THE INFLUENCE OF RHYMING VERSES ON YOUNG CHILDREN'S ABILITY TO REPEAT RHYTHMIC PHRASES

DISSERTATION

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By

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The purpose of this study was to determine if the teaching of rhyming verses containing rhythmic phrases facilitates young children's learning of the rhythmic phrases.

The study utilized a pre-test/post-test/control group design. One hundred forty-three kindergarten students participated in the study. The students were randomly selected and assigned to either experimental group A, experimental group B, or a control group.

Students in experimental group A were taught the rhyming verses and given practice repeating the rhythmic phrases contained in the rhyming verses. Students in experimental group B were only given practice repeating the rhythmic phrases. The control group was taught seasonal songs and activities. No rhythmic instruction was given to the control group.

All students were pre-tested and post-tested using the Primary Measures of Music Audiation and the Test of Rhythmic Repetition. The Primary Measures of Music Audiation was administered to intact classes by the investigator or an elementary music specialist. Scoring was done by the investigator.
The Test of Rhythmic Repetition was individually administered to each child by the investigator. Student responses were recorded via a tape recorder and were scored by three experts.

Analysis of covariance was used to determine differences among group means. The analysis of covariance did not produce a significant F at the 0.05 level when applied to the Primary Measures of Music Audiation.

The analysis of covariance did produce a significant F at the 0.05 level when applied to the Test of Rhythmic Repetition. Therefore, a Scheffe's multiple comparisons was conducted to determine which adjusted means differed significantly.

Significant differences were found between experimental group A and the control group and between experimental group B and the control group. However, no significant differences were found between the test scores of children in experimental group A and experimental group B.
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CHAPTER I

INTRODUCTION

Music has become an integral part of our society. It is a means of socialization and acts as a strong unifying force among individuals. Group performance of music gives a sense of belonging and sharing with others to its participants. Group spirit is fostered in children through class participation in singing and marching activities. Music is a language in itself as well as being a supplement to visual and verbal communication. The child's social development is accelerated through performance and other musical activities and by the unique ability of music to communicate ideas and emotions (Anderson, 1974; Griffin, 1968; Meyers, 1977; Simons, 1978).

The most basic ingredient of music is rhythm (Boberg, 1975; Gerjovich, 1979; Richards, 1967). Richards (1967) states that everyone is born with a sense of rhythm and it can be developed. A feeling for rhythm is the most important single item in learning, performing, or listening to music (Richards, 1967). Gerjovich (1979) stated that rhythm, rhyme, and repetition are essential for a young child's growth. Each provides the child with necessary skills, and all three are equally important in the child's
development, rhythm being an important organizing influence in the child's life (Gerjovich, 1979). "The most basic of music relationships exists in rhythm; without rhythm, music, life, and all experience ceases to be." (Boberg, 1975, p. 33). If music education is to be taught in our schools, rhythm must be an integral if not fundamental part of the music education curriculum (Boberg, 1976; Gerjovich, 1979; Richards, 1967).

The Orff-Schulwerk system of music education teaches rhythm to children by associating speech patterns or verses with the rhythmic phrase (see Appendix A). Children first learn the verse, then the beat of the phrase, and finally the rhythmic pattern of the words is taught and internalized. The rationale underlying the teaching of rhythm using speech patterns and rhyming verses such as "Hickory, Dickory, Dock" is that children's ability to remember and repeat the rhythmic phrases will be enhanced by the association of speech and rhythmic phrases. However, a thorough search of related literature and research including an on-line ERIC search, two off-line ERIC searches, a RILM search, a search of the Comprehensive Dissertation Abstracts, a computer search of the Psychology Information File and a thorough investigation of the North Texas State University music library revealed no empirical evidence to substantiate the assumption that the use of rhyming verses facilitates the learning of rhythmic phrases. If the use of speech patterns and rhyming verses
does not facilitate the learning of rhythmic phrases, then much time is used teaching speech patterns and verses when repetition of rhythmic phrases might be a more efficient way of learning.

Purpose of Study

The purpose of this study was to determine if the teaching of rhyming phrases containing rhythmic phrases facilitates the learning of rhythmic phrases by young children.

Hypotheses

1. Kindergarten children who are taught rhyming phrases that contain rhythmic phrases and are also provided rhythmic practice will score significantly higher on a Test of Rhythmic Repetition than kindergarten children who have been provided with only rhythmic practice.

2. Kindergarten children who are taught rhyming phrases that contain rhythmic phrases and are also provided rhythmic practice will not score significantly differently on the Primary Measures of Music Audiation than kindergarten children who have been provided with only rhythmic practice.

3. Kindergarten children who are taught rhyming phrases that contain rhythmic phrases and are also provided rhythmic practice will score significantly higher on a
Test of Rhythmic Repetition than kindergarten children who are not taught rhyming phrases containing rhythmic phrases and have not been provided rhythmic practice.

