your grasp. Others may hold higher expectations of you, and perceive you as the accomplished individual you are.

REFERENCES

Abercrombie, D. (1956). *Problems and principles in language study.* London: Longman.

Asher, J. (1993). Imagination in second language acquisition *Journal of the Imagination in Language Learning and Teaching 1,* 20-23.

Avery, P. & Ehrlich, S. (1992). *Teaching American English pronunciation* Oxford:
Oxford University Press.

Celce-Murcia, M. (1987). Teaching pronunciation as communication. In J. Morley (Ed.).
Current perspectives on pronunciation. Washington DC: TESOL.

Celce-Murcia, M., Brinton, D., & Goodwin, J. M. (2000).*Teaching pronunciation*. New York: Cambridge University Press.

Gabb, S. (2000). Calzones! You can't eat calzones in Mexico. *American Education Newsletter.*

Genesee, F. (2000, December 12). Brain research: implications for second language learning. *ERIC Digest,*12-13.

Herrmann, C., Friederice, A., Oertel, U., Maess, B., Hahne, A., & Alter, K. (2003). The brain generates its own sentence melody: A Gestalt phenomenon in speech perception. *Brain and Language, 85*(3), 396-401.

Hu, C. H. (2003). Phonological memory, phonological awareness, and foreign language word learning. *Language Learning, 53* (3), 429-263.

Morley, J. (1998). Trippingly on the tongue: putting serious speech/pronunciation back in the TESOL equation. *ESL Magazine, 1,* 20-23.

Parrish, B. (2004). *Teaching adult ESL.A practical introduction.* New York: McGraw-Hill Companies, Inc.

Schumann, J. H. (1975). Affective factors and the problems of age in second language.