

THE RAP ON STRESS: TEACHING STRESS PATTERNS TO ENGLISH LANGUAGE LEARNERS THROUGH RAP MUSIC.

Janelle Fischler

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. This study was designed to explore the effectiveness of teaching English word and sentence stress patterns through the recitation of rap music. Six secondary English language learners from various primary language backgrounds voluntarily participated in a four-week intensive pronunciation course. Appropriate allocation of word and sentence stress was measured in speech samples obtained before and after completion of the course. The results of this study indicate improvement in stress placement by the end of the four weeks. The students also reported substantial gains in their confidence levels when communicating with others. The study includes specific methodology that may be useful in many ESL classrooms.

THE RAP ON STRESS:
INSTRUCTION OF WORD AND SENTENCE STRESS THROUGH RAP MUSIC

by

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To the loved ones who cultivated my journey and passion through this project. To my greatest support, Ro, for her encouragement, sacrifice, and belief in me. To Kira, Jonathan, Justin, and Jeremy: may your lives be an exciting and undying quest for knowledge and understanding. To the students who give me boundless joy.

Music training is a more potent
instrument than any other, because rhythm and harmony
find their way into the inward places of the soul.

—Plato

In teaching it is the method and not the
Content that is the message...the drawing out,
not the pumping in.

—Ashley Montag

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CHAPTER ONE

Introduction

Imagine you are an advanced adolescent English language learner (ELL). This is your senior year of high school, and you have accomplished the daunting challenges of passing all required standardized tests and earning sufficient credits to graduate from high school. Your advanced grasp of the English language has gained your acceptance at several reputable universities. 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.

Consider these poignant excerpts quoted from student journals in one of my secondary ESL classes. They were asked to comment on their personal issues with English pronunciation.

“Some words give me a hard time to pronounce when I am reading. Pronunciation is a very good thing for us because if you don’t know how to pronounce words, you will face a serious problem in life that will affect you...”

“I don’t like to read aloud because I can’t pronounce well. I don’t have any confidence in my English.”

“I want to practice more speaking to improve my speaking more smoothly and faster.”

The Americans speak so fast so I must learn good listening skills to help me catch up.”

The importance of intelligibility

I have been approached by numerous students echoing similar concerns. They desperately want to be clearly understood – the first time they speak. In the absence of reasonably intelligible speech, effective communication simply cannot take place.

Morley (1999) contends that severe pronunciation difficulty puts some English language learners at considerable educational, occupational, professional, and social risk.

Furthermore, ELLs with poor pronunciation skills tend to avoid speaking with native speakers, which deprives them of the necessary practice they need to improve their speaking skills.

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.

Schumann’s study also found that feelings of rejection could incubate a negative attitude that impedes language acquisition in NNSs. This can create a vicious circle in many situations. Mainstream teachers’ lowered expectations of an advanced ELL with poor intelligibility could result in potentially negative consequences. That student’s performance could be substantially affected in such circumstances.

The need for increased pronunciation instruction

It is my observation that many ESL textbooks lack an emphasis on teaching pronunciation. As most students progress through the existing curricula, insufficient attention is directed towards pronunciation aspects of the English language. Effective communication in English is dependent upon more than an expansive vocabulary, mastery of decoding, and grammatical accuracy. Although these are imperative components of communication, they do not complete a program of effective communication in English. Explicit integrated instruction of pronunciation can greatly enhance the intelligibility of these students, as well as their confidence as they progress in

their language development.

To date, there is a relatively meager selection of pronunciation methods designed specifically for secondary ELLs. When students arrive in the United States in their teens, their future working situation must be taken into consideration. They do not have as many years to fully develop effective communication skills necessary to succeed in the workforce. Although future professional success within the American culture depends largely upon strong interpersonal communication skills (Gillespie, 1996), teachers and curricula tend to deemphasize or even ignore pronunciation issues. ESL teachers must increase the amount of teaching time devoted pronunciation skills that enhance the ability of NNSs to speak intelligibly enough to interact within the target culture.

Second language acquisition

The age of this group of language learners is an important feature to consider. The students in this study had arrived in the United States during or after the onset of puberty. As will be noted in Chapter Two, there seems to be a critical period for acquiring the phonological system of a second language. Many researchers have found that native-like pronunciation is very difficult or even unlikely to be acquired after the onset of puberty. This is possibly due to some developmental neurological factors.

Language acquisition is believed to be an innate biological process. Certain factors limit the critical period for language acquisition from approximately two years of age through puberty. The brain develops specialized functions during this age span. After that time, the brain loses plasticity, making post-adolescent language acquisition more difficult (Lenneberg, 1967).

Another confounding issue arises when a speaker has achieved competence in

the pronunciation systems of their first language (L1). As they learn English, there can be interference from their L1 pronunciation patterns. Such transfer can be particularly tenacious in older students who have spoken their L1 for many years. Hence, it is crucial to provide instructional methods that appropriately address the pronunciation needs of older students. There are valuable aspects to be considered from the various trends that have evolved in pronunciation methodology. These trends have ebbed, flowed, and transformed over time.

Historical trends in pedagogy of pronunciation

Pronunciation instruction has been linked to the most popular current method used (Celce-Murcia, Brinton, & Goodwin, 1996). Pronunciation was seldom taught during the reign of the grammar-translation method. During the 1940s through the 1960s, pronunciation received emphasis in the Audiolingual Method, which will be discussed further in Chapter Two. During this time, instruction focused upon imitation and memorization, with frequent use of error correction. Learners spent long hours in language labs listening to and repeating sounds and phrases. Perfect pronunciation was the main goal.

This trend to emphasize pronunciation diminished over the next two decades. Some ESL professionals questioned whether pronunciation could even be realistically taught. The previously popular drills used were deemed meaningless and non-authentic. As a result, pronunciation instruction was virtually ignored. However, during the 1970s, some professionals began to reconsider the importance of pronunciation, but with a new emphasis on communicative practice and learner involvement (Morley, 1975).

Since the 1980s, interest in pronunciation has reemerged, particularly for use in

academic and occupational contexts. There have been many more journal articles and

books about pronunciation produced since this time. The latest focus of pronunciation instruction is to empower ELLs to become effective and competent communicators. As more holistic, communicative approaches have become increasingly popular, pronunciation instruction is now being addressed within the context of authentic communication (Celce-Murcia, Brinton, & Goodwin 1996; Morley, 1991). Now that pronunciation instruction is emerging from its often-marginalized place in ESL instruction, professionals are realizing that perfect grammar is not enough. The feeling and flow of a language are gained through a natural sounding accent.

I have developed a pronunciation method specifically for secondary ELLs that addresses two important aspects in attaining effective communication skills: word and sentence stress. In order to improve pronunciation, ELLs must be open to experimenting with vocalizations and sounding differently than they have before in their lifetime. I have chosen the channel of rap music to help ELLs experiment and practice such novel vocalization of word and sentence stress. Students must be explicitly taught that word and sentence stress convey meaning that can be even more informational than the actual word used. Since word and sentence stress are such salient factors of intelligibility, the course outlined in this study is almost entirely directed to these features of pronunciation.

This approach may provide ESL teachers with a fun and simple method to impart the patterns of stress. Even ESL teachers have difficulty in understanding their own students at times. Recently, I directed a skit using ELLs who attend one of our district's high schools. Two ESL teachers who see these students on a daily basis and supposedly have "ESL trained ears" were astonished to find that they had great difficulty

understanding their students outside of the context of their classrooms. They had to

concentrate carefully in order to understand the lines spoken by their students during the skit. This experience surprised the ESL teachers to the degree that it has caused them to reconsider and reevaluate the importance of good pronunciation instruction in their classrooms.

Stress- and syllable-timed languages

As mentioned earlier, this Capstone will focus on the importance of teaching two suprasegmental aspects of pronunciation: English word and sentence stress patterns in spoken language. The core research question is, “Will rap-based instruction have a positive effect on students’ production of appropriate English word and sentence stress?”

I seek to find out whether such instruction can be especially useful to students who come from a first language background that is syllable-timed. In syllable-timed languages, each syllable receives a similar amount of time and stress. Most world languages are of a syllable-timed nature. The subjects who participated in this study all had syllable-timed primary language backgrounds (Farsi, Somali, Chinese and African Creolized English).

In contrast, English has a stress-timed nature, where the length of utterances depends on the number of stressed elements, rather than the number of syllables. English word and sentence stress comprise a regularly patterned form of rhythm, which is almost musical. The musical “beats” of English are stressed, and the number of unstressed syllables that fall between can vary drastically. Consider the following examples (note that stressed syllables are indicated by capital letters):

The CHICKen CROSSED the ROAD. (Six syllables, three stresses)

The CHICKen has CROSSED the ROAD. (Seven syllables, three stresses)

The CHICKen has been CROSSing the ROAD. (Nine syllables, three stresses)

Learners whose L1 is syllable-timed tend to stress all elements without adequate reduction of unstressed syllables (Celce-Murcia, Brinton, & Goodwin, 1996).

Therefore, it is useful to explicitly teach this lack of correspondence between the number of syllables and number of stresses.

In English, certain words within a sentence also tend to receive the strongest stress. The stressed syllables within content words, such as nouns, adjectives, and main verbs, are produced in regular rhythmic beats. Function words, such as articles, conjunctions, and auxiliary verbs, and unstressed syllables do not appreciably extend the duration of the sentence.

This pattern differs from languages where every syllable carries its own rhythmic beat. I believe teaching students our word and sentence stress principles can result in reduced frustration as they listen to rapid speech flow, as well as improvement in their production of English. Practicing with rap beats will hopefully provide an excellent manner of raising awareness of and instilling natural stress patterns of English.

An additional problem arises from discrepancies between written and spoken English. The correspondence of the spaces between English words on paper and pauses in connected speech is confusing. The boundaries between spoken words are less obvious than they are on paper. Visual exposure to written English can also affect pronunciation, resulting in choppy-sounding speech with inappropriate pauses, according to Dixo-Leiff & Pow (2002) and Hill & Beebe (1990). Clearly, ELLs are unlikely to be able to learn complicated English stress patterns without proper instruction.

Potential benefits of using rap music to teach word and sentence stress

Since stress-timed rhythm serves as the foundation for English poetry, rhymes, and chants, these media provide an effective manner by which to practice word and sentence stress. However, secondary school-aged ELLs may consider these genres to be “too babyish, or too boring.” They may find them condescending, since other mainstream students of the same age don’t typically listen to or recite such pieces of literature or music on a daily basis. Therefore, this Capstone explores the implementation of rap music as an alternative method for the instruction of stress.

There is well-accepted evidence that utilizing methods that are motivating to a given population may lower the affective filter, and create an elevation of natural input in language learning (Krashen, 1983). Since rap music is currently a very popular musical genre among secondary students, I believe it may serve as a useful and productive medium to impart some patterns of English word and sentence stress.

The role of motivation in successful language acquisition cannot be understated. Many ELLs enter the classroom feeling socially uncomfortable and uncertain. In order to improve pronunciation, ELLs must be willing to make changes. Motivation to change speech patterns may be confounded by many variables such as primary language, age, degree of self-esteem, and length of time spent within the target culture (Miller, 2000). The students are struggling with a strange new culture, and may feel disconnected from their native culture.

Such students may welcome the familiarity and solidarity they feel when rap music is introduced into the classroom, since rap music has made its mark across the

world in virtually every major city. For better or worse, rap music may help the acculturation process. Acculturation is the ability of the newcomer to adapt to and survive within the dominant culture, without discarding their first culture. The impact of rap music in today's society is impossible to miss. Tuning into most television or radio stations will result in an inundation of rap-based songs and advertisements. Indeed rap has become a major component of mainstream culture. Success in acculturation can enhance successful language acquisition (Schumann, 1986).

Achieving competence in a valued manner of communication can bolster self-esteem. Rap music occupies an important place in students' compact disc players, in their homes and at social gatherings. I intend to find out whether becoming rappers themselves will help this group of students to improve their skill and confidence in pronunciation. Many students fantasize about becoming pop stars or rappers, so perhaps the rap activities in this Capstone may help the students to believe in their abilities.

I believe musical rhythm has a powerful effect upon learning, especially when considering teaching to the various learning styles of students (Sims & Sims, 1995). Rhythm seems to appeal to the human essence. Perhaps we're universally moved by drum rhythms because they mimic the beating of our own hearts. Music mimics language, in respect to its meter and rhythm (Martinec, 2000). Meter refers to the structure of beats, which specifies the relative spacing and prominence of these beats. Languages vary widely in how they structure the spoken beats. Carolyn Graham (1978, 1986) has tapped into the use of musical rhythm as a means to teach suprasegmental features of English through the introduction of jazz chants for focused rhythm practice. Graham's jazz chants have become popular in ESL classrooms world-wide.

The predictable rhythm in rap music is emphasized by the strong bass and drumbeats contained in this style of music, which is very similar to the rhythm of spoken English. The rap method created for this Capstone is intended for a similar purpose as Graham's jazz chants. However, it is more specifically directed to motivate secondary ELLs, as it incorporates current teenage pop culture. Since rap music consists primarily of rhythmic speech, it may prove to be an ideal modality for learning appropriate patterns of English stress.

My method is also designed to encourage ELLs to use various intelligences such as audio, tactile, visual, and musical. The lesson plans included in the appendices of this Capstone will include specific ideas of how to incorporate these learning styles. Such stimulation of multiple areas of the brain increases the number of synapses, which increases overall learning (Asher, 1988). A combination of Asher's Total Physical Response techniques and specific teaching to varied learning styles is the cornerstone of my rap method.

The methods of instruction for pronunciation revealed in this Capstone project are vastly different from the traditional instruction that has taken place in many ESL classrooms. The rap-based approach is more intuitive and creative than drill-based methodology of the past. Since accent carries the underlying spirit and music of language, it deserves as much prominence in language instruction as the mechanics of grammar.

The rap-based method presented in this capstone was designed to foster:

- Learner self-involvement
- Self-assessment skills

- Self-monitoring skills

- Recognition of accomplishments

The climate of a pronunciation class will greatly enhance or inhibit effective communicative exchange. I intend to pay diligent attention to the climate of my pronunciation class. I am fortunate to have a group of students who have registered of their own volition and are willing to participate outside of school hours. This element of great interest should help to create an environment of personal investment and accountability. Following are some “generally accepted findings” in relation to best practices in foreign language teaching:

- 1). Learners are motivated to do things that are interesting, relevant to their goals, and enjoyable.
- 2). Different learners use different learning strategies. More successful learners use a broader range of strategies more flexibly.
- 3). Language aptitude includes the sub-components of sound discrimination (oral mimicry ability) and verbal memory.

Although it is an unusual academic method, rap music’s enormous popularity may provide a bridge to fulfill these objectives. The oral mimicry involved in this method may contribute to long-term verbal memory. As mentioned previously, researchers have found that when the brain receives input from multiple sources, the circuits activated work together in a parallel fashion. Perhaps teaching word and sentence stress through music and rhythm may cause the brain to be stimulated in multiple areas that may interact in a positive manner to create superior learning. The brain is continually evolving, even after puberty, when the onset of fossilization is commonly expected.