4. Kindergarten children who are taught rhyming phrases that contain rhythmic phrases and are also provided rhythmic practice will score significantly higher on the Primary Measures of Music Audiation than kindergarten children who are not taught rhyming phrases containing rhythmic phrases and who have not been provided with rhythmic practice.

5. Kindergarten children who have been provided with only rhythmic practice will score significantly higher on a Test of Rhythmic Repetition than children who have not been provided with rhythmic practice or been taught rhyming phrases that contain rhythmic phrases.

6. Kindergarten children who have been provided with only rhythmic practice will score significantly higher on the Primary Measures of Music Audiation than kindergarten children who have not been provided with rhythmic practice or been taught rhyming phrases that contain rhythmic phrases.

Definition of Terms

The following terms have been used with special meaning in this study.

1. Musical training. Classroom music instruction by a certified elementary music teacher.
2. **Rhythmic phrases.** A four beat rhythmic pattern in simple or complex meter.

3. **Rhythmic practice.** A 5 to 15 minute time period during which the teacher claps, taps, or patschens rhythmic phrases and the students repeat the rhythmic phrases.

4. **Rhyming phrases.** Rhyming verses having a definite rhyme scheme such as "Hickory, Dickory, Dock" (AAB).

5. **General rhythmic ability.** The rhythmic ability of the child as measured by the rhythmic portion of the **Primary Measures of Music Audiation**.

6. **Rhythmic repetition ability.** The specific ability to repeat rhythmic phrases as measured by the **Test of Rhythmic Repetition**.

**Significance of the Study**

The study sought to provide an empirical basis for selecting a method of rhythmic instruction that produces optimal general rhythmic achievement as measured by the **Primary Measures of Music Audiation** and optimal ability to repeat specific rhythmic phrases as measured by the **Test of Rhythmic Repetition**.

**Limitation**

A limitation of the study is that the population was comprised of kindergarten children of middle class, suburban, multicultural background; therefore, the findings of this study are generalizable only to similar populations.
Selection of the District

The district in which this study was performed was selected due to an agreement between the district and North Texas State University regarding research within the district. Considerations regarding the selection of schools included the training of the elementary music teacher assigned to each school, the familiarity of the investigator with the elementary music teachers, the ethnic ratio of each school, and the socio-economic status of the students attending each school.

Procedures for Collecting Data

Sample

Three kindergarten classes from each of three participating schools were randomly selected for testing. In each school, the kindergarten classes were randomly assigned to either experimental group A, experimental group B, or the control group. Forty-five students were assigned to experimental group A. Forty-eight students were assigned to experimental group B. Fifty students were assigned to the control group.

Treatment

Three music teachers were given training in each of the three methods of instruction prior to the beginning of the treatment. Monthly training sessions were conducted by the investigator to maintain consistency of teaching methods.
In addition, the three elementary music teachers were contacted weekly by the investigator to determine the amount of time each teacher was using per lesson.

All students were pre-tested using the Primary Measures of Music Audiation (see Appendix C) and the Test of Rhythmic Repetition (see Appendix A). Following the pre-test, the three treatments representing the independent variables were begun.

Experimental group A was taught rhyming verses containing six different simple rhythmic phrases and six different complex rhythmic phrases such as, "Hickory, Dickory, Dock" (see Appendix A). The children were taught the rhyming verses and were given practice clapping the rhythm of the words while they said the verses aloud, as well as repeating the rhythmic phrases without repeating the verses aloud.

Experimental group B was taught to echo clap the rhythmic phrases contained in the rhyming verses. However, the children were not taught to associate the clapped rhythmic phrases with rhyming verses.

The instruction of the control group emphasized songs, singing games, and seasonal activities. These children did not practice echo clapping or learn the rhyming verses.

At the end of the ten week experimental period, the children were post-tested using the Primary Measures of Music Audiation and the Test of Rhythmic Repetition.
Only test scores of children receiving eight of the ten treatments were used in the analysis of data.

Data Analysis

The mode, mean, median, standard deviation and range of scores in each group were reported. Analysis of covariance was used to determine differences among group means. Two tests of significance were run. The first used the Primary Measures of Music Audiation Pre-Test as the covariate and the Primary Measures of Music Audiation Post-Test as the dependent variable. The second used the Test of Rhythmic Repetition Pre-Test as the covariate and the Test of Rhythmic Repetition Post-Test as the dependent variable. The analysis of covariance did not produce a significant F at the 0.05 level using the Primary Measures of Music Audiation Pre-Test as the covariate and the Primary Measures of Music Audiation Post-Test as the dependent variable. However, analysis of covariance using the Test of Rhythmic Repetition Pre-Test as the covariate and the Test of Rhythmic Repetition Post-Test as the dependent variable produced a significant F at the 0.05 level. Multiple comparisons using Scheffe's F were conducted to determine which adjusted means differed.
CHAPTER BIBLIOGRAPHY