Throughout the remainder of this Capstone, I will search for answers to the

question, “Will rap-based instruction have a positive effect on students’ production of appropriate English word and sentence stress?” The succeeding chapters will demonstrate how such instructional strategies may impact the production and understanding of word and sentence stress in secondary ELLs. Chapter Two will focus on published research relating to my Capstone topic. I will also highlight the lack of information regarding secondary students learning language through rhythmic methods. Chapter Three will describe the methodology employed during four weeks of action research with NNSs. In Chapter Four, I will report the results of this study and its impact upon the participants. Chapter Five will explore conclusions that can be extracted from this research and offer some recommendations. It is my greatest hope that this Capstone may provide an additional method of effective and creative practice for both instructors and learners.

CHAPTER TWO

Literature Review

Introduction

Accent and intelligibility, the ability to be understood, account for a major contribution to interpersonal communications. The main components of accent are *segmental* aspects: spoken sounds and combinations of sounds, and the *suprasegmental* aspects: stress (length and loudness applied to syllables), intonation (speech music or rising and falling of voice pitch), and liaisons or rhythm (word connections during streams of speech). Suprasegmental features of language transcend the segmental production of vowels and consonants. They extend across the inventory of distinctive sounds and are usually unconsciously produced by native speakers. Many experts contend that mastery of suprasegmentals may contribute to overall intelligibility even more than mastery of the segmental aspects typically emphasized in the ESL classroom (Grant & Levis, 2003). Therefore, it is the focus of this study to encourage prioritizing the instruction of suprasegmentals in the ESL classroom.

In an effort to answer the research question, “Will rap-based instruction have a positive effect on students’ production of appropriate English word and sentence stress?” I consulted numerous articles, books, journals, and professional colleagues. Various sub-topics emerged as important during my reading, and many common threads emerged within these subtopics. Following is an overview of significant findings, or lack thereof, relating to these topics described. This chapter is then divided into sub-topic sections that reveal supporting studies pertinent to my research question.

The sub-topic, Second Language Acquisition, will highlight highly regarded research and theories that pertain to the research question, “Will rap-based instruction have a positive effect on English word and sentence stress?” Since my sample consists of older language learners, Lenneberg’s Critical Hypothesis (1967) is examined in reference to whether it is possible to improve word and stress patterns after the onset of puberty. Other studies are examined, that refute the notion of brain as incapable of adjustments after puberty. Chomsky’s language universals (1968), and Krashen’s theory of Language Acquisition (1983), offer considerable hope that learners can gain access to improved pronunciation through underlying language universals, as well as through active learning.

The role of Music in Language Learning, Rhythm and Language Learning, will consider studies involving the utilization of music to specifically enhance language learning. Although there were relatively few such studies, they indicated great promise for the use of music and rhythm in ESL classrooms. This sub-topic casts some light on the potential positive effects of using rap music to teach word and stress patterns to secondary language learners.

Following is a review of literature on the sub-topic, Rhythm and Language Learning. Since rhythm is universal, (Martinec, 2000), it seems to be a logical resource to implement in the education of students who come from diverse cultural and linguistic backgrounds. This section will address the great differences between the patterns of English rhythm and those of most other world languages (Celce-Murcia, Brinton & Goodwin, 1996). Some research has shown that explicit instruction of English patterns can result in significant improvement of production, even after L1 rhythmic patterns have been internalized (Adams, 1979). The importance of role rhythm plays in pronunciation

has guided the focus of this study, since rap music possesses a rhythmically driven nature.

The Importance of Word and Sentence Stress on Intelligibility explores studies revealing the substantial impact of word and sentence stress upon perceived intelligibility (Prator, 1071; Hu, 2003; Kreidler, 1999; Fudge, 1984; Cutler, 1984). There is data presented that indicate misplaced stress resulting in miscommunication (Bansal, 1969; Hubicka, 1980; Tiffen, 1974; Banrabah, 1987). These studies align with my research question, since I am investigating a method to improve word and sentence stress.

Investigation of Neurological and Phonological Aspects of Learning Pronunciation resulted in uncovering an increasing body of work indicating that the brain may be far more adaptable after puberty than has been previously believed (Herrmann, Friederici, Oertel, Maess, Hahne, & alter, 2003; Jensen, 1998; Asher, 1993). These findings have important implications for this Capstone's project's intention to impart stress rules that can hopefully become permanent knowledge and habit in the brains of the subjects participating in this study.

The final sub-topics, Why Use Rap?, and Pedagogy of Pronunciation Instruction, will explore evolution of the historical trends in pronunciation instruction and how these have shaped the philosophy and methodology presented in this study. The prominence of pronunciation instruction has fluctuated over time. Both positive and negative facets of the Audiolingual and Communicative phases of pronunciation instruction are explored and evaluated in order to determine where the rap-based method of this study holds its place.

The seven sub-topics introduced in this overview are interrelated, yet they will be discussed separately. The following sections will examine more closely what other research has unveiled and how the results relate to the topic of this study.

Age and Second Language Acquisition

Age is a crucial factor considered in many studies reviewed. It seems to play a role in the acquisition of rhythm, language, and pronunciation. There is heated controversy among linguists about the extent to which older language learners can acquire accurate pronunciation of the target language. Many accumulating studies are showing that native-like pronunciation of a second language may be possible after puberty. One group of scholars examined individual learner characteristics, specific learning contexts, and language variables (Bongaerts, van Summeren, Planken, and Shils, 1995). This series of studies revealed that such aspects can compensate for a late start in language learning. The subjects in these studies were native Dutch speakers who were learning British English. The researchers attempted to identify late language learners who had acquired sufficient pronunciation skills such that NSs would think the learners were also NSs. The study confirmed that these Dutch university students could overcome the predictions of the Critical Period Hypothesis.

Given the variety of language backgrounds included in this Capstone project, it is difficult to assume that nativelylike pronunciation of NAE is possible, based upon the results of the studies above. The L1 of the subjects in this study include tonal languages, which have characteristics that are vastly different from English than characteristics of Dutch. However, improvement may still be possible, and studies such as mentioned

above show promise. Intelligible pronunciation, rather than native-like pronunciation, is the intent of this study.

One major and current theory of second language acquisition is that of Stephen Krashen (1982). A central component in Krashen's theory is the "monitor model." Krashen highlights that older language learners have two means of acquiring a target language: "acquisition" and "learning." He distinguishes between the two means by describing "acquisition" as a subconscious and intuitive construction of language learning. This is much like the way a child simply "picks up" a language, without really thinking about it. This component aligns closely with Chomsky's earlier theory of an innate learning acquisition device (LAD). Chomsky (1968) and others argue that the deeper universals underlying all languages render the surface structural differences between languages as less important.

"Learning," on the other hand, is a process in which learners consciously attend to the form and rules of a target language. Instruction of pronunciation rules through rap music falls under the "learning" category. According to Krashen, the learned language component serves as the internal "monitor" and causes the learner to correct and adjust oral production. However, the rhythmic impulses contained within rap music may relate more to a deeper universal, or the "acquisition" component. This notion will be further examined in the next section.

Another component of Krashen's Theory of language Acquisition is the "input hypothesis." According to Krashen, the input students receive should be one step beyond their level of competency. This is known as the "i-plus-one" formula. The introduction of rhythm-based learning may provide this additional level to make input just beyond the

learners' level accessible (Lake, 2000; Adams, 1979). To illustrate how music fits into the "i-plus-one" formula, Lake used the example of musical lyrics in a verse versus musical lyrics in a refrain. The learners in his study picked up a chorus much faster than a verse. The chorus may be catchy enough to hook the learners into progressing towards the plus-one feature of the verses, since verses are more difficult to learn. The "i-plus-one" theory also incorporates the notion of taking risks. Students may become more apt to negotiate meaning when language is presented within the circular nature of music, rather than when it is presented as mere text.

In order to improve pronunciation, the secondary ELL must have good reasons to create such a change. When a community surrounding the language learner values the acquisition of the target language, the likelihood for eventual intelligibility will be enhanced (Schuman, 1975). This research found that motivation and concern for good pronunciation are largely directed by surrounding community and therefore cannot be controlled by the ESL teacher.

The Role of Music in Teaching Language

There are many correlations between musical patterns and speech patterns of stress, intonation, and rhythm. Both music and speech could be described as organized sound. Neurologists use sophisticated equipment to map the areas of the brain used when processing music and processing speech patterns. The two areas are adjacent and closely related. The brain strives to detect patterns in speech in much the same way it detects patterns in music (Voigt, 2003). Thus, it may be valuable to consider the validity of using musical instruction in the language learning classroom.

There is a relatively limited amount of literature on teaching language through music and rhythm. Some studies indicate a strong correlation between successful English

pronunciation and musical methodology (Martinec, 2000; Voigt, 2003). Many have found that music trains the brain to perform higher order thinking (Newham, 1993).

Music also creates an environment of lowered anxiety (Lake, 2000), which supports Krashen's theory of Language Acquisition (Krashen, 1983). Several aspects of Krashen's theory are relevant to teaching language through rhythm. The three most widely accepted components of Krashen's Theory of Language Acquisition are "affective filter", the "monitor model", and natural input. Krashen views the language learner's emotional and attitudinal state as a "filter" that acts to pass, impede, or stop the input necessary for language learning. Therefore, lowering the affective filter is a critical factor in successful second language acquisition. Optimal learning conditions include an environment of high motivation, self-confidence, and low anxiety level.

Suggestopedia was developed by Georgi Lozanov as a method for language teaching that utilizes music to lower affective filters (cited in Larsen-Freeman, 1988, pp. 72-88). The premise of this method is that optimal language learning is acquired in a relaxed environment. This is accomplished through guided imagery, creative dramatics techniques, soft lighting, and music. Following is a description of the phase of Suggestopedia that incorporates music.

The teacher reads a dialogue as music is played, closely matching their voice to the cadence, rhythm, volume and melody of the music. The students follow along, reading the text of the dialogue presented in both English as well as their L1. Students are presumed to be attending to the linguistic message on a conscious level, while responding to the soothing effects of the music on an unconscious level. Both

hemispheres of the brain are engaged during this process. Thus, conditions for learning language are believed to be enhanced.

The dialogue is presented a second time. This time the students close their eyes and relax in a more passive state as the teacher recites at a normal rate with music that is more up-tempo. The two exposures were designed to promote an effective receptive phase of language acquisition before an expressive phase is attempted.

Suggestopedia is geared towards teaching vocabulary and grammar, rather than teaching pronunciation. However, the notion of matching cadence, intonation, and rhythm of lyrics to a musical melody may prove to be useful in teaching pronunciation. Word and sentence stress relate to musical aspects. The method described above implements classical and baroque styles of music. Although rap music does not seem to possess a particularly soothing nature, the inherent enjoyment of music can contribute to lowering affective filters when learning language.

A recent study has found that text within the context of music tends to carry learners into interaction, whether they are consciously ready or not (Lake, 2000). This study of teenaged ELLs probed into music and language learning. Lake taught students to sing songs in combination with physical gestures and motions. He found that music and language seem to be tied together in brain processing with connections among pitch, rhythm, and symmetrical phrasing. Repetition of language through singing resulted in dramatic improvement of pronunciation, measured at the end of the school year. Rhythmic patterns contained within music combined with text may entice interaction among students to learn English stress patterns. Simple rote memorization of patterns may only be minimally exciting. The enjoyable aspect of making music can create a far

more exciting atmosphere. Since teenage students are entertained by rap music, the method presented in this Capstone project is directed at creating an enjoyable language – learning environment.

Pronunciation instruction should take on a much larger role in the ESL classroom than it has in the past. It is widely accepted that context is essential to the success of any language program. Rap music and hip-hop culture may provide an enticing and familiar context for many secondary students. Students relate to rap as entertainment rather than work. They may find that learning through music they like is fun rather than tedious. It is also important to consider the cultural and religious practices of one's student body before embarking in the use of rap music. Some students may come from cultures that may prohibit use of music and dance.

The non-prescriptive grammar and foul language associated with popular rap music may cause reluctance on the part of some teachers to incorporate rap music into education. The approach presented in this study does not contain inappropriate language as heard in some mainstream rap. There are, however, some slang words and non-standard grammar. This should not confuse ELLs, since non-standard grammar is commonly found in daily usage among most languages. In fact, students have to learn to deal with current usage of the language they are learning (i.e. descriptive grammar). It is the teacher's responsibility to explain the various registers of language. Since current research recommends use of students' daily experience to provide context for effective language learning, rap music can provide a powerful medium for many teenaged students.

This broad discussion of the role of music in language learning is relevant to the topic of this Capstone. However, none of the studies specifically addresses the infusion

of rap music into language learning. Rhythm is one of the pertinent elements of music. Those of us who have heard a car approaching from two blocks away can attest to the strong and rhythmic percussive element of rap music. The rhythmic drive contained within rap music leads to the following discussion of the specific role that rhythm plays in language learning.

Rhythm and Language Learning

Rhythm is one of the most pervasive cultural elements found across the world (Martinec, 2000). In exploring literature related to the effect of rhythmic exercises on ESL instruction, I found no specific research on the use of rap music in English language instruction. However, some independent research has been done on the relationship between rhythm and language. A sense of rhythm is present in all cultures through chants, percussion, poetry, music, and other forms. Human language has deeply rhythmic foundations. When teaching pronunciation, it is important to make students not only aware of the universality of rhythm, but also of how to compare the patterns of their native language rhythm to those of English.

According to Adams, (1979), the rhythmic impulse is the most essential phonological feature of language. This phonetician found that command of the rhythm of a target language provides a key to mastery of the spoken language. Furthermore, she found that insufficient control of rhythm leads to the most salient barrier to fluency and intelligibility at all levels of language usage. The group of subjects in this study consisted of graduate teachers of English from Asian countries, who were attempting to boost their professional skills. Although this group of subjects was very different from the group in this study, the analysis and conclusions in the study support many facets of

this project. Adams contends that the major contribution to faulty organization and timing of English rhythm is the syllable-timed nature of the first language.

All languages possess speech rhythm, but the manner with which they divide that rhythm into time varies widely. Stated another way, the rhythm of a given language has a particular timing and organization of rhythmic units, which is a crucial and distinctive phonological feature of that language (Kenworthy, 1987). There are two general types of speech rhythm in languages: syllable-timed and stress-timed. There are very few languages that are both stress and syllable-timed. The rhythm of English has a stress-timed nature. This means it is based on a series stressed pulses that are uniformly spaced. A phrasal group consists of one strongly stressed syllable plus one or more unstressed syllables, interrupted by pauses (Adams, 1979). Hence, the stresses carry the rhythmic impulse in Northern American English (NAE), e.g. The CAT was CHASED by the DOG.

The vast majority of world languages follow a rhythm pattern that is more closely related to the syllable. Syllable-timed languages are based on a more evenly timed spacing of syllables. Thus syllables, rather than stresses, carry the rhythmic pulse, and are spoken at more evenly spaced time intervals. In such languages, the duration of an utterance is equivalent to the total number of syllables it contains.

In English, the duration of syllables varies according to context. The actual number of syllables does not correspond closely to the duration of the utterance. English rhythm is largely comprised of the regular patterned beats of word and sentence stress. These patterns are similar to musical patterns, with regular, rhythmic beats that move from stress to stress, regardless of how many unstressed beats fall in between (Celce-

Murcia, Brinton & Goodwin, 1996). Hence, the rhythm of English may be strongly detectable within the context of rap music, which utilizes spoken syllables and pauses predictably situated between regular rhythmic beats. The following example (Appendix Nine, Track 11) is taken from rap lyrics created for the method presented in this Capstone:

ENGLISH has a RHYTHM and it's KIND of like a CHEAT.
 We SQUEEZE lots of WORDS in the SAME four BEATS.
 Count 1...2...3...4
 There MIGHT be THREE words, MAYbe MORE.

KIDS LIKE CANDY.
 The LITTLE KIDS like CANDY.
 The LITTLE KIDS like the CANDY.
 The CUTE little KIDS like the CANDY.

There are some authors who lament the lack of emphasis devoted to rhythm in previously written linguistic textbooks. They argue that all human language is predictably rhythmic. Some even posit that a baby's perception of these rhythmic patterns is a key mechanism in launching the language acquisition process (Petitto, Howlok, Segio, & Ostry, 2001; Auer, Couper-Kuhlen, & Muller, 1999). Many researchers argue that all human language is predictably rhythmic, although the degree and type of rhythm can vary according to context (Auer, Couper-Kuhlen, & Muller, 1999) and the rhythmic nature of a primary language is internalized at an early age (Adams, 1979). Therefore, this is an important consideration for this Capstone project, which targets relatively older subjects. Perhaps the early internalization of their first language's rhythm may interfere with their ability to acquire the different patterns of English rhythm.

Conversely, some research argues that there may be more of an underlying universal pattern recognition device. Although the pattern of stress-timed English varies greatly from syllable-timed languages, universal regularities in the timing and tempo as early as infant babbling have also been discovered. Pettito (2001), along with her team of Dartmouth colleagues, has researched infants intensively for 20 years and found their

brains to be universally “hardwired” for rhythmic patterns of language. She discovered an innate sensitivity to specific rhythmic patterns naturally found across all languages.

Pettito’s study compared the rhythmic hand movements of hearing infants born to profoundly deaf parents to hearing infants who were exposed to spoken language. The infants who lacked exposure to spoken language still produced rhythmic hand activity that contains the specific patterns of natural language (silent babbling). However, the babies demonstrated a significantly different type of low-frequency hand activity that corresponds to the rhythmic patterns of the sign-syllables of American Sign Language. This study concludes that such linguistic and motor patterns could only be differentiated if babies are able to utilize the rhythmic patterns underlying human language. These findings are therefore in alignment with Chomsky’s theory of a LAD.

The findings support the idea that infants are sensitive to rhythmic language patterns. The results of Pettito’s studies have driven her to posit that babies’ perception of these patterns is major factor in triggering the language acquisition process. Research directed at infantile pattern detection may also provide some provocative implications for older language learners (Pettito, Howlok, Sergio, & Ostry 2001). If rhythm is an innate universal structure, it may prove useful to tap into this aspect of language, even in later

years. There is research pertinent to my topic about older language learners, who must encounter entirely new rhythm patterns.

In older learners, the acquisition of rhythmic patterns of English may be considerably more complicated, because they are learned after a previous language's rhythmic pattern has already been acquired. Interference from the first language patterns is inevitable (Adams, 1979). Stress patterns of English are often related to attitudinal contrast, emotional overtones, and numerous other factors. These types of stress patterns are not likely to be "automatic," or "hardwired." Hence, it cannot be assumed that all specific rhythm patterns of English are innate. Rather, a predisposition for general pattern recognition may be universal. This is an important consideration for this Capstone, because this study is based upon the premise that rhythmic patterns are part of the background experience and are programmed into the brains of the subjects.

Many other studies have demonstrated that improvement is possible when teaching English stress patterns to NNSs. Learning accurate rhythm of standard American English has also resulted in the improvement of other acoustic features, such as syllable length and appropriate intonation (Todaka, 1990). This study compared acoustic contours of NAE and Japanese speakers and found that the Japanese speakers transfer their first language features to English. One of these features is that they did not know how to sufficiently stress and lengthen prominent stressed syllables. Todaka recommends training through a "hyper-pronunciation" method where pitch, rhythm and duration of stressed syllables are exaggerated. The Japanese speakers were able to significantly improve their pronunciation through this method.

In another study, Anderson-Hsieh & Ventatagiri (1994) also found that it is possible to learn appropriate English rhythm. The researchers compared the syllable duration and length and frequency of pauses between groups of high- and intermediate-proficiency Chinese speakers of English. Then they compared the productions of these two groups to NAE speakers, according to acoustic measures. The high-proficiency Chinese demonstrated nearly native-like proficiency on the variables mentioned above. Their use of rhythm was far more natural sounding than that of the intermediate group, who failed to distinguish duration of stressed versus non-stressed syllables. The intermediate group also demonstrated more frequent and inappropriate pauses, which indicates they had not successfully internalized the rhythm of English.

Additional research has been done on rhythm indicating that acquisition of English stress patterns may be the most challenging facet of English pronunciation for speakers of other languages (Florez, 1998). The researcher experimented with various approaches of teaching English rhythm to Spanish speakers. The subjects in this study made the most substantial gains when rhythm patterns were taught in the following manner:

- 1). Vocabulary items or phrases are taught in isolation.
- 2) .The items are then matched by patterns of rhythm to items or phrases.
- 3). The patterns are imposed on words, phrases, and sentences.

The Spanish speakers in this study demonstrated great improvement in producing the rhythm of English, particularly when they practiced under controlled conditions. Flores also acknowledges that extended practice in multiple situations would be necessary for these improvements to carry over into automatic production during spontaneous speech.

The studies of Chinese and Japanese speakers give support to the theory that it is possible for older language learners from syllable-timed language backgrounds to improve their pronunciation in terms of stress. Appropriate instructional techniques such as those presented in this study are of paramount importance when teaching older language learners.

Most of the previously discussed methods using rhythm incorporate kinesthetic components that reinforce the sense of rhythm in a language. Thus far, this discussion of kinesthetic approaches has involved only the speech mechanism. Some scholars advocate for rhythmic reinforcement through additional kinesthetic features such as gesture and body movement (Acton, 1984, 1986, 1991). Body movement used in conjunction with speech was shown to enhance the acquisition of proper rhythmic stress patterns in ELLs in these studies. Acton advocates exercises focusing on the stress-timed nature of English. ELLs may clap, snap their fingers, or tap out the rhythm of stressed syllables, as well as practice to the beat of a metronome. The speed of the metronome can be increased gradually as fluency improves. This technique helped students to overcome the tendency to read word by word. The techniques described in these studies have helped guide many of the activities used in this Capstone. Chapter Three will present many kinesthetic movements used in conjunction with English rhythm.

The literature regarding the rhythm and stress-timed nature of NAE has demonstrated that there are strong correlations among the use of interactive, kinesthetic approaches upon the acquisition of English stress and rhythm. Furthermore, the studies indicate that context and proper instruction may allow older language learners to

overcome the effects of the critical period for language acquisition. In the next section, the importance of word and sentence stress on intelligibility is explored.

Importance of Word and Sentence Stress on Intelligibility

Stress is a suprasegmental property that begins at the syllable level. This property is comprised of both increased duration and volume when compared to other syllables within the word (e.g. popuLAtion, GOLDfish, MinneSOta). Stress placement often is coupled with rising intonation.

Likewise, certain words within a sentence are given prominence. For example, nouns, verbs, and adjectives are given prominence, since they carry the most information within a sentence. (The BIG RED BALL was THROWN by the BOY). New information is also given more prominence than old information in an utterance. Note the shift in prominence evident in the following lyrics (Appendix Nine, Track 11):

I LIKE PIZza.

I LIKE my PIZza HOT.

I LIKE my PEPperoni PIZza HOT.

I LIKE my CHEEzy pepperoni pizza HOT.

These stresses shift as new information is added. Pepperoni and *cheesy* are both content words, adjectives in this case. However, *cheesy* receives more prominence in the final sentence because it is newer information. The research presented in this section explores both word and sentence stress.

A number of researchers have explored the prosodic component of stress from an English learner perspective (Hu, 2003; Kreidler, 1999). Since English word and sentence

stress differs even from other stress-timed languages, it is imperative to explicitly teach the unique rhythm of English to all ELLs (Benrabah, 1997). In this study, the ELLs had either no reference point or different reference points for stress allocation, which made English patterns seem very complicated and difficult to learn. With appropriate instructional methods, however, the learners were able to understand and show improvement in their production of English word and sentence stress.

Certain features of pronunciation contribute to overall intelligibility more than others. Prator (1971) points out that, regarding the area of phonology, the elements of stress, rhythm, and intonation emerge as the highest priorities that contribute to intelligibility. Stress is essential for a number of reasons. Although it is a universal phenomenon, word stress in English reduces both vowel duration and quality in non-stressed syllables. Other languages differ greatly in the manner they allocate stress in words. English stress allocation is considerably less predictable and more complex than that of other languages. This can cause considerable confusion for English language learners who are accustomed to the more simple rules governing their native tongue. These learners have no inherent idea of where to assign stress in English (Hubicka, 1981).

There is a general lack of consensus among scholars about whether actual English stress rules even exist. Some insist that stress is merely a part of the mental lexicon. In other words, a listener automatically attends to stress patterns according to a previously constructed *metrical template*, which is based upon prior knowledge (Garnes & Bond, 1980). These researchers analyzed 890 misinterpretations of NSs, and proposed the *metrical template* as one of the strategies that is unconsciously employed to decipher

connected speech. NNSs have a natural tendency to impose the stress features from their L1 onto their interpretation and pronunciation of English.

There are many who embrace the theory that English word and sentence are indeed rule-governed, and these rules should be explicitly taught (Halle & Keyser, 1971; Cruttenden, 1986). Additionally, some scholars believe that learners need to learn stress placement of words individually because of the complexity of rules (Gimson, 1980). Whether or not the rules exist, most of these experts agree that word and sentence stress are important phonological features for both production and perception. If English stress placement is even somewhat rule-governed, these rules should be directly taught to ESL students (Celce-Murcia, Brinton, & Goodwin, 1996).

The exact allocation of stress plays a major role in speech processing and serves to enhance understanding of words (Fudge, 1984; Cutler, 1984). The latest research indicates that native English speakers do not decode connected speech one word at a time in a sequential manner. Rather, the stressed syllables are extracted from the stream of speech and used to search the mental lexicon. The feasible candidates selected from the lexicon are then analyzed by how well they fit with the adjacent unstressed syllables (Dalton & Seidhoffer, 1994). Therefore, misplaced stress by non-natives is likely to lead to miscommunication (Hubicka, 1980). This lack of command of the language can greatly hinder language comprehension (Halle & Keyser, 1971).

The following data show cases of such misunderstandings on the part of native English speakers. These examples clearly demonstrate how incorrect allocation of word stress can lead to miscomprehension. The first column contains the targeted word, the second column indicates the mispronunciation, and the third column shows what the

native English listener interprets. The words are derived from speech samples where the monologue of each speaker was divided into sentences and presented to British native speakers of English. The listeners transcribed what they had understood. These words clearly demonstrate how incorrect allocation of stress can lead to misunderstanding of the entire sentence.

Table 1

Effect of Stress Placement upon Interpretation

Indian Speakers		
UTTERANCE	PRONUNCIATION	INTERPRETATION
“suitable”	suiTAbLe	“the level”
“written”	wriTTEN	“retain”
“divisions”	Divisions”	“regions”
“Richard”	riCHARD	“the child”

(Bansal, 1969)

Table 2

Effect of Stress Placement upon Interpretation

Nigerian Speakers		
UTTERANCE	PRONUNCIATION	INTERPRETATION
“interval”	interVAL	“only trouble”
“normally”	norMALly	“no money”
“secondary”	seCONDary	“country”
“primary”	priMARY	“family”

(Tiffen, 1974)

Table 3

Effect of Stress Placement upon Interpretation

Algerian Speakers		
UTTERANCE	PRONUNCIATION	INTERPRETATION
“forgot”	FORgot	“forelock”
“chemistry”	cheMIStry	“community”
“airport”	airPORT	“approached”
“upset”	UPset	“absent”

(Benrabah, 1987)

It is evident from this data that non-native speakers can produce an utterance that is very close to the correct pronunciation, from a segmental point of view, yet the

distortions in stress pattern, usually accompanied by lengthening the “wrong” syllable, result in a breakdown of communication. (As mentioned before, the speaker monologues were divided into isolated sentences. If these utterances had been spoken in context, there may not have been such a substantial breakdown.)

Another key finding of this study is that the native listeners tend to apply their interpretations based upon their aural expectations. They rely heavily on the stressed syllables and disregard segmental information. Hence, identification of word stress overrides segmental clues and can lead to inaccurate recognition. The listener’s perception can defy segmental evidence (Cutler, 1984). Cutler’s study supports the theory of speech recognition based on stressed syllables that was described earlier.

Most research indicates that word and sentence stress impose salient effects upon intelligibility. It also appears that the human brain expects to hear something definite, even though it may not correspond exactly to what has been spoken (Garnes & Bond, 1980). Since perception and auditory processing take place in specific areas of the brain, neurology is another key sub topic that enters into my research question. Ongoing neurological processing takes place both receptively and expressively, and must be carefully considered when examining the question, “Will rap-based instruction have a positive effect on students’ production of appropriate English word and sentence stress?”

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.

Asher maintains that it is the instructor’s job to implement Total Physical Response during class time, thus optimizing the opportunity for “brainswitching.” Total Physical Response involves learning through multiple modalities such as touch, hearing, movement, sight and hearing. This method of teaching has had a great influence on the rap methodology presented in Chapter Three. Rap music seems to tie together a strong rhythmic pulse in conjunction with speech. Since it has been established that music, rhythm and spoken language have many correlations, and are neurologically processed in similar manners, this study was designed to test whether these three aspects combined, within the context of rap music, can serve to improve production of word and sentence stress.

Why Use Rap?

Rap music may be loosely defined as a style of music that is spoken, more than sung, in a highly rhythmic fashion. The narrative of rap music is usually poetic or quasipoetic in nature. Rap music emerged in New York City during the late 1970s.

Contemporary Rap is the offspring of a combination of musical styles, including jazz, blues, rock, and soul. It originated on street corners, with the human vocal apparatus serving as percussion. This is also known as *beat boxing*. The inception of MTV in 1981 brought rap music to a new height of popularity among teens. Many would argue that MTV also created an exploitation of rap music, through objectionable language and visuals. However, it is inaccurate to assume all rap music is offensive. There is nothing inherently negative about this style of music. In fact, there are many optimistic and positive movements and messages conveyed through rap music (Hildreth, 2004).

The thumping beats characterized by rap artists have become the most popular trend in music for secondary students. Popular culture has become so salient that we cannot deny its developmental impact. It is, in fact, part of the learning environment of today's teens, albeit informal. Rap music has become a monumental medium of communication among teens. Hence, there are positive implications for use of rap music in pedagogy.