CHAPTER II

REVIEW OF RELATED LITERATURE

The Importance of Music Education

Music is a natural outlet for the child. Children sing and hum simple songs throughout the day. They react rhythmically to the music they create through simple movement and folk dances. Musical expression is common worldwide and exemplifies a natural outlet for human expression. Since music is natural to the child, music education should begin early in life. Zoltan Kodaly stated that music education must begin nine months prior to the birth of the child (Caylor, 1979). Carl Orff stated that rhythmic education ought to begin when the child enters school or at preschool age (Orff, 1963). The rationale given for early training in music is that music is one of the first and most natural vehicles of communication for the child. At an early age the child learns musical skills quickly and easily. Early in life the child is not self-conscious and will perform spontaneously. This tendency toward spontaneous performance leads to an increased development of musical skills and knowledge through a variety of musical experiences and training.
Another reason given for early training in music is that early musical training permits early identification of musically gifted children. If early identification of musically gifted children takes place, special experiences and training can be provided so as to enrich this area of the child's life (Cohen, 1974; Meyers, 1977; Miller, 1977; Simons, 1979).

By studying music, one comes to an understanding of different cultures, eras, and styles.

Woven into the musical fabric of the centuries is the tale of man's striving toward a richer life. As children in the classroom learn the simple, direct songs of the people and the music of the artist, they will become aware of the place of music in the past and present life of man (Broadman and Landis, 1966, p. iii).

The study of music helps one understand the past, present, and look to the future (Hansen, 1937; Simons, 1978).

Music gives the child an avenue for self-expression and personal enrichment. Educators agree that music plays an important role in the area of self-expression. Music education is mandated in Texas and in other states. Through music, man is able to express himself physically, emotionally, and spiritually. The arts provide a valuable means of recreation and self-expression. Many people do not achieve their musical potential because they lack the skills necessary to achieve musical adequacy. For these people, music can only be experienced at the childhood, "fun" level. The greater values of musical self-expression
can never be fully realized (Child, 1969; Simons, 1978; Swanson, 1961).

Music provides a means of personal enrichment. Self respect, acceptance, and respect by peers may result from musical accomplishments. As the child matures, music may bring beauty into his/her life. Swanson (1961) states, "Through music one is able to extend and enrich his life beyond what is practical for him to do directly." Students who acquire an understanding of music at an early age may develop an artistic awareness and aesthetic sensitivity which will increase their abilities to think imaginatively, work creatively, and approach adulthood with a capacity to enjoy life more fully through enriched cultural experiences (Child, 1969; Nye and Nye, 1970; Simons, 1978; Swanson, 1961).

Music also reinforces and enriches other aspects of the school curriculum. Areas enriched by music include auditory discrimination, auditory concept development, and language development. Listening to music and discussing what is heard reinforces all of the above. In early childhood, the use of A, B, C songs and rhymes reinforces language skills; counting songs and games serve to enrich mathematics skills. Auditory discrimination is also enhanced by clapping games and echo work (Griffin, 1968; Hamm, 1969; Meyers, 1977; Reeves, 1978; Simons, 1978; What Every Child Should Know...Music, 1981).
Seashore (1938) has stated that musical learning consists of two aspects: the acquisition and retention of musical experience and information, and the development of music skills. It is these which form memory. According to Seashore this musical memory is an inherited trait which can be improved by training (Seashore, 1938).

Others perceive music learning in a different manner. Lunden (1953) wrote that musical learning is a response to various stimuli. According to Lunden, the response may be integrative as in playing an instrument with a group; discriminative such as distinguishing sounds, timbres or rhythms; variable in musical interpretation; modifiable and therefore able to correct mistakes with practice; delayable and inhibitive which allows it to refrain from performance until the correct time; cultured in nature to share the responses with others. Lunden disagrees with Seashore on the issue of inherited trait. Lunden (1953) states that all such responses are learned, and success is a function of many stimuli. Therefore, no one is born to genius.

Shuter (1968) agrees with Lunden that environment does influence the child's musicality. Shuter states that the most important condition in the earliest years of the child's life is to hear music. The child should also be
encouraged to improvise his own music. Music should be a joyful activity in the life of the child (Shuter, 1968).

Edwin Gordon (1971) investigated the role played by musical aptitude in the child's musical ability. Gordon defines music aptitude as potential. The achievement of the child is his actual musical accomplishment. Musical aptitude is a product of environment, as set forth by Lunden (1953) and Shuter (1968), and innate potential (Gordon, 1971). Musical aptitude is not dichotomous since scores on a musical aptitude test tend to follow the normal distribution.

According to Gordon (1971) there are three components of musical aptitude. These must be understood in order to understand how students learn. The tonal component consists of tonal imagery. Rhythmic aptitude is best characterized as imagery for rhythm as it interacts with tonal and expressive elements. Senses of tempo and meter are primary elements of rhythmic aptitude. These give rise to tension and relaxation in the melodic rhythm. The third component identified by Gordon is the aesthetic expressive-interpretive dimension. This may be the element which unifies musical aptitude (Gordon, 1971).

Musical Learning Behaviors

Gordon cites Gagne's types of learning behavior and relates these to musical learning. These are arranged in
hierarchical order from simple perceptual learning to complex conceptual learning and are as follows:


Signal learning takes place when one recognizes sound. The response generated when the sound is recognized as musical is due to stimulus-response learning. Chaining occurs when one response becomes the stimulus for another response. If spoken or written descriptions are used, verbal association learning has taken place. Multiple discrimination learning takes place as one is able to differentiate between styles, forms, tonality, and so forth.

Gordon defines concept learning as "... the ability to transfer and generalize multiple discrimination understanding to unfamiliar music." Principle learning is described as an understanding of theoretical concepts. Problem solving learning is said to be basically the same as principle learning (Gordon, 1971).

Milak (1969) agrees with Gordon that these types of learning behavior are necessary for musical learning. Specifically, Milak states that stimulus-response learning, chaining, and multiple discrimination are necessary for musical learning. Milak conducted a study designed to
examine and apply certain basic types of learning to aspects of music education and to build a sequence of instruction based on ideas and concepts derived from these types of learning. Milak selected two experimental groups and a control group. The experimental groups were given instruction in rhythm and meter using a sequential method developed by the investigator. One experimental group practiced a specified number of minutes at home in addition to the training received at school. The other experimental group received only the training given at school. The control group was given instruction in rhythm and meter using the conventional method as well as home practice. Following the experimental period, an instrument designed by the investigator was administered to the three groups. This instrument measured the ability to perform unmetered rhythms. Both experimental groups performed better on this instrument than the control group (Milak, 1969).

Marvin Comte (1981) states that music educators must be aware of the child's mode of learning. Comte asserts that children experience music principally through the enactive and iconic modes in early childhood. Young children experience music through muscular response, through action, and through the senses. By teaching at these two levels, music educators are providing children with a basis for learning in the symbolic mode (Comte, 1981).
Rhythmic Learning

"It may even be that rhythm aptitude is the basis for musical aptitude" (Gordon, 1971, p. 28). This statement by Edwin Gordon holds the key to the importance of early training in rhythm. If rhythmic aptitude is the basis for musical aptitude and musical aptitude stabilizes in the primary grades (deYarman, 1975; Gordon, 1971), it is crucial to begin rhythmic training at an early age.

Many ideas have been put forth as to the manner in which rhythm is perceived and learned. Seashore (1938) discusses two factors involved in the perception of rhythm: subjective and objective grouping. Subjective grouping involves grouping uniform successions of sound into rhythmic measures. Objective grouping is marked by emphasis of time or intensity. According to Seashore, five fundamental capacities are required to perceive rhythm. These capacities are 1. A sense of time, 2. A sense of intensity, 3. Auditory imagery, 4. Motor imagery, and 5. A motor impulse for rhythm. These are instinctive tendencies (Seashore, 1938). Individual differences are recognized by Seashore; however, the basic tendency toward rhythm and rhythmic grouping is instinctive (Seashore, 1938).

Lunden agrees with Seashore that the capacity to respond rhythmically is instinctive (Lunden, 1953). However, Lunden also states that rhythmic response is the result of stimuli. These stimuli may be the markings on a page
or auditory beats. The response is varied. A perceptual response requires listening and/or analysis. A motor response requires actual, physical performance (Lunden, 1953).

Mursell and Glenn (1931) state that rhythm should be taught through muscular response. As the child better understands the rhythm, notation is learned (Mursell and Glenn, 1931).

Comte (1981) stresses the need to vary instructional stimuli when developing rhythm in children. Neither aural stimuli or movement should be the primary technique used. While both of these are necessary for rhythmic development, visual stimuli also plays an important role (Comte, 1981). Comte states, "Children can be greatly assisted by seeing and imitating rhythmic actions." (Comte, 1981, p. 38). Visual stimuli should be utilized in addition to aural stimuli and movement in teaching rhythm to children (Comte, 1981).

According to Gordon (1971), rhythm is comprised of tempo beats, meter beats, and melodic rhythm. These elements interact and give rise to rhythm. Tempo beats provide the foundation for the other elements of rhythm. The tempo beat is the steady beat of the music. Meter beats are felt as two or three equally spaced beats within the duration of one tempo beat. Melodic rhythm consists
of the rhythm patterns which correspond to the rhythm of
the melody or text (Gordon, 1971).

Gordon states that the ability to feel rhythm patterns
kinesthetically constitutes rhythmic readiness. The
initial stage of rhythmic readiness occurs through the
development of the large muscle groups using creative and
interpretive activity. Physical activity such as walking,
clapping, and tapping meter beats helps children develop an
understanding of steady tempo and learn to differentiate
between duple and triple meter (Gordon, 1971).