This review of literature uncovered no specific research on the use of rap beats to practice stress. Beyond the use of rap music, a gap in previous research has been uncovered in the area of teaching suprasegmental features to secondary students. The most current and prominently used rhythmic pronunciation exercises are Jazz Chants (Graham, 1978, 1986). Originally targeting adults, Grahams Jazz Chants are now available to and used with all age groups. There are numerous musical methods for younger learners, but few that are specifically geared towards teenage pop culture. It was difficult to locate literature closely linked to the specific subject of rap music and its use

in the pronunciation class. However there are some studies that indirectly support the introduction of such a method.

As was discussed earlier, one condition for improving performance is the level of value placed by the surrounding community (Schumann, 1975). Given the tremendous popularity of rap music across the world, the genre is highly valued by the age group targeted in this study. Therefore, rap music may provide fertile ground for improving pronunciation skills. In another study, positive changes in pronunciation were found to be directly affected by the amount of time the NNS practiced outside of the classroom (Miller, 2000). The pleasure of learning and performing raps may prove to result in substantial practice time outside the classroom.

When such time, energy, and motivation are potent enough, there will be perceived improvement in pronunciation (Celce-Murcia & Goodwin, 1991). Most secondary students enjoy rap music, so this popularity should be utilized as a valuable teaching tool (Powell, 1991). Powell's study found that use of rap music in general education served to boost the self-esteem of the teen-aged subjects. This study found that teens from inner city schools connected to rap music in the classroom, since this music is part of the larger hip hop culture highly valued outside of school. The students had viewed rap music, street life, and peer groups as viable alternatives to formal schooling. When teachers incorporated rap into the educational setting, the context provided a meaningful reference point for the students in this study. Other research has demonstrated improved recall of the message contained within the music (Hall, 1998).

Rap music may be defined as a musical style that is spoken in a highly rhythmic fashion (Stewart, 1998). Since rap music consists primarily of rhythmic speech, it seems

an ideal modality for teenaged language learners. The poetic and rhythmic flow of rap is particularly important since it provides movement, momentum, and a significant portion of the meaning (Nelson, 1999). Stress-timed rhythm is the foundation for the meter in English poetry, chants, nursery rhymes and limericks (Celce-Murcia, Brinton, & Goodwin, 1996). It is also the basis for the meter of rap music, which is far more popular among secondary students than these other genres. Since rap music is associated with entertainment and identity, it may prove to be intrinsically motivating to the secondary language learners in this study. It may not be a traditional method of pedagogy, but one worth trying.

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 learner's 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 Audiolingual 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). Thus, the goal of

pronunciation instruction has gradually evolved into that of communicative competence; the ability to effectively use language in various settings (Parrish, 2004).

Teaching pronunciation has regained popularity, judging by the number of publications since the 1980s (e.g. Kenworthy, 1987; Brown, 1991; Avery & Ehrlich, 1992; Morley, 1994; Dalton & Seidlhofer, 1994; Celce- Murcia, Brinton, & Goodwin, 2000). This exciting resurgence has caused the role of pronunciation to be re-examined in terms of pedagogy and curriculum.

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 suprasegmentals to English language learners. The “drill and kill” and “listen to me and imitate” methods prevalent in the Audiolingual phase of pedagogy have been replaced by the currently more popular Communicative Approach. The Audiolingual 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 Audiolingual Approach. It is actually a combination of the favorable elements of both approaches. Rehearsal and repetition of rap music (Audiolingual) 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 (Audiolingual). 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.

It is crucial to impress upon students the importance of stress placement and its impact on meaning. A speaker's message must be communicated through proper assignment of stress (Wennerman, 1999). The intent of teachers should not be to entirely eliminate any trace of an accent, as the Audiolingual Method would advocate. Rather, ESL teachers must be trained to set realistic goals that can improve intelligibility (Grant, 1999). Successful communication, not impeccable pronunciation, should be the ultimate goal.

Appropriate pedagogical sequencing plays an important role in the effectiveness of pronunciation instruction. According to Celce-Murcia, Brinton, & Goodwin, (1996), it is essential that teachers help ELLs in learning to diagnose and evaluate their auditory discrimination skills before gradually moving on to spoken production. Once the students are practicing stress exercises, they should move from word to sentence stress.

Celce-Murcia, Brinton, & Goodwin, (1996), also advocate for classroom activities that address metacognitive skills. The rap method developed for this Capstone explicitly teaches content versus function words, functional shift of homographs such as reBEL and REbel, compound nouns and other such metacognitive concepts. This enables the students to correct themselves, as well as other speakers. Such autonomy should be a primary objective for any language or pronunciation class.

Conclusion

On the surface, the six sub-topics covered in this chapter may not appear to be intimately related. However, connections can be made between these various areas of research to improve instruction of stress and rhythm in English. There is certainly overlap in the readings of the different sub-topics, but not a great deal of harmony. The research on the human brain as a pattern-seeking device can certainly be applied to the patterns of rhythm within both music and language. These findings in turn can be applied to pedagogical methodology. The importance of word and sentence stress can be incorporated into the idea of how the brain develops schemata to draw out important information. The place for rap music in pronunciation instruction has yet to be fully discovered. Hopefully, rap music can provide a ripe environment for secondary ELLs to improve their communicative competence. Most of the existing literature shows little

collaboration among these fields. However, there does seem to be recent growth in researching music from a neurological viewpoint, with its potential boost in the language learner classroom.

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 suprasegmentals 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?”

CHAPTER THREE

Methods

Chapter Two of this Capstone addressed the supporting research indicating that there is great potential for strengthening word and sentence stress through rhythmic measures. Since there is little or no research on blending rap beats with pronunciation practice, this Capstone may help make a case for the usefulness of rap music with secondary language learners. This study was conducted to examine effects of rehearsing English words and sentences using rap music, in order to determine whether there is a perceived improvement on elicited primary word and sentence stress. The following sections will identify the questions, setting, tools and elicitation methods of this research project.

To achieve optimal results, instruction was methodical and based upon multiple pedagogical strategies for improvement of pronunciation. Skills were introduced and rehearsed to boost students' autonomy and confidence in their communicative performance. This research concurs with the suggestion that intelligibility can be improved through the combination of cognitive, communicative, and functional foci (Morley, 1991).

Rationale

In my experience, NNSs frequently express great frustration when they fail to communicate effectively. The curriculum utilized in my school district does not include a very significant focus on pronunciation instruction. In response to this deficit, I began to informally experiment with teaching stress and intonation using rap beats. I continued

this technique for a period of three years in my secondary school ESL classes, and noted positive results. The observed enthusiasm of students combined with the improvement in pronunciation led me to integrate a more significant pronunciation component into my language instruction time. Even though the amount of time devoted to pronunciation was limited due to curriculum constraints, a perceptible improvement in pronunciation proved evident. This finding prodded me to question whether a more intensive pronunciation program would result in even greater gains in intelligibility. Hence, this action research project evolved.

Research Questions

The overarching question directing this project is: Will integration of rap into instructional techniques positively affect secondary ESL students' ability to produce English patterns of word and sentence stress?

Additional questions have arisen as a product of this research:

Will the students improve their overall intelligibility through learning about patterns of stress and practicing these patterns? Will they gain confidence reading and speaking in front of others as a result of this program? Will guided practice result in positive carry-over into spontaneous speech? Will additional improvements of suprasegmentals result in tandem with direct instruction and practice of word and sentence stress? Will students learn to self-monitor their pronunciation?

Setting:

The data were collected during a four-week-long summer school course, Improving Pronunciation through Music and Rhythm. The course was taught at a large high school in a major metropolitan area of the Midwest. Participants were invited to attend the class, due to their previous demonstration of difficulty using proper word and sentence stress in

English. This difficulty interfered significantly with their overall intelligibility, as judged by their ESL teachers. Students attended class for two hours, four days per week. Total direct contact time was thirty-two hours. The study was conducted over a four-week period. The students were also required to practice the rap songs for thirty minutes daily outside of class. The ESL classroom served as a quiet setting during the summer, so there was little distraction.

Sample

The subject sample was comprised of six ESL students in grades 9-12. Their English language proficiency levels varied from Level 4, (academic English skills equivalent to grades 7-8) to Level 5 (transitional ESL), according to Woodcock-Munoz Language Assessment results. At a minimum, all six students were at an advanced intermediate level of English language proficiency. This was an important consideration since the vocabulary base required for this course was quite advanced. The subjects were also required to take notes, play pronunciation games, and discuss metacognitive concepts. The students ranged in age from thirteen to seventeen. Participation in the course was voluntary and students received an elective credit for completing the class. The following table describes the language backgrounds found in this sample:

Table 4

Subject Background

Subject #	Home Country	First Language	# Years in U.S.	Woodcock-Munoz Score
1	Afghanistan	Farsi	3	4
2	Ghana	Creole English	3	5
3	Thailand	Hmong	3	5
4	Somalia	Somali	2	5
5	China	Mandarin	3	4
6	Ghana	Creole English	3	4

The subjects all carried over pronunciation characteristics from their primary language, which interfered with their pronunciation of English. The individual phonological structures of the primary language affect the articulatory programming of the lips, jaw, tongue, etc. Therefore, many overall patterns of pronunciation errors were language-specific (Swan & Smith, 2001). Although these first languages have diverse characteristics, they also share some common features where stress is concerned. All subjects demonstrated difficulties with word and sentence stress placement in English. This is because all of their primary languages are syllable timed, rather than stress timed. Following are some stress characteristics of the languages in this sample as well as some accompanying difficulties they encounter with English stress patterns.

Subject #1 demonstrated transfer of Farsi stress, which is highly predictable. Primary stress generally falls on the final syllable of words in the Farsi language. Farsi does not carry weak forms of stress, so the subject had difficulty with production and perception of weak forms of English speech. Subjects #2 and #6 demonstrated various pronunciation influences of their multilingual background in West Africa. (These subjects have had exposure to Creole English, Twi, Ga, Ewe, and French). Both African subjects displayed difficulty with stress timing and rhythm. Contrastive stress, (e.g. I KNOW that, versus I know THAT), posed great difficulty for these students. Subjects #3 and #5 are both from Asian language backgrounds. They tended to overstress weak syllables in English, because syllable reduction is infrequent in their first languages. They also tended to improperly stress final syllables of multisyllabic words. Since English stress patterns differ from Asian language stress patterns, these speakers sounded flat and staccato. Subject #4 is Somali and tended to give equal time to each syllable in English, much like the other subjects. Weak syllables posed a problem and were often overstressed. This may be due to the Somali feature of stressing the penultimate syllable of words. This can lead to distortions such as “generaLlity, geoGRaphy, and clarINet.”

Research Methodology

This four-week action research project was designed to find whether overall NNS intelligibility can be improved through explicit instruction of stress rules and practice with rap music. Nunan (1992) defines action research as inquiry that is self-reflective and focused on problem-solving, expanding practice, or seeking greater understanding. According to Nunan, the greatest advantage of conducting action research is the situational aspect. This Capstone project begins with the following situation: secondary learners who are unaware of specific issues relating to their misplacement of primary

word and sentence stress, and how to improve this. The hypothesis is that secondary ELLs can improve their production of word and sentence stress through identifying areas of need, learning rules about stress in North American English (NAE), and practicing these rules to original rap songs composed by the ESL teacher. Progress was tracked during this pronunciation class through daily tape recordings, journal entries, and teacher consultations.

It is difficult to definitively attribute improvement found at the end of the course to the variables introduced. This is the main disadvantage of action research (Nunan, 1992). Yet the positive correlation can be interesting to other ESL teachers, who may wish to employ the strategies described in this Capstone.

Instructional Methods Overview

This pronunciation course entailed a variety of pedagogical methods. Students participated in individual, paired, and group activities. Instructional implementation was based upon the framework for action research provided in Nunan's *Research Methods in Language Learning* (1992).

- I. Information Elicitation
 - A. Preliminary Intake
 - B. Elicitation Questionnaire (Appendix One)
- II. Diagnosis and Analysis
 - A. Obtain Speech Samples
 1. Unrehearsed Reading Sample (Appendix Two)
 2. Pictorial Story Retell Stimulus (Appendix Three)
- III. Consultation
 - A. Identification of Strengths and Areas of Concern

- B. Ongoing Audio Taping and Reflection
- IV. Instructional Implementation
 - A. Explicit Instruction of Stress Features in English
 - B. Explicit Instruction of NAE Word and Sentence Stress Patterns
 - C. Communicative Speech Practice
 - D. Metacognitive Strategies
 - E. Ongoing Reflection and Feedback
- V. Final Assessment
 - A. Final Recitation
 - B. Oral Assessment of Stress Rules Introduced
 - C. Questionnaire (Appendix Seven)

The individual components of this framework were followed somewhat sequentially during this pronunciation course. However, some overlapping and order changes were inevitable due to the ongoing need for reviewing concepts previously introduced. The next section will delineate the components of this framework in greater detail.

Information elicitation

Background information about the subjects in this study was gathered in order to develop appropriate instructional methods. The results of the students' most recent English proficiency test scores helped determine which types of intervention I chose to utilize in this class. An initial Elicitation questionnaire provided further pertinent information about the subjects (Appendix One). Questionnaire items included information about first languages, educational backgrounds, and student attitudes about pronunciation.

Diagnosis and analysis

Pretests were conducted on audiotape. The rationale for audio taping versus videotaping is that raters were given no visual cues to influence their scoring of intelligibility. This insured greater validity. Each subject recorded two brief speech samples on a high quality digital voice recorder during the first class session. The first sample was a brief unrehearsed reading sample. This text contained words and phrases exemplifying the specific stress rules that would eventually be addressed during the course (Appendix Two). The second speech sample obtained was less structured, elicited by a visual stimulus. Subjects were asked to verbalize the “story” taking place in a picture (Appendix Three).

After listening to the initial speech samples, the ESL instructor tallied the number of correct stresses for individual subjects, then found the average. Additionally, the ESL teacher reported her perception of each student’s overall intelligibility.

An additional method for analysis was derived from the students’ ongoing perceptions about their pronunciation throughout the four weeks of classes. Following individual consultation, they recorded continuous observations in a journal. They reflected on their pronunciation as well as the rules of pronunciation learned. The students listened to tape recordings of themselves reading several pages per day of a humorous book, Walter the Farting Dog. This book lowered the affective filter of the subjects, due to its entertaining content. They wrote daily reaction entries in their journals. The students created attainable stress placement goals.

A final measurement consisted of a Likert scale completed by three NAE adults who were neither ESL teachers, nor actively involved in the pronunciation course. This

scale was based upon descriptors on the Minnesota SOLOM inventory (Appendix Five). The raters were trained on practice samples, in order to ensure inter- and intra-rater reliability. The raters were presented with speech samples presented in random order; they didn't know whether samples were pre- or post-class recordings. This was done to avoid influencing the raters to score post-class samples higher than pre-class samples.

After subjects were tape-recorded reading at the end of the course, the same measures were used to evaluate their progress (i.e. tallies, NAE adult ratings, and self- assessment.)

Consultation

Students listened to the recording and evaluated areas of both strength and concern with the ESL instructor. The students then wrote journal entries detailing the issues covered in their consultations. Although English language learners are aware that others are often unable to understand them, they are rarely aware of the underlying pronunciation problems. Diagnosis and analysis are the important first steps towards improvement.

Instructional Implementation

The following synopsis details the main foci covered during the pronunciation course. Students were taped in order to obtain initial speech samples. The initial text sample and picture prompt were presented to the students only this once until the final class. Since no repeated exposure to this passage occurred during the four-week course, memorization could not take place. As mentioned above, evaluation of the initial and final readings of these speech samples were later compared for the purpose of this study.

The teacher then held individual consultations with each student to analyze the speech samples and create a pronunciation plan. Students were introduced to auditory

discrimination tasks in order to determine whether they could hear the difference between stressed and unstressed syllables. This was accomplished through listening activities and worksheets.

The following simple rules about stress were introduced one at a time.

1. One word has only one primary stress. If you hear two primary stresses, you are hearing two words.
2. Only vowels are stressed, not consonants.

Over the next weeks, students were presented with the following categories of word stress patterns. Each rule was practiced outside of class through a corresponding rap song.

- 1). Approximately 75% of two-syllable words receive stress on the first syllable (e.g. FAther, WINdy, MANsion).
- 2). Cardinal numbers (e.g. SIXty versus sixTEEN).
- 3). Reflexive pronouns (e.g. himSELF, themSELVES).
- 4). Compound words that function as nouns (e.g. DOGhouse, FIREman).
- 5). Functional shift: words with identical spellings but different functions.

Verbs carry stress on the second syllable.

NOUN	VERB
INsult	inSULT
REcord	reCORD
REbel	reBEL

- 6). Stress on penultimate syllables (e.g. creAtion, iRONic).
- 7). Stress on antepenultimate syllables (geoLOGical, phoTOgraphy, aBILity).

Each category of stress was imparted and practiced through listening discrimination tasks, controlled practice (this included the corresponding raps), guided practice, and finally communicative practice, as outlined by Celce-Murcia, Brinton, & Goodwin (2000).

Once the students' knowledge of word stress was evident, some general rules of sentence stress were introduced. First, students were made aware of utterance lengths being equivalent to multisyllabic word length:

Table 5

Corresponding Stress Patterns in Words and Utterances

Multisyllabic word	Utterance
overSEE	What's the FEE?
clarifiCAtion	What inforMAtion?
exPLORatory	A SCARy story

The students were taught to emphasize accented syllables or words by stretching rubber bands, standing up and down, tapping on desks, clapping, and beating drums, and ultimately, by speaking to the rhythm of rap music. A specialized CD player with pitch and tempo control was purchased for this course. This allowed the instructor to begin practice very slowly, and gradually increase the rate of speech to a more natural level. Later in the course, content words, which are usually stressed in sentences, and function words, which are usually unstressed in sentences, were discussed and practiced to rap music. Again, the sequence of controlled, guided, and communicative practice was utilized. Daily tape recordings were made and journal entries were written to monitor progress. Students practiced with rap beats both during class and later at home. Each

student received a CD of rap music to take home for practice. Each rap was recorded on two consecutive tracks, the first with lyrics and the second with instrumentation only. This gave the students an opportunity to sub vocalize first, and then to practice solo. During class, groups were formed to alternate stanzas and compete.

Bio-feedback was learned through use of mirrors during vocal and muscular exercises. The students also learned basic anatomy of the speech mechanism to increase their awareness of points and manner of articulation.

The daily lesson plans comprised the pronunciation course (Appendix Four). The main focus of the course was stress. The lessons moved from syllabification to word stress to phrase and sentence stress. A small amount of class time was dedicated to certain problematic segmental features, which were identified by the students during consultations.

The raps were taught in a logical sequence moving from simple word stress to more complex sentence stress. Although there was some daily variance, the following basic procedure was used to present each rap song.

Planning Stage

- Photocopy the rap for each student. Prepare other materials as stated in lesson.

Teaching Stage

- Listen to the rap and have students follow along by tracking print with a finger or pencil.
- Have students circle unfamiliar vocabulary. Discuss possible meanings.
- Have students make flashcards for new vocabulary words, including slang expressions. Practice using the words.

Rap-a-long Stage

- Play rap again.
- Rap chorally without music as many times as needed.
- Rap with the version that has lyrics.
- Rap with the instrumental-only version.
- Assign 30 minutes of practice with both tracks outside of class as homework.
- On the following day offer opportunities for review by allowing students to perform raps individually or in small groups.

Final assessment

Subjects were tested on their knowledge of and application of word and sentence stress rules. They tape-recorded the same sample of text they had read at the beginning of class. They also repeated the pictorial story task on tape. Results were tallied and compiled into total raw scores and percentages. Pre/post scores were recorded in a table to display the individual students' total scores and percentages. A bar graph was developed from this data to provide additional visual illustration of the before and after results. The data collected from the ESL teacher have also been converted to a table of pre-post scores for each student. Three NAE adults were trained to rate the overall intelligibility of the students before and after the course. The scores were analyzed and compared. All of the ensuing graphs and charts appear in the next chapter.

Students practiced continuous informal self-assessment through individual consultation with the ESL teacher and through reflection about their learning in their journals. On the final day of class, students completed an informal survey regarding the class and how successful they deemed it to be (Appendix Seven).

Justification

This pronunciation course provided an atmosphere of fun, which was highly motivating to the ESL students. Scaffolding was implemented throughout class activities. The students performed individual, paired, and finally group activities. These activities were then reflected upon in the journals. This structure of building upon previously learned skills was continued throughout the weeks of the pronunciation course. Smaller successes became larger successes and the students became progressively more self-motivated.

The guest rap artists, and use of musical instruments provided a fun and exciting environment for this class. Many methods in this class were non-traditional, which resulted in a high level of curiosity and interest from the students. Since all students were required to participate, there was a high level of trust among this group. The students were very supportive of each other. Risk-taking was encouraged and errors were handled lightly and with humor. The final concert was performed only for the participants, so it was not a high- pressure situation.

Rehearsal is crucial for successful learning of suprasegmentals. The course allowed practice through a variety of motivating activities beyond the drudgery of the usual “drill and kill” exercises. The students reported a high level of enjoyment for this class on their post-class surveys. Many of them felt this was a fun and meaningful way to learn stress patterns of English.

This chapter has provided an overview of the setting, methods, and elicitation techniques that were undertaken for this Capstone project. All of these elements provide a partial answer to the research question. The following chapter will report and analyze the specific data collected during this study. Chapter Five will explore the implications of the findings for future use in the ESL classroom.

CHAPTER FOUR

Results and Discussion

The findings presented in this chapter correlate to the intent of this Capstone: to discover whether the introduction of rap music into pronunciation instruction can improve production of word and sentence stress. Moreover, this study intends to indicate whether perceived overall intelligibility can be improved after a four-week-long course of intense instruction and practice of English stress patterns. This chapter presents the general flow of the daily lessons, and the student and teacher interactions. Finally, the overall results, both positive and negative, were compiled following the data-gathering phase of this study.

Information gathering

The subjects in this study completed an initial Information Elicitation form (Appendix One). The questionnaire was designed to elicit basic information about the subjects' language and educational backgrounds. Additional items were included to reveal students' attitudes towards their current English pronunciation. Such information proved to be extremely useful when planning the future course of action. One item on the questionnaire asked why they want to improve their pronunciation. Responses indicated a desire to improve because their future plans to work or go to college, requires they be understood by others.

This group of students included the following first language backgrounds: two Ewe, one Chinese, one Hmong, one Somali, and one Farsi. Additional languages spoken by the students included Twi, Ga, and French. The students in this sample had previously

attended school for five to ten years. The amount of previous ESL instruction ranged from two to five years. The amount of time the students had lived in the United States ranged from three to sixteen years.

The students unanimously responded that they believe it is possible to improve their pronunciation. It was particularly useful for me to know that I was to teach such a positive group of students, who both desired and fully expected to improve their speaking skills. Awareness of the high degree of reception and dedication of the students led me to hold high expectations for positive results.

Following completion of the elicitation questionnaire, the students discussed specific situations in which they had experienced difficulty communicating effectively with native speakers. All of them shared at least one specific scenario involving a phone call, classroom situation, or work experience. The students expressed great anxiety about speaking in front of groups, job interviews, and making new friends. Sharing their stories and frustrations helped the students gain a sense of community and trust. We then established expectations for the course. The students enjoyed taking ownership of these expectations.

Audio tape recording

Following the group discussion, the students were presented with a brief script and asked to tape record an unrehearsed effort (see Appendix Two). This reading contained contrived samples of the specific word and sentence stress rules that were to be subsequently imparted during the class. Next, the subjects recorded a less-structured speech sample after being given a picture prompt (see Appendix Three). Some students were hesitant to record their voices, but eventually cooperated.

After taping the sample, a brief consultation with the teacher ensued. First, areas of strength in pronunciation were pointed out to the students. Most of the students cringed or laughed nervously upon hearing themselves on tape the first time, but they also gained some objective sense of how they sound to others. All of the students demonstrated significant pronunciation difficulties in the areas of word and sentence stress. Upon detection of this type of error, the teacher played back that segment of the tape. The students were told that they would be able to identify strengths and areas of concern themselves as they progressed through the class. The students took this responsibility quite seriously. Ten minutes allowed sufficient time for the initial speech recording and consultation. A volunteer was available to help the rest of the class write in their journals while the consultations took place.

Instructional implementation

Initially, the students reported some degree of anxiety about the daily tape recordings. Eventually, they all became increasingly comfortable with the routine of taping, listening, and self-evaluating. Each day of class, the students read two pages of the book, Walter the Farting Dog. They found the book to be very humorous, which seemed to lower anxiety levels when tape recording. Recordings were conducted at the beginning of each class, followed by guided writing. Daily journal topics included such starters as: “Describe a time you felt frustrated because someone did not understand you.” “How do I feel about recording my voice and listening to the recording?” “Am I starting to become more aware of stress patterns in the speech of others?” “Which stress rule has been the most useful to me so far?” I responded to the journal entries in writing, after collecting them weekly. This dialogue created open communication, a feeling of

security, and it reduced anxiety over time. By the end of the course, all of the students were able to correctly identify faulty rhythm patterns within their tape recordings.

The next routine component of the class was oral flexibility exercises using hand mirrors. The students found their images in the mirrors to be ridiculous at first. They rolled and folded their tongues, puckered and smiled, massaged their jaws, and did vocal warm-ups. Again, as time passed, the students became more comfortable with these exercises, and found them to be useful as well as humorous. They were encouraged to practice the exercises at home, since it takes at least three weeks to strengthen these oral muscles.

The class then turned to a presentation and discussion of one stress rule at a time. Once the students grasped a given rule, they were presented with the lyrics of a rap song incorporating that particular rule. Although the stressed syllables were capitalized on the copies, the students also used highlighters to mark the stressed syllables. This made appropriate primary stress even more visually obvious. The corresponding rap song was then introduced. First, the students simply listened to the song on the CD player. Then the sequence outlined in Chapter Three was executed.

Auditory discrimination

The first class session included a discussion of segmental and suprasegmental aspects of speech. The importance of proper placement of stress was illustrated through the following example in which the teacher presented the same sentence three times, demonstrating three different errors.

The first sentence was read by the teacher with a segmental error (i.e. frontal lisp of sibilants). *Thereth a pothibility that ith going to thorm today.* The following two presentations were read with no segmental errors. The sentence was read a second time

without stress or changes in intonation. Hence, this presentation was read with a monotone and sounded robotic. Finally, the sentence was read with improper placement of stress. *There's A possibiITy that it's goING TO storm TToday.* When asked to rank the intelligibility of the three readings, the students unanimously ranked the first example as most intelligible and the last example as least intelligible. This activity helped the students to understand the power of word and sentence stress in carrying meaning.

Next, a simple activity was introduced where the students held up a *same* or *different* card following the teacher's productions of word pairs such as *APple* and *inVITE*; *rePORT* and *SAlad*. The students were quickly able to identify stress patterns that were the same or different.

Syllabification

Once the importance of stress was understood, the students were enthusiastic to learn how to improve their own production of stress. They began with simple exercises in syllabification, which is a necessary first step in understanding word stress. It was surprising how much difficulty the students demonstrated in counting out syllables. This posed the greatest problem for students who demonstrated epenthesis in their habitual speech. Internal epenthesis exists when a speaker adds vowels to break up a consonant cluster (e.g. substitution of *worldid* for *world*). External epenthesis exists when a speaker adds a vowel, and consequently a syllable, to the outside of a consonant (e.g. substitution of *estreet* for *street*).

Two class periods were devoted to syllabification in order fully gain the skills necessary to decipher boundaries and count out syllables. Students worked in pairs taking turns pronouncing multisyllabic words while the partner counted the syllables on

their fingers. Initially, the students made numerous errors in counting, but they improved with practice. The syllabification stage required a good amount of ear training.

Next, the students were presented worksheets for practice in dividing words into syllables. This controlled practice was first oral, and then in written form (e.g. vic-to-ry). Finally a group activity requiring student elicitation ensued. The teacher handed out an original worksheet entitled Syllabic Steps (Appendix Seven), containing spaces for words ranging in length from one to five syllables. The students were then given a category such as fruits or sport teams. They were then timed for one minute. The goal was to write as many words within the given category with the proper number of syllables. No points were given if syllables were miscounted (e.g. a student wrote *broccoli* in the space for a four-syllable word). The students generated their own words for this activity, which built in authenticity to the activity. This game was a favorite among this group and was revisited many times throughout the course.

After the first two days, the students became more comfortable with counting syllables and seemed to enjoy this new empowerment. They also were more aware that one syllable within a word receives the strongest stress and length. Once students demonstrated a good understanding of syllabification, they moved into learning one word stress rule each day, paired with an accompanying rap song.

Anatomy of speech mechanism

A lesson dedicated to basic anatomy of the speech mechanism was also implemented during the first week of class. The students were introduced to a sagittal diagram and asked to memorize anatomical components. They used mirrors to locate visible parts of the face and mouth as they were discussed. Q-tips were used to touch

accessible parts, such as the lips, teeth, hard and soft palate, and various parts of the tongue.

The students received bottles of bubbles and wands for blowing out air. This activity demonstrated unobstructed airflow. This helped them to understand and visualize what happens within the vocal mechanism to shape and alter sound through points and manner of articulation. The class was tested on the following day, by filling in a blank diagram. The students took this lesson very seriously and felt proud to be able to name such anatomical features as the epiglottis, uvula, and nasal cavity. However, I think they enjoyed blowing bubbles the most!

Stress games

As the ELLs moved through the rules of word stress, various pronunciation games were used to reinforce each rule. We invented a “Duh” language, which the students found to be very humorous. The stress pattern of a word such as *explosion* could be identified as *duhDUHduh*. All students were delighted to discover that they were fluent in “Duh” very quickly.

Another method to visually represent stress was through use of two sizes of squares representing strongly and weakly stressed syllables (Appendix Eight). Various square patterns were taped onto the white board. Students practiced placing words written on flash cards beneath the appropriate squares pattern on the board.

Additional variations in stress representation helped the students reinforce the concept of stress. One technique used was stretching rubber bands in tandem with pronouncing words (Gilbert, 2000). This method was used when encountering new words, as well as familiar words. The students enjoyed additional kinesthetic

representations of stress through tapping, clapping, raising and lowering their hands, playing percussion instruments and standing up and sitting down.