Gordon suggests that the association of eurhythmic
feeling with rhythm syllable patterns seems to facilitate
rhythmic literacy readiness (Gordon, 1971). The findings
of deYarman (1971) and Dittemore (1970) suggest that
rhythm syllables should be introduced only after the student
has developed an organized kinesthetic reaction to tempo and
meter. When the rhythm syllables are introduced, these
should be associated only with duple and triple meter beat
patterns (Gordon, 1971). After learning the basic syllable
patterns by rote, the child is ready to learn the remaining
basic and uncommon duple and triple meter beat and tempo
beat patterns (Gordon, 1971).

Following the development of a rote vocabulary of
the basic duple and triple rhythm syllable patterns, the
child is ready to begin reading these patterns by associating
what is felt with rhythmic notation (Gordon, 1971). Rhythm patterns are read in phrases. Gordon, therefore, suggests silently associating rhythm patterns or phrases in notational forms with the corresponding rhythm syllable patterns learned by rote. Teachers must use care to introduce only one duple and one triple meter signature when introducing rhythmic notation. Otherwise the children may become confused when rhythm patterns which are identical in sound are notated differently in different meters. Other meter signatures may be taught when the children read rhythmic notation well in the two meters previously introduced and after arithmetical fractions have been introduced in the classroom (Gordon, 1971).

Gordon suggests the student begin writing rhythmic notation when he is able to read notation. Rhythms notated should be derived from familiar literature such as chants or folksongs (Gordon, 1971).

Methods of Music Education

Three music educators whose methods have had a pronounced effect on American music education in the past fifty years are Emile Jacques-Dalcroze, Zoltan Kodaly, and Carl Orff. The systems of music education developed by these men are in some ways related although each has its own unique methods and purposes. Kodaly and Orff both learned from Dalcroze and incorporated his methods of
teaching into their own. Carl Orff said he recognized the interrelationship of his instructional philosophy and that of Kodaly. Kodaly once visited the Orff institute in Salzberg and purchased a set of instruments designed for Orff's "Schulwerk." So the methodology of Orff and Kodaly is somewhat similar due to the influence of Dalcroze and the influence of Orff on Kodaly and vice-versa (Landis and Carder, 1972; Choksy, 1981).

Dalcroze Method of Rhythmic Instruction

Emile Jacques-Dalcroze stated, "Rhythm is the basis of all art" (Dalcroze, 1921, p. 40). Dalcroze felt rhythm was essential to the functioning and happiness of the individual. In his system of music education, rhythm was treated as the organizer of all musical elements and the body was used as the musical instrument for the personal, physical experience of these elements. In the Dalcroze system, one experiences music using the entire nervous system (Dalcroze, 1935).

This system of music education involves three musical techniques. Eurhythmics encompasses time and rhythm. Solfedge is used to teach ear training, sight singing, and dictation. Improvisation develops a capacity for free musical innovation (Roach, 1980). Using these, rhythm, melody, harmony, dynamics, form, phrasing are taught and basic musical concepts are internalized.
Roach (1980) states the Dalcroze system is a Gestalt approach to music education. Activities progress from hearing and feeling the music with the body to verbalization and visualization of musical sounds in symbolic form. The enactive response is to feel the music physically. The iconic response is to perceive and organize musical sounds. The symbolic response is to translate those sounds into notation (Roach, 1980).

In a typical music class, a musical concept is built gradually. The concept of accelerando, an acceleration in tempo, might begin with an imaginative idea of something gaining speed. This beginning is made with movement but without the use of music. Then students listen to music in which an accelerando is unmistakable, and discover movement which corresponds with the accelerando in the music. In another related lesson, the students would learn the notation for accelerando, respond with muscular sensations, and use the concept in notation and in improvisation.

Dalcroze uses standard rhythmic notation when appropriate; however, not much written work is done in this method. What notation is taught is taught rhythmically using movement (Driver, 1951). In the words of Emile Jacques-Dalcroze, "A rhythm is a series of connected movements forming a whole and capable of being repeated" (Dalcroze, 1935, p. 3). Notation is not a vital part of the

**Orff-Schulwerk Method of Rhythmic Instruction**

The influence of Carl Orff's method of teaching rhythm is evident in many curriculum guides and music education materials. Rhythm is taught using speech patterns derived from rhymes, speech chants and folksongs. Before children can truly understand the concept of rhythm, rhythmic readiness must be achieved. To do this, children must walk, clap, and tap various tempi. This technique has been used to help handicapped children respond to rhythmic patterns and to comprehend as well as to duplicate these patterns using both large and small muscle groups (Hicks, 1980; Houlliff, 1981; Moyer, 1976).

Other curriculae using Orff-based techniques for rhythmic instruction include rhymes, echo clapping, clapping the rhythm of each child's name, clapping the rhythm of folksongs, moving to various rhythmic figures. These are used to develop a feeling of beat and pulse as well as to develop creativity in the child (Kindergarten Instruction Guide for Teachers, Fairfax Co., Va., 1969; Meyers, 1977; Texas Education Agency, 1974; Ott, 1977).