Guided and controlled practice using raps

All of these activities were further applied to the rap songs. The students stood up, stretched rubber bands, beat drums etc., on targeted syllables of words they had previously highlighted. For example, the students would stand up and sit down on a compound noun such as *TOOTHbrush*. The first introduction of the rap would be very slow. Then, the tempo was gradually increased on consecutive trials. The students enjoyed the challenge of rapping as fast as they possibly could. Speed seemed to be motivating since it is common in rap music.

The students each practiced a given rap daily on their personal CD players. They reported listening to and practicing the songs far more time than was required by the teacher. This extra rehearsal was evident when they returned to class capable of reciting the raps effortlessly.

On the following day of class, the raps were rehearsed chorally at first. Next, the students were split into groups and alternated lines or stanzas. Once the class was reciting the rap smoothly, the instrumental-only track (without the rapper) was introduced for added challenge. It was necessary to slow down the tempo once again, as the students attempted to rap independently. Following incremental increases in tempo, some students would volunteer to rap alone, with other students acting as sidekicks, added rap “noises.” The sidekicks really enjoyed ad-libbing. Most of the students could not contain themselves from moving or dancing to the rhythm.

Throughout the guided and controlled activities, the students were encouraged to exaggerate stressed syllables and words within a sentence. This helped the students

internalize the sound and feel of primary word and sentence stress. The students with the least intelligible speech seemed to improve more obviously than the others. S5 and S6 made the most marked initial progress, as judged by the instructor and the classroom volunteer. These two students had been consistently producing stress on normally unstressed syllables. Therefore, the listener had to attune very carefully in order to understand the students. During the guided and controlled practice activities, the students were quite easily understood. The elements of repetition and rehearsal included in this phase of instruction consumed the majority of the time spent in this course.

In addition to the rap songs, the students read Dr. Seuss books and Shel Silverstein poems in 4/4 time, beating drums on stressed syllables. A guest speaker visited the class and demonstrated Spoken Word poetry. He included a discussion of the 4/4 time signature upon which Spoken Word is based. The students were able to see the similarities among poetry, rap music, and Spoken Word, and natural speech flow. Throughout the course, the instructor reminded the class that the musical and poetic forms practiced are exaggerations of the stress patterns in natural speech.

Communicative practice

During the final week of the course, students participated in less structured tasks. Students executed various activities involving role-playing scenarios, information gaps, conducting interviews, and holding informal discussions. Some of these activities were videotaped, and then analyzed by the students. Predictably, there was less carryover evident in these activities than in the guided and controlled practice activities. It was, however, very encouraging to see the students correctly identify errors in stress production as they viewed the videotapes. Being able to recognize correct and incorrect productions is a significant step to internalizing stress patterns. This outcome brings to

mind the discussion of pattern recognition research in Chapter Two. Auditory discrimination is a key example of pattern recognition.

The teacher's monitoring during some of these activities revealed that the students were able to adjust their placement of stress. Error correction was used sparingly, and limited to cases where intelligibility was undermined. The communicative phase of this course was integrated throughout the daily lessons. It is possible that the communicative phase was introduced too early, since the students were still in the process of internalizing word and stress patterns. It would be interesting to see if an extended length of course time would result in better carryover of the stress patterns.

Evaluation

This four-week project involved six students in an intense program of learning and practicing NAE stress patterns. Initial information elicited from the students was followed by collection of speech samples. The resulting analysis helped guide the scope and sequence of the course. The course was designed to incorporate adequate and appropriate auditory discrimination, controlled, guided and communicative practice. Particular focus was devoted to activities related to the rap songs specifically composed for this course.

Final assessments were developed in order to answer the question "Did the rap method improve the students' use of word and sentence stress?" The original unrehearsed speech sample was again presented and recorded during the last session of class. The students were informed that people whom they have never met would evaluate the initial and final speech samples. All six of the original students were present for the final assessments.

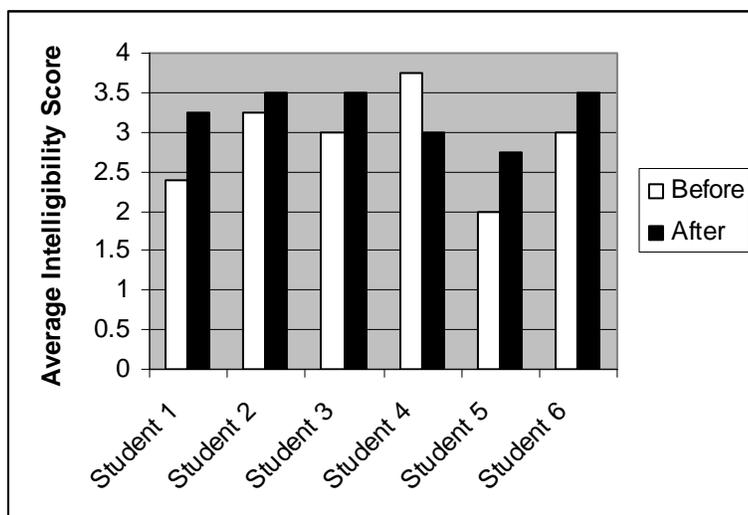
The recorded speech samples were mixed up and dubbed onto a CD. Readings of the unrehearsed script were randomly mixed in with picture-prompted speech samples. The samples were later judged by three NAE adult speakers. These evaluators were not in any way affiliated with the field of ESL. The evaluators rated student intelligibility on a scale of 1-5, with 1 being the least intelligible and 5 being the most intelligible. (See Appendix Five).

This basic scale representing the unrehearsed reading samples provided some indications that intelligibility had improved over the four-week period of study. Although the amount of change may not be statistically significant, five out of six subjects received higher ratings in the final speech samples. The perceived improvement in intelligibility may have been greater if the duration of the class had been longer.

The following graph illustrates the averages of the numerical responses of the three evaluators in this study. This graph represents the unrehearsed reading samples.

Figure 1

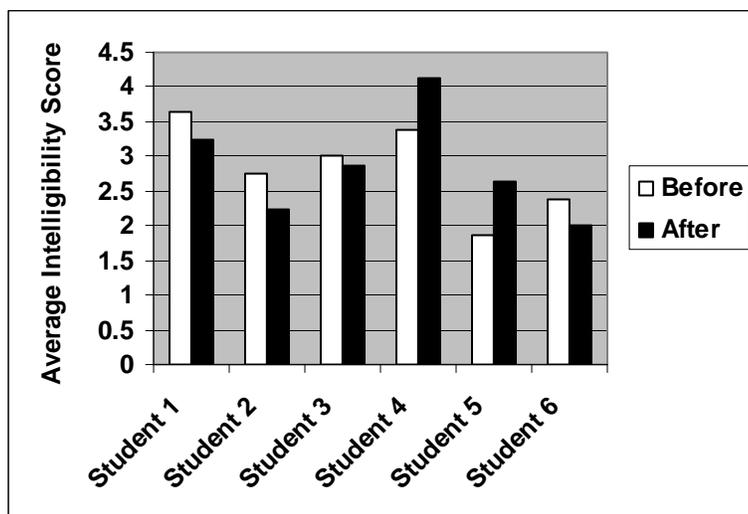
Pre/Post Intelligibility Score on Unrehearsed Reading Sample



The before and after ratings of the picture-prompted speech samples were less impressive. Since this task was considerably more spontaneously generated, the chances for carryover were slim. It takes more time than four weeks to see results in spontaneous speech. Another possible reason the results are less impressive is that the word stress pattern features elicited by this picture did not match the word stress patterns taught during class. The Figure 2 represents the raters' average scores given on the picture prompt task.

Figure 2

Pre/Post Intelligibility Score on Picture Prompted Speech Sample



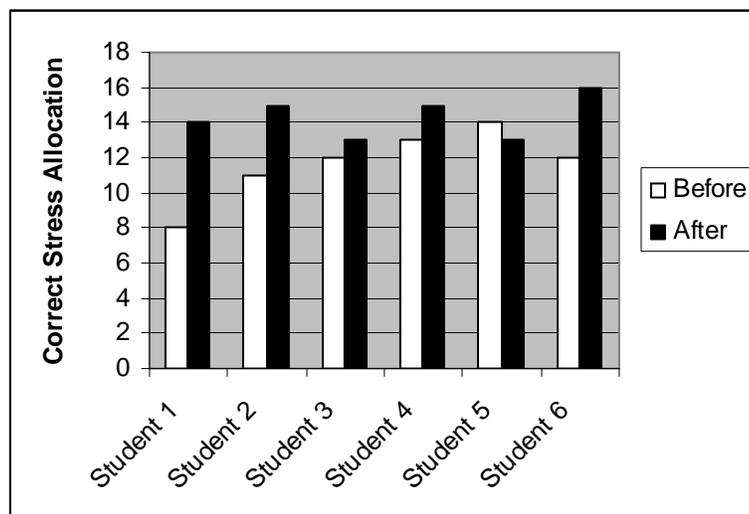
The instructor also listened to the speech samples collected and tallied the number of appropriate word and sentence stresses. This was only done with the unrehearsed reading samples. The reason for this was that the script was the same for each subject, allowing for accurate recording of stress marks as the samples were listened to. The spontaneous speech samples were sometimes impossible to understand, making accurate

recording of stress unlikely. The speech samples were reshuffled onto another CD so the instructor did not know whether a sample was from the beginning of class or the end. Again, five of the six students increased the number of correct stress allocations, as judged by the ESL teacher. The tempo on the CD was slowed down, in order to accurately record stress marks over the words on paper.

Figure 3 summarizes the number of correct stress placements, as judged by the instructor.

Figure 3

Pre/Post Score on Stress Allocation



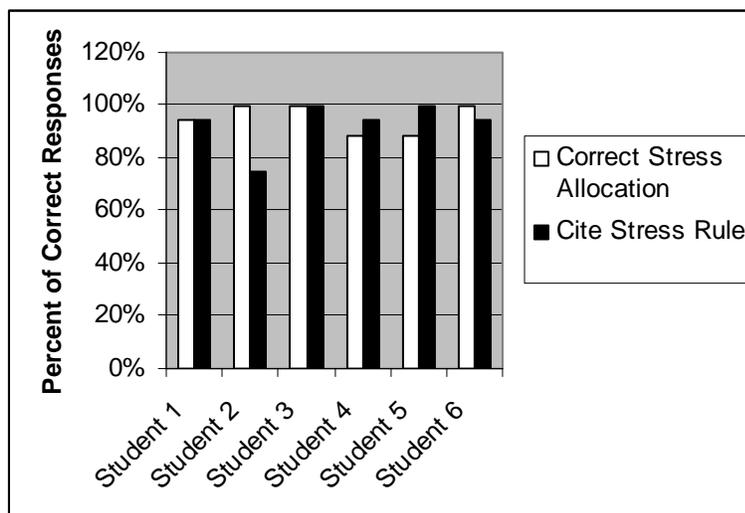
A final assessment was conducted using flashcards with targeted words and phrases. The students were assessed in the following areas:

1. Correct placement of stress.
2. Correct citation of the word or sentence stress rule for each flash card.

The students displayed impressive performances on this assessment. They showed confidence and pride in demonstrating the mastery of metacognitive strategies.

Figure 4

Score on Final Assessment

Final questionnaire

The last day of class included a final questionnaire that students filled out (Appendix Six). The students' responses were quite positive. All six students indicated affirmative responses to the following items:

- They improved their pronunciation skills during the course.
- They stop and correct errors in their speech because they know some stress rules.
- They would be willing to take another similar course in the future.
- They believe rap music is a good way to learn pronunciation. Some additional

comments recorded :

“Talking is good, but the music helps more.”

“Music helps me remember the rules.”

“It is fun to work with rap music, so I remember.”

“It’s fun to repeat and learn, because it’s music.”

- They would continue listening to the CD and practicing stress rules even though the class was ending.

“Yes, yes, yes, yes, yes, yes I will!”

- They felt new confidence in their speech.

“I didn’t trust myself before when I was talking, but now I do.”

“I think I’ll be more confident about my speech in 12th grade.”

Two of the six subjects reported that someone outside of the class had commented on their improved pronunciation. Additional comments made:

“Thanks for making me a better speaker than I was before.”

“Thank you very much. Now I think I’m not nervous speaking to teacher or other.

You’ve help me a lot.”

“I think this class is the best. It improved my pronunciation this summer.

Everything was great.”

Observations and field notes

The instructor also wrote narratives throughout the course that provide an alternative look at progress made by the students.

- Some students demonstrated difficulty in counting syllables, even at the end of the course.
- Students’ response to pattern recognition games was very enthusiastic.
- S1 and S5 attended class sporadically, which could have impeded progress.

- S5 was considerably more shy and self-conscious than the other students. She had the lowest intelligibility in the class and seemed aware of this. She was sometimes reluctant to participate.
- S4 and S6 had the most outgoing personalities and had a tendency to dominate the class. They needed reminders to let others have a chance to answer questions. Perhaps there is a correlation between personalities that are risk-taking and positive pronunciation outcomes.
- The volunteer helper reported that students increased their awareness of errors when listening to themselves on daily tapings. She also noted that the students' frequency of self-correction increased with time during class time discussion and games.
- Both the instructor and the volunteer were impressed by the speed and accuracy the students displayed in memorizing lyrics and complicated musical rhythm patterns.

Summary

This study was developed in order to determine whether rap music may be a valuable instructional tool for improving word and sentence stress in English language learners. The first step was collecting relevant data from the students in this sample. Next, speech samples were obtained and evaluated. Then, the instructional phase was implemented using controlled, guided, and communicative practice. The final evaluation procedures were conducted in order to provide a general indication of whether intelligibility was affected as a result of the intervention of rap music.

According to the responses gathered from the three evaluators, there was general perceived improvement in the performance of most students. Perhaps the most valuable

result is that the students in this sample gained a sense of autonomy through learning metacognitive skills regarding word and sentence stress production. Their focused efforts can certainly contribute to future competence in pronunciation. Given such a small sample size and the limited duration of the course, major conclusions cannot be assumed based on this one study. Chapter Five will address the usefulness of the results obtained in this Capstone project.

CHAPTER FIVE

Conclusion

Introduction

In Chapter Four, the results of this study were reported and analyzed in order to answer the research question: “Will rap-based instruction have a positive effect on students’ production of appropriate English word and sentence stress?” In Chapter Five, these findings are revisited in light of their implications for ESL teachers and English language learners. Limitations of this study will be discussed and linked to suggestions for future studies.

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 rap method. Hence, this Capstone project is a work in progress, with no end point in sight. This excites me, because I don’t 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 rap 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, rapped, danced, 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, "Ms. Fischler! I told someone my address on the phone and they understood every number!" "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.

Limitations and Recommendations for Future Research

The results of this study are positive, but it is not possible to determine whether the positive gains made will last over time. Only longitudinal research can determine this. The improvements found in the reading sample show promise, but cannot be assumed to correlate to spontaneous speech. This is the greatest limitation of this study--insufficient practice time to ensure carry-over. The intense nature of this class provided a healthy dose of specific pronunciation practice, but the duration of a mere four weeks does not allow for definitive conclusions. Conversely, I had the luxury of two solid hours on four consecutive days to dedicate solely to pronunciation. Perhaps the results would be quite different when a much shorter and intermittent period of time is devoted to pronunciation.

The results of the picture-prompted speech samples are inconclusive, given the short duration of the class. If I had the opportunity to do this measure again, I would use a more spontaneous speech sample, such as a taped conversation. This sample would be gathered after no less than twelve weeks of controlled and guided practice. I know from my former experience as a speech and language pathologist, that evidence of substantial carry-over commonly takes at least one year. I would also obtain a longer speech sample from the subjects. The speech samples obtained were not very natural or authentic. Most

subjects generated one simple sentence per picture frame. The data collected for this part of the study did not allow for demonstration that the subjects had internalized the stress rules taught.

Another limitation to this study is sample size. It was difficult to obtain a four-week long commitment from a large group of high school students. Many students who had registered for the class did not end up attending. Furthermore, several of the few students who did participate missed some classes due to oversleeping, working, and vacationing. Perhaps summer is not the best time to expect perfect attendance.

The fact that this class was voluntary may have positively impacted the results. It is possible that lesser results would occur in a mandatory ESL class setting. This would be an excellent area for further study. Few regular ESL classes allow for the amount of pronunciation instruction provided in this study. It would be useful to find out whether a smaller, intermittent dose of rap-based instruction would yield similar results.

Another factor to consider is the validity of this rap-based method. This study was far too short in duration to determine validity. Careful scrutiny of multiple future interventions is required to reveal the validity of this method. Therefore, another future area of study could be to track the progress and success of other teachers using the method. Longitudinal, ethnographic, case study and action research would all be valuable tools to apply to the research of this pedagogy. I intend to conduct related research in the future, but more importantly, I invite others to report results from their own experiences using this method.

There are many other extensions of this topic that warrant further study. Some of the questions that emerged unanswered during the course of this project are:

- Will students improve intonation patterns along with word and sentence stress?
- Will linking (liaisons) also improve when learning through rap-based instruction?
- Will students gain confidence in reading and speaking in front of others as a result of this program?
- Will improvements attained during structured activities carry over into less-structured situations?
- Will students internalize self-monitoring techniques outside the classroom?
- Could this methodology be used effectively with lower English proficiency levels?
- Will elementary students also enjoy and grasp the concepts imparted through this method?

These are just a few ideas; there are many more possibilities.

Implications

Examination of this study has revealed some possible pedagogical directions. ESL teachers must consider the drive and desire of ELLs to improve their intelligibility. Integration of explicit pronunciation instruction should be present as an important component in any ESL class. Pronunciation should not be viewed as an “extra” skill to be addressed if there is enough time left over. We are obligated as ESL teachers to impart language skills that allow students to synthesize stress rules and consequently be understood by others. From the NNS point of view, poor pronunciation undermines self-confidence and consequently limits social interaction (Morley, 1998). To complicate

matters further, it is found that NS listeners perceive NNSs with low intelligibility as less intelligent and capable (Schumann (1975). Such negative impact can severely limit the opportunities for English language learners. Lowered expectations on the part of native speakers can result in self-fulfilling prophecies.

ESL teachers must be properly trained to identify the most serious pronunciation deficits that most negatively affect intelligibility. The salience of suprasegmentals should be understood and given proper perspective. Colleges and universities offering ESL licensure programs must include sufficient emphasis in their curricula to address the need for methodology in pronunciation. This is particularly true of secondary teachers who work with older learners who have arrived in the United States as adolescents and oftentimes have had limited schooling. These learners have more obstacles to overcome, as was illustrated in Chapter Two. Finally, teachers must become not only familiar, but comfortable with effective instructional methods for teaching pronunciation.

Communication between students and teacher is crucial. Journal writing, interviewing, and simply playing with students can uncover their anxieties, attitudes, and learning styles regarding speech. Focused listening goes a long way in motivating students in the ESL classroom, and removes barriers to learning. Understanding their fears and frustrations can open the gates to learning. Once students have expressed their feelings, and a safe environment is established, they oftentimes begin to take necessary risks with their speech. A balance of laughter, fun, and serious study create the ultimate conditions for effective communicative competency.

The sequence of instruction also plays a major role in the effectiveness of any pronunciation course. It is essential that students can first demonstrate their ability to hear the difference between a good and a poor oral production. Only after auditory

discrimination is evident should students move into more expressive tasks. Both receptive and expressive skills must be considered when teaching pronunciation. Hence, it is important that teachers are trained to effectively assess these skills.

Instruction should progress from very controlled activities to less-structured activities. This optimizes gradual independence in pronunciation outside the classroom. It is also important to vary the activities in order to maintain student motivation and broaden the spectrum of speaking situations. Teaching each stress rule in a different manner helped the students in this study to use their speech in different ways and for different reasons. Rapping to music is a fun and useful way to learn and practice a stress rule, but is not a particularly practical context to use in speech at school or work!

Within the variety of contexts, there must also be sufficient rehearsal. Chapter Two's discussion of the role of music in language learning illuminates the power of musical and rhythmic information in the processing and storing of information in the brain. There are preliminary provocative implications for using music and rhythm in language learning, but research is still in the stage of infancy. Hopefully, there will be more future collaborative study among the fields of linguistics, neurology, phonology, speech and language, education, and music.

Summary

This Capstone 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 rap-based 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.

And NEVER aGAIN will ANybody PLEAD,

“Now WHAT did you SAY?”

A HUNdred TIMES throughout the COURSE of a DAY!

STRESS RULES! RHYthm ROCKS!

APPENDICES

Appendix One:	Elicitation Questionnaire
Appendix Two:	Unrehearsed Speech Sample
Appendix Three:	Picture Prompt
Appendix Four:	Lesson Plans
Appendix Five:	Intelligibility Scale
Appendix Six:	Final Questionnaire
Appendix Seven:	Syllabic Steps
Appendix Eight:	Stress Squares
Appendix Nine:	Compact Disc

APPENDIX ONE

Elicitation Questionnaire

1. What is your first language?
2. What other languages do you speak?
3. How many years have you attended school?
4. How many years of ESL classes have you had?
5. Was there any pronunciation instruction in your ESL classes? How much?
6. Why do you want to improve your pronunciation?
7. Do you believe you can improve your pronunciation? Why or why not?
8. Why do you think you may have pronunciation problems?

APPENDIX TWO

UNREHEARSED SPEECH SAMPLE

Hello, I am a student and I'm taking a class to improve my pronunciation. There's a gigantic amount to learn, but this class will make it as enjoyable as possible. I intend to learn about American English stress patterns, so that I'll be easier to understand. Soon, I'll be able to tell you the rules by myself. I really want to learn more about pronunciation because I must speak in front of the whole classroom. Better pronunciation will permit me to feel more confident in every situation. I will record my speech many times in order to discover problems and to listen for improvements. I will also keep a record of my reflections about how I feel about my speech. There will be seventeen days of class and I realize that good attendance is very important. I will practice for at least twenty minutes each day with my rap CD. I will copy rules from the blackboard and try to memorize as many as I can. Will this rap method really work? After working really hard, I may find that this method really does work!

APPENDIX THREE
Picture Prompt



APPENDIX FOUR

Week One: Introduction to Syllabification and Word Stress

Day One

1. Introductions and housekeeping.
2. Ice breaker activity.
3. Elicitation questionnaire.
4. Discussion of segmental and suprasegmental aspects of speech.
5. Discussion of importance of flexibility exercises in pronunciation.
6. Muscular warm-ups with mirrors.
7. Syllabification worksheet in pairs: one partner pronounces multi-syllabic words, the other counts the number of syllables on fingers and records.
8. Pronunciation Pyramids.
9. Introduction to word stress-read packet as a class and discuss.
10. Dictionaries – look at stress marks, (‘), just before or after the stressed syllable.
11. “First Day of School” rap. Listen and read.
 - a. Highlight stressed syllables
 - b. Recite without CD
 - c. Recite with CD at slow tempo
 - d. Recite with CD at normal tempo.

Homework: rehearse rap with lyrics and then with instrumentation only, for 30 minutes on personal CD players.

Day Two

1. Record initial unrehearsed speech samples.
2. Journal Topic: Describe a time you felt frustrated because someone could not understand you.
3. Word stress game. (“Duh” Language Game).

4. Warm-ups.
5. Review “First Day of School.”
6. Anatomy of the speech mechanism.
 - a. Introduce sagittal diagram.
 - b. Find parts visible in mirror.
 - c. Use Q-tips to touch.
7. Stress Rule #1: 75% of two-syllable words receive stress on the first syllable.
 - a. Tap on desk.
 - b. Use rubber bands to feel stress.
8. Introduce “Stress Rules” rap.

Homework: review first rap and learn new rap.

Day Three

1. Read book to be used for daily recording.
2. Record speech samples.
3. Review segmentals, suprasegmentals, syllables, stress.
4. Journal Topic: How do I feel about recording my voice and how do I feel about listening to it afterwards?
5. Pronunciation Pyramid race.
6. Warm-ups.
7. Review previously learned raps.
 - a. Alternate stanzas between the two sides of the room.
 - b. Students recite one stanza individually.
8. Handout:” Why is Word stress so Important?”
9. Rule #2: suffix endings (-tion, -cian, -sion, -ity, -ical, -ic).
10. Introduce “Stressful Endings” rap.
11. Anatomy Quiz.

Homework: 30 minutes of practice rapping. Syllabification worksheet.

Day Four

1. Record speech samples.
2. Journal topic: Identify one area of good pronunciation from your recording. Explain. Identify one area that you could improve.
3. Warm-ups.
4. Review previously learned raps.
5. Rule #3: Compound nouns comprised of two simple nouns usually receive stress on the first element.
6. Discuss difference between an element and a syllable.
7. Play Compound Clues Pronunciation game.
 - a. Write a story about what may have happened in this game.
 - b. Read story aloud to class, paying focused attention to pronunciation of compound nouns.
8. Introduce new rap: “Compound Nonsense.” Students stand up on stressed element.
9. Pronunciation Pyramids

Homework: Rap practice for 30 minutes.

Day Five

1. Record speech samples. Work on one pronunciation error. Speak into PVC pipe to amplify voice.
2. Journal topic: If there were one sound I wish I could improve upon, it would be _____. This sound gives me trouble with certain words like_____.
3. Warm-ups.
4. Review “Compound Nonsense.” Vary tempo.
5. Ear training exercise.
6. Stress Rule # 4: Numerical stress.
7. Practice multiples of ten, stretching binders on first syllable. Practice ‘teen’ numbers, stressing the second syllable.
8. Call out a number: students identify on board.

9. Students identify each others' called-out numbers.
10. Play Telephone Game, whispering a number around the circle.
11. Information gap activity using numbers for flights and times.
12. Introduce "Cardinal Rule" rap.

Homework: at least 30 minutes of rehearsal.

Day Six

1. Record speech samples and have consultation with teacher.
2. Journal topic: Am I becoming more aware of word stress in the speech of others? Give examples.
3. Warm-ups. Learn new vocal warm-ups with guest music teacher.
4. Review previously learned raps, using a variety of techniques to emphasize word stress (e.g. desk tapping, standing up and sitting down, rubber bands, banging on percussion instruments).
5. Blow bubbles to demonstrate unrestricted airflow. Discuss points of articulation and how they obstruct airflow.
6. Demonstrate voiced versus unvoiced consonant pairs. Students put hands to throat in order to feel vibration or lack thereof.
7. Minimal Pairs Bingo.

Homework: Practice raps at least 30 minutes.

Day Seven

1. Record speech samples.
2. Warm-ups: tongue and vocal.
3. Review "Cardinal Rule."
4. Rule #5: Reflexive pronouns receive stress on the second syllable.
5. Introduce "A Selfish Rap."
6. Play "Shop until you Drop" game, in order to review compound nouns.

- a. Controlled practice. Combine with reflexive pronouns. (“I’m going to the _____ to buy some _____ by myself.”)
- b. Role plays, using actual items that are compound nouns, such as toothpaste and lipstick.

Homework: Practice.

Day Eight

1. Warm-ups.
2. Record speech samples.
3. Students retell the story being read thus far as a class.
4. Journal topic: Has this class helped me with pronunciation? How?
5. Review previously learned raps.
6. Discuss how word stress changes according to the form within a word family (e.g. photograph, photographic, photographer).
7. Play “Happy Families” pronunciation game.

Homework: Practice 30 minutes of raps and prepare a question to ask our guest

MC/rap artist.

Day Nine

Guest: Spoken Word/rap artist, Frank Sentwali

Day Ten

1. Record speech samples.
2. Journal topic: What did I learn about the rhythm of spoken English from Sentwali?
3. More practice with syllable counts.
4. Rule #6: Functional shift. Students copy list on board of the stress shift that occurs in words that have identical orthography, such as REcord versus reCORD. Discuss the pattern for nouns versus verbs.
5. Introduce “Change that *Funktion*” rap.
6. Recap word stress rules learned.

7. Assessment of word stress.
 - a. Teacher presents multi-syllabic words on flashcards.
 - b. Students must produce stress on correct syllable.
 - c. Students cite the correct rule of word stress associated with the given word.
 - d. Words are presented with no stress cues (i.e. underlining, capital letters, bubbles).

Day Eleven

1. Record speech samples. Consultation with teacher about progress of intelligibility.
2. Journal topic: Of all the stress rules you have learned so far, which one has been the most useful? Why?
3. Review “Change that *Funktion*” and the corresponding rule
4. Introduce sentence stress.
 - a. Word and sentence stress combine to form the rhythm of English.
 - b. There is a regular pattern of beats, unstressed beats, and pauses.
 - c. Compare to musical time signatures, rests.
 - d. Go over example on board and have students beat drum four times each sentence, regardless of how many syllables it contains..
5. Stress Rule #7: English is a stress-timed language.
6. Introduce ‘Squeeze the Moment’ rap.
7. Calculate the number of beats in each line, versus the number of syllables.
8. Discussion of tense and lax vowel pairs
9. Minimal Pair Bingo, using tense versus lax vowels.
 - a. Teacher calls out words, accompanied by a sentence for context.
 - b. Teacher calls out words in isolation.
 - c. Students take over the role of caller, eliciting accompanying sentences.

Homework: Learn “Squeeze the Moment” rap and practice previously-learned raps.

Day Twelve

1. Record speech samples: spontaneous conversations, now that the book reading has been completed.
2. Journal topic: Predict what our rapper on the CD looks like. Then draw a sketch of how you picture him.

3. Review “Squeeze the Moment.”
4. Take turns reciting Dr. Seuss’ The Foot Book to rap beats.
5. Greater difficulty level: recite The Cat in the Hat to rap beats. The other students keep four beats per line going, using percussion instruments.
6. Stress Snap game.
7. Students perform a favorite rap either alone, or in pairs.

Homework: practice all raps.

Day Thirteen

1. Record speech samples.
2. Review “Squeeze the Moment.”
3. Present equivalent multisyllabic words and utterances (e.g. *evolution* and *I approved it.*)
4. Introduce content and function words.
5. Guided practice of stress on content words.
6. Content versus function words worksheet.
7. Role play guest show host interviews.
8. Demonstrate how meaning is conveyed when we eliminate function words, but not when we eliminate content words. (E.g. “Lost glasses.”)
9. Play Happy Families pronunciation game.
10. Homework: Content and function words packet.