Orff's method of rhythmic instruction relies almost completely on speech and speech patterns. The use of speech is a distinguishing part of the Orff-Schulwerk
system of music education. Children progress from speech, (rhymes, chants, names, etc.), to rhythmic activities, to songs, to playing instruments. Notation is introduced as it relates to speech patterns or as it becomes necessary in order to play the instruments. Names, rhymes, and so forth are notated; however, a special system of rhythmic syllables is not used. Notation is derived exclusively from speech patterns or rhythmic figures found in folksongs (Landis and Carder, 1974; Rogers and Ebinger, 1977).

Kodaly Method of Rhythmic Instruction

Kodaly's method of rhythmic instruction is unique in several ways. First, it emphasizes the use and understanding of notation. Children instructed using the Kodaly method learn to read and write rhythmic notation fluently. Second, Kodaly devised a system of syllables to denote duration of rhythmic sound. Unlike Dalcroze, or Orff, the children taught using Kodaly's method consciously learn the duration of various rhythmic notes and their relationship to each other (Choksy, 1974; Landis and Carder, 1972).

Rhythmic patterns are introduced according to a carefully ordered sequence of difficulty. The first patterns taught consist only of quarter notes and joined eighth notes. These patterns are derived from familiar folksongs and are not made conscious until the folksong material has been mastered. Children step, patschen, or
clap the beat to the folksong and are told that the beat note is "ta" and looks like a straight stem (I) (Richards, 1963; Zemke, 1977). Rhythmic notation in Kodaly uses only stems for quarter notes, stems joined by a ligature for eighth notes, and stems joined by two ligatures for sixteenth notes. Note heads are used only for whole notes and half notes. After children practice and write quarter notes, eighth notes are introduced and practiced, followed by a combination of quarters and eighths. Again folksong material is used to introduce eighth notes. A well learned song which is made up mostly of quarter notes with an isolated eighth note combination is selected. Children clap the beat and are asked to isolate the two sounds on one beat. After the eighth note combination is isolated, notation for the two joined eighth notes is introduced (Choksy, 1974; Landis and Carder, 1972).

All other rhythmic patterns are introduced in the same manner. A folksong containing the desired rhythmic figure is taught; the rhythmic figure is isolated; notation is introduced; appropriate practice on the new notation is incorporated into the class time to ensure mastery. The sequence is slow and systematic to seek to ensure understanding on the part of the children. Each grade level has specific rhythmic concepts to be introduced and mastered
before going on to the next rhythmic figure. A brief list summarizing the rhythmic skills taught in each grade level follows:

**First**--beat, duple meter, quarter note (ta), joined eighth notes (ti-ti), quarter note rest, meter sign (\( \frac{2}{4} \)).

**Second**--meter sign (\( \frac{2}{4} \)), half note, fermata, reading and writing notation.

**Third**--triple meter (\( \frac{3}{4} \)), meter signs (\( \frac{2}{4}, \frac{3}{4} \)), dotted half note, sixteenth note patterns, anacrusis, syncopation.

**Fourth**--dotted rhythms, compound meter.

**Fifth**--alla breve (cut time), dotted eighth-sixteenth note combinations, triplets, less common meters. It must be emphasized that these skills spiral or build one on another. A child cannot begin at the fifth grade level. The foundation must be built and constantly reinforced (Choksy, 1974; Choksy, 1981; Landis and Carder, 1972).

Some music educators are suggesting a marriage of Orff and Kodaly based on their complementary aspects. For example both methods deal with these factors in much the same way:

**Vocal development:** Orff and Kodaly both use the pentatonic scale, beginning with two to three tones and extending the range outward. Both encourage the use of canons and the development of "inner hearing," melodic independence. Kodaly adds sight singing,
vocal technique and the conscious learning of intervallic relationships to Orff's basic singing approach. 

Rhythm: Orff and Kodaly both emphasize rhythm. Orff's rhythmic emphasis is on movement whereas Kodaly emphasizes rhythmic notation and learning to read and write rhythmic notation. Orff uses words of rhymes and folksongs to accentuate rhythmic feeling. Kodaly has derived a system of rhythmic syllables to clarify duration and use in reading notation.

Listening: Orff's use of listening is solely in relation to enjoyment or movement. Children listen to hear how to move but no conscious effort is made to teach concepts through listening. Listening is a by-product of experience. Kodaly approaches listening as a separate, important part of the curriculum. Listening is included in each lesson and is used to teach form, voice movement, harmonic structure, compositional style, and styles of different periods of music. Each listening lesson has a specific purpose and only one idea is considered per lesson.

As can be seen, Orff and Kodaly methodologies do compliment one another. Where Orff emphasized the affective aspects of musicianship, Kodaly's thrust is on cognition. A blend of the two would seem to give the music education class a completeness (Choksy, 1981; Wheeler and Raebeck, 1972).
Research on Teaching Rhythm

Fourteen studies were found which were pertinent to this investigation. Two of these were based on the work of Carl Orff. Two dealt with various instructional methods. One concerned developmental music aptitude. Nine of the studies discussed levels of musical ability and development.