Day Fourteen

1. Record speech samples.
2. Journal topic: What are three pronunciation class activities you have enjoyed the most? Why did you like them?
3. Review parts of speech and categorize content and function words.

4. Students identify content words and their part of speech.
5. Form nonsense sentences from student-elicited nouns, verbs, adjectives, adverbs, etc. Practice correct sentence stress using drum.
6. Introduction to emphatic stress. Explain cases when auxiliary verbs are stressed, even though they are function words.
7. Homework: Learn “I Mean It!” rap. Review all others.

Day Fifteen

1. Record speech samples.
2. Journal topic: Name three activities we have practiced that were the most helpful for you.
3. Practice “I Mean It” rap as a dialogue. Class divides into two parts. Alternate dialogue roles.
4. Students create their own dialogues, using emphatic stress.
5. Students recite elicited dialogues to accompanying drum beats.
6. Students recite dialogues to rap music.
7. Students perform rap of their choice either individually, or in pairs.
8. Pronunciation “Snap” game.
9. Homework: Practice raps.

Day Sixteen

1. Guest rapper performs
2. Students demonstrate techniques learned in class for the rap artist (i.e. rubber bands, mirrors, drums, alternating lines, tapping, counting syllables, standing up on stressed syllables).
3. Students are videotaped performing all nine raps learned, along with the rap artist.
4. Pizza party!

Day Seventeen

1. Final assessment of all stress rules learned: students read from note cards using proper stress, and cite the appropriate stress rule.

2. Tape record final speech samples; structured reading and one less structured. (Identical procedures as used on first day of class.)
3. Final questionnaires.

APPENDIX FIVE

INTELLIGIBILITY SCALE

Rate the speaker on a scale of 1-5, with 1 being the least intelligible and 5 being most intelligible and most nearly approximating pronunciation of a native American English speaker.

1. Speaker is virtually unintelligible.
2. Speaker is very difficult to understand, requiring great concentration on the part of the listener.
3. Pronunciation occasionally interferes with intelligibility.
4. Speaker is usually intelligible, although pronunciation may slightly interfere with understanding.
5. Although an accent may be present, pronunciation approximates that of a native American English speaker to a degree of not interfering with intelligibility.

APPENDIX SIX

Final questionnaire

1. Do you believe you have improved your pronunciation during this course?
2. What are some new things you notice about your speech now?
3. Do you sometimes stop and correct yourself now that you know some stress rules?
4. Has anyone commented on your pronunciation since you have been taking this course?
5. Would you take another course like this one if it were offered?
6. Do you think that rap music is a good way to learn pronunciation? Why or why not?
7. Will you continue to listen to the CD and practice stress after this class is over?
8. Do you feel more confident about your speech now than you did before taking this course?
9. Any additional comments, suggestions, etc.

APPENDIX SEVEN

Syllabic Steps

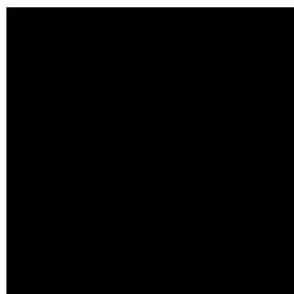
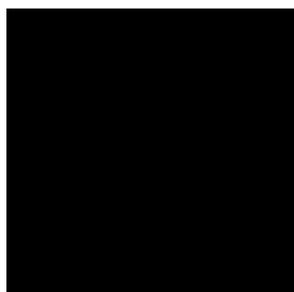
Directions: Write down the category. Write down words that are members of that category. Try to use one, two, three, four, and five syllable words.

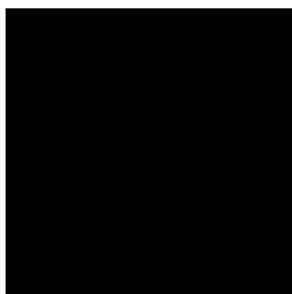
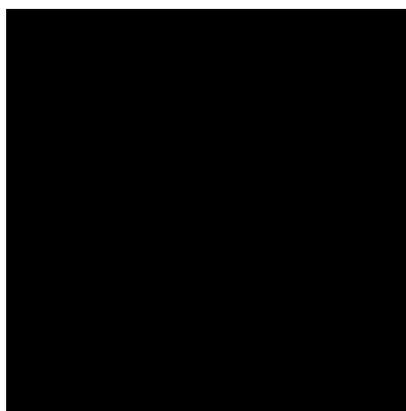
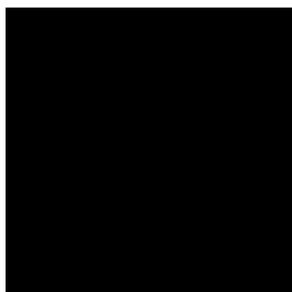
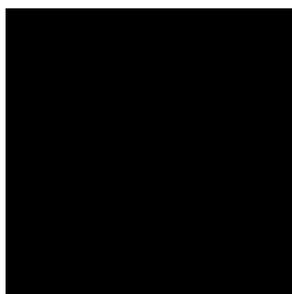
Time limit: 1 minute

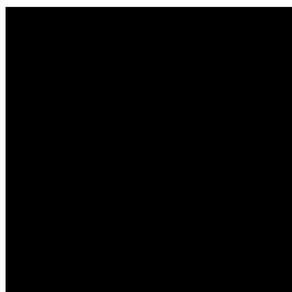
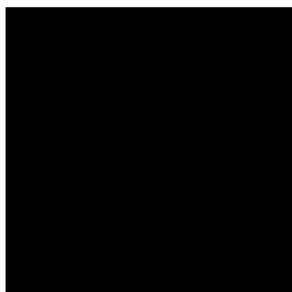
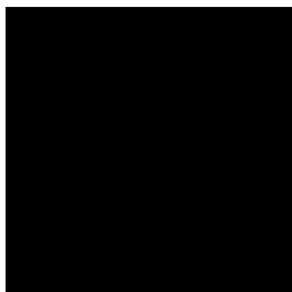
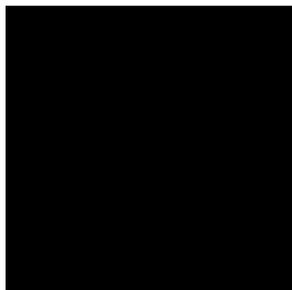
Category: _____

					➤ 1 syllable
					➤ 2 syllables
					➤ 3 syllables
					➤ 4 syllables
					➤ 5 syllables









APPENDIX NINE

REFERENCES

- Abercrombie, D. (1956). *Problems and principles in language study*. London: Longman.
- Acton, W. (1984). Changing fossilized pronunciation. *TESOL Quarterly*, 18, 71-85.
- Adams, C. (1979). *English speech rhythm and the foreign learner*. The Hague: Mouton publishers.
- Anderson-Hsieh, J., Johnson, R., & Koehler, K. (1992). The relationship between native speaker judgments of nonnative pronunciation and deviance in segmentals, prosody, and syllable structure. *Language Learning* 42, 529-555.
- Asher, J. (1988). *Brainswitching*. Los Gatos, CA: Sky Oaks Productions, Inc.
- Asher, J. (1993). Imagination in second language acquisition. *Journal of the Imagination in Language Learning and Teaching* 1, 20-23.
- Auer, P., Couper-Kuhlen, E., & Muller, F. (1999). *Language in time; the rhythm and tempo of spoken interaction*. New York: Oxford University Press.
- Avery, P. & Ehrlich, S. (1992). *Teaching American English pronunciation*. Oxford: Oxford University Press.
- Bansal, R. K. (1969). *The intelligibility of Indian English*. Hyderabad: Central Institute of English.
- Begley, S. (1996, February 19). Your child's brain. *Newsweek*, 55-62.
- Benrabah, M. (1997). Word stress – a source of unintelligibility in English. *IRAL* 35, 157-165.
- Bongaerts, T., van Summeren, C., Plankton, B., & Schils, E. (1995). Age and ultimate attainment in the pronunciation of a foreign language. *Studies in Second Language Acquisition*, 19, 447-465.
- Brown, A. (1991). *Teaching pronunciation: a book of readings*. London: Routledge.
- 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.
- Chomsky, N. & Halle, M., (1968). *The sound pattern of English*. New York: Harper &

Row Publishers, Inc.

- Cruttenden, A. (1986). *Intonation*. Cambridge: Cambridge University Press.
- Cutler, A. (1984). Stress and accent in language production and understanding. in D. Gibbon and H. Richter (eds.) *Intonation, accent and rhythm: Studies in discourse phonology*. Berlin: Walter de Gruyter.
- Dalton, C. & Seidlhofer, B. (1994). *Pronunciation*. Oxford: Oxford University Press.
- Dixo-Leiff, C. & Pow, E. (2002). What spelling factors might affect pronunciation achievement. Retrieved April 28, 2002, from http://www.public.iastate.edu/~jlevis/SPRIS/spelling_ans_html.
- Florez, M. C. (1998). Improving adult ESL learners' pronunciation skills. Retrieved May 24, 2001, from http://www.ed.gov/databases/ERIC_Digests/ed427553.html.
- Fudge, E. (1984). *English word stress*. London: George Allen & Unwin.
- Gabb, S. (2000). Calzones! You can't eat calzones in Mexico. *American Education Newsletter*.
- Gardner, H. (1983). *Frames of mind: The theory of multiple intelligences*. New York: Basic Books.
- Garnes, S., & Bond, Z. S. (1980). *Errors in linguistic performance: Slips of the tongue, ear, pen, and hand*. New York: Academic Press.
- Genesee, F. (2000, December 12). Brain research: implications for second language learning. *ERIC Digest*, 12-13.
- Gilbert, J. (2001). *Clear speech from the start*. New York: Cambridge University Press.
- Gillespie, M. K. (1996). *Learning to work in a new land*. Washington, DC: Center for applied Linguistics.
- Gimson, A. C. (1980). *An introduction to the pronunciation of English*. London: Edward Arnold.
- Graham, C. (1978). *Jazz Chants*. New York: Oxford University Press.
- Graham, C. (1986). *Small Talk*. New York; Oxford University Press.
- Grant, L. (1999). Form to meaning: Bridges in pronunciation teaching. *TESOL Matters*, December/January, 12.

- Grant, L., & Levis, J. M. (2003). Integrating pronunciation into ESL/EFL classrooms. *TESOL Journal* 12, 13-19.
- Hall, P. D. (1998). The relationship between types of rap music and memory in African American children. *Journal of Black Studies*, 28 (6), 802-814.
- Halle, M., & Keyser, S. J. (1971). *English stress: its form, its growth, and its role in verse*. New York: Harper and Row.
- 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.
- Hildreth, S. (2004). The use of rap music as educational material in the classroom setting. Retrieved April 15, 2004, from http://www.personal.psu.edu/users/s/y/syh107/syh_rap.htm
- Hill, C., & Beebe, L. M. (1980). Contraction and blending: the use of orthographic clues in teaching pronunciation. *TESOL Quarterly*, 14 (3), 299-323.
- Hu, C. H. (2003). Phonological memory, phonological awareness, and foreign language word learning. *Language Learning*, 53 (3), 429-263.
- Hubicka, O. (1980). Why bother about phonology? *Practical English Teaching*, 1 (3), 22-24.
- Hubicka, O. (1982). Phonology: stress. *Practical English Teaching*, 1 (3), 20-23.
- Jensen, E. (1998). *Teaching with the brain in mind*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Kenworthy, J. (1987). *Teaching English pronunciation*. New York: Longman Publishing.
- Krashen, S. & Terrell, T. (1983). *The natural approach*. Oxford: Pergammon Institute of English.
- Kreidler, C. A. (1999). *The pronunciation of English: a course book in phonology*. Malden, MA: Blackwell Publishers, Inc.
- Lake, B. (2000). Music and language learning. *Journal of the Imagination for Language Learning, Volume VII*. Retrieved August 20, 2003, from <http://www.dtae.org/Adultlit/Connections/music.html>.
- Larsen-Freeman, D. (1986). *Techniques and principles in language teaching*. New York: Oxford University Press.

- Lenneberg, E. (1967). *Biological foundations of language*. New York: Wiley.
- Martinec, R. (2000). Rhythm in multimodal texts. *Leonardo*, 33 (4), 289-297.
- Miller, S. (2000). Looking at progress in a pronunciation class. *TESOL Matters*, June/July, 6. Retrieved July 29, 2004, from <http://www.tesol.org/isaffil/intsec/columns/200006-sp.html>.
- Morley, J. (1975). Round robin on the teaching of pronunciation. *TESOL Quarterly*, 9 (1), 81-88.
- Morley, J. (1991). Pronunciation component in teaching English to speakers of other languages. *TESOL Quarterly*, 23, 481-520.
- Morley, J. (1994). A multidimensional curriculum design for speech pronunciation instruction. In Morley (Ed.), *Pronunciation pedagogy and theory: New views, new directions*. 64-91. Alexandria, VA: Teachers of English to Speakers of Other Languages, Inc.
- Morley, J. (1998). Trippingly on the tongue: putting serious speech/pronunciation back in the TESOL equation. *ESL Magazine*, 1, 20-23.
- Morley, J. (1999). New developments in speech/pronunciation instruction. *As We Speak*, 2, 1-4.
- Nelson, A. M. S. (1999). *This is how we flow: rhythm in black cultures*. Columbia, SC: University of South Carolina Press.
- Newham, P. (1993). *The singing cure*. United Kingdom: Random House.
- Nunan, D. (1992). *Research methods in language learning*. New York: Cambridge University Press.
- Parrish, B. (2004). *Teaching adult ESL. A practical introduction*. New York: McGraw-Hill Companies, Inc.
- Pennington, M. (1996). *Phonology in English language teaching*. New York: Longman.
- Petitto, L.A., Howlok, S., Segio, L., & Ostry, D. (2001). Language rhythms in babies' hand movements. *Nature*, 413, 35-36.
- Powell, C. T. (1991). Rap music and education with a beat from the street. *Journal of Negro Education*, 60 (3), 245-259.

- Prator, C. H. (1971). Phonetics vs. phonemics in the ESL classroom: when is allophonic accuracy important? *TESOL Quarterly*, 5, 61-72.
- Schumann, J. H. (1975). Affective factors and the problems of age in second language acquisition. *Language Learning*, 25, 209-235.
- Sims, R. & Sims, S. (1995). *The importance of learning styles: understanding the implications for learning, course design, and education*. London: Greenwood Press.
- Smith, B. & Swan, M. (2001). *Learner English*. United Kingdom: Cambridge University Press.
- Stewart, E.L. (1998). *African American music*. New York: Schirmer Books.
- Tiffen, B. (1974). The Intelligibility of Nigerian English. Unpublished doctoral dissertation, London University College.
- Todaka, Y. (1990). An error analysis of Japanese students' intonation and its pedagogical applications. Unpublished master's thesis, University of California, Los Angeles.
- Voigt, E. (2003). Syntax: rhythm of thought, rhythm of song. *Kenyon Review*, Winter 2003,25, 144-164.
- Wennerstrom, A. (1999). Why suprasegmentals? *TESOL Matters*, October/November, Retrieved February 21, 2001, from <http://www.tesol.org/isaffil/intsec/columns/199910-sp.html>.