"A Comparative Study of the Orff and Regular Methods of Music Education in Jefferson County, Colorado" was conducted by Margaret T. Siemens to evaluate a one year pilot program in Orff methodology. The experimental group was comprised of fifth grade students from the schools piloting Orff instruction. The control group was comprised of fifth grade students from schools using the regular (never defined) mode of music instruction and of like socio-economic background to the pilot schools. Music instructors in all schools were assumed to be qualified, experienced and equal in performance capability. Students in the experimental group had received one year of Orff instruction. Students in the control group had received at least one year of regular music instruction. Students in each group were equated on the basis of intelligence and ability prior to the administration of the Knuth Achievement Test in Music and the Kwalwasser-Ruch Test of Musical Accomplishment. Data were collected on
eighteen variables for each participating student. Results pertaining to rhythm were as follows.

1. The Orff method of instruction resulted in a greater interest in music.

2. The experimental group enjoyed rhythmic activities to a significantly greater degree than the control group.

3. The mean score of the control group on the Knuth Achievement Test, a test designed to discriminate between children's sense of rhythm and pitch intervals, was significantly higher than the mean score of the experimental group.

Results of this study seem to indicate that the Orff method of music instruction increases student interest. However, the Orff method of instruction did not increase student ability to discriminate between rhythm and pitch intervals to the degree that the regular music instruction did. This may result from a short period of instruction in Orff methodology as opposed to several years of regular music instruction or it may be a result of the Orff method's lack of emphasis on conscious skill learning (Siemens, 1969).

Siemen's study did not adequately define regular music instruction or describe the particular instructional techniques employed by the experimental group teachers
or the control group teachers. The children used in this study were fifth graders and would have received prior music instruction which, according to the study, was not Orff methodology. This would prove a handicap to the students with only one year of training in Orff, since the other students had previous experience in the regular music instructional method.

The second study using Orff's methods, "Orff in the Kindergarten," was conducted by Joann Rogers and Virginia Ebinger (1977). This study sought to investigate the value of the Orff approach to total education and to kindergarten instruction. The investigation took place in a kindergarten classroom in Los Alamos, New Mexico. Thirty-four children were divided equally into two groups for small group activities. It is assumed that both groups received equal instruction time since this point is not stated in the article. Results of the work with Orff, as stated by Rogers and Ebinger were

1. An increased awareness and developmental ability of movement skills;
2. Ability to carry individual speech parts in echo, canon, question and answer, and rondo; and
3. Growth in listening skills, including rhythmic ability (Rogers and Ebinger, 1977).
It would seem that instruction in Orff methodology does enhance many aspects of children's development; however, this cannot be empirically supported from this study. Nowhere does the article state whether the two groups received equal instruction time. The sample size used in this study was inadequate for statistical purposes. No empirical evidence is given to support the results given by Rogers and Ebinger. The instructional techniques utilized are not given, so one must take at face value the statement that Orff methodology was used.

The third and fourth studies deal with various methods of instruction. "The Relative Effectiveness of the Richard's and Gordon Approaches to Rhythm Reading for Fourth Grade Children" was investigated by Mary Henderson Palmer (1974). Palmer utilized a pre-test/post-test/control group design with two experimental groups. All groups were pre- and post-tested using the Music Aptitude Profile, Colwell's Music Achievement Tests I and II and Gordon's Iowa Tests of Music Literacy, Level One. Following the twenty week experimental period, post-tests were given to compare the groups in each of three categories: response to meter, imitation of rhythmic patterns, and response to rhythmic notation. Palmer found significant differences between the control group and the experimental groups in the three areas investigated. The treatment did
contribute significantly to each aspect of achievement. No significant differences were found between the two experimental groups on combined rhythm reading gain. However, when aptitude was held constant, the experimental group receiving the Gordon approach as treatment scored significantly better in performance at the 0.03 level.

McDaniel (1974) compared music achievement test scores of fourth graders taught using Kodaly and traditional methods. The purpose of this study was to determine if statistically significant differences existed in the musical achievement of students using the Kodaly method, as set forth in Richard's *Threshold to Music*, and the traditional method as set forth in *Making Music Your Own*. Two hundred sixty-nine fourth grade students were pre- and post-tested using Colwell's *Music Achievement Tests I, II, III*. Instruction during the eighteen lesson experimental period followed the sequence of either *Threshold to Music* or *Making Music Your Own*. Analysis of covariance was used to determine significant differences between the groups. The traditional group scored significantly higher than the Kodaly group in the area of pitch recognition. The group taught using Kodaly, *Threshold to Music*, regressed in the areas of interval recognition and melody recognition.

These studies seem to indicate a weakness in the Richard's method of instruction as opposed to Gordon's
method of rhythmic instruction and a traditional method of melodic instruction. Although Palmer found no significant differences between the experimental groups in combined rhythm reading gain, a significant difference was found in the area of performance. McDaniel's study found significant differences in melodic areas. A disturbing factor is the regression of the group instructed using Richard's *Threshold to Music* in two of the three criterion areas in McDaniel's study.

Stability of music aptitude was investigated by DeYarman (1975). DeYarman's sample consisted of 2980 children in four separate fourth grade classes from September, 1968 to June, 1972. Groups were assigned on the basis of year of entrance into kindergarten. Each group received differing amounts of instruction by a specialist in school years K-4. DeYarman found music aptitude to be stable in the primary grades, stabilizing by age six. Instructional differences made no significant differences on the Music Aptitude Profile.

If the child's music aptitude stabilizes at six, early training in music is imperative. This study underscores the need to begin music education as quickly as possible.

Russell Jones (1976) investigated the child's development of the concept of meter in music. Using a sample of
sixty-six elementary children, Jones tested each child individually using tasks derived from Piaget's theory of growth and development. The results of this study seem to indicate a developmental sequence of rhythmic understanding.

Dittemore's "An Investigation of Some Musical Capabilities of Elementary School Students" (1970) was designed to investigate the nature of children's specific musical capabilities at different grade levels in a school having a well structured music program. Dittemore used the Music Aptitude Profile to pre-test students in grades four, five and six. The Primary Measures of Music Audiation was used to pre-test students in grades one, two, and three. Following the pre-test, twelve songs were selected to evaluate the twelve musical capabilities. During the second week of the study, these songs were taught to the students by rote. Five minutes per song per class period was allotted for the teaching of songs designed to measure melodic and rhythmic capabilities. Ten minutes per song per class period was allotted for teaching songs designed to measure harmonic capabilities. At the end of the second week the students were individually tested. Student responses were recorded via a tape recorder and were evaluated by two music graduate students at the University of Iowa. Composite ratings were tabulated by grade and aptitude level. Dittemore concludes that different harmonic,
rhythmic and melodic capabilities are manifest in the average student at different grade levels. A logical sequence appears in the development of musical capabilities investigated (Dittemore, 1970).

Petzold's longitudinal five year study examined the auditory perception of musical sounds by children in grades one through six (Petzold, 1966). This study proposed to determine differences between children in the first six grade levels in the ways in which they perceive and respond to auditory presentation of sounds. Two basic rhythmic tests were developed. The rhythmic patterns test required students to repeat rhythmic patterns. Form one required a tapped response to an identical stimulus. Form two required a tapped response to a stimulus which is played on the piano. Form three required a response which was sung and tapped to a melodic and rhythmic stimulus. Student responses were tape recorded for analysis. The results of this test were obtained for two hundred eighty-eight children and showed significant differences at the 0.01 level between the grade levels. Neither sex, mode of presentation, or mode of response was a significant factor. However, in responses requiring both singing and tapping, the rhythmic response was generally more accurate.

The periodic beat test required students to tap a steady beat at various tempi. The periodic beat test with
continuous stimulus began at metronome marking 152. The child tapped with the metronome at 152 beats per minute, 120 beats per minute, 92 beats per minute, and 60 beats per minute for 40 to 60 stimulus beats at each of the four tempos. Following the tapping of 60 beats per minute, there was a brief pause to allow the child to rest. Then the child tapped the four tempi for 40 to 60 stimulus beats in the reverse order.

The periodic beat test with interrupted stimulus required the child to establish and maintain a steady beat with the metronome silent for periods of time. The number of beats per minute used were identical to those in the continuous stimulus section of the test. After the stimulus was presented for a number of beats, the metronome was silent and the child continued tapping. A brief rest period was given before beginning each section.

The results of the periodic beat test showed significant differences between tempo and grade level at the 0.01 level. The ability to respond accurately to a rhythmic pattern or maintain a steady beat does not change substantially after third grade. There was a tendency to tap faster than the metronome; tempos of 120 and 152 beats per minute were the most easily maintained regardless of grade level.
Sister Olivia Cox conducted a study focusing on the response of children in grades one through six to beat, meter, and rhythmic pattern (1977). Cox used Gordon's *Musical Aptitude Profile* to assess the aptitude and background of eight hundred twenty-three students. Students were then tested using three tests similar in format, routine, and mode of response. The tests were individually administered and student responses were tape recorded.

Cox found a continuous improvement in performance accuracy in grades one through six. The students were most accurate on the test measuring beat and least accurate on the meter test. A plateau seemed to be reached at grade two with regard to beat; however, rhythmic accuracy improved continuously throughout the grades. Response to meter showed little change through grade two. Between grades three and four, a marked difference was noted, however, less improvement was seen between grades five and six.

The studies of Cox, Dittemore, and Petzold lend credence to the work of Jones in developmental rhythm. In each study, grade level was a significant factor in performance on the criterion measure.

Robert deYarman (1971) sought to investigate the following questions pertaining to the rhythmic development of kindergarten and first grade children.
1. Do children taught to sing in duple and triple meters perform songs written in duple and triple meters better than children taught to sing in unusual and usual mixed meters?

2. Do children taught to sing songs written in mixed and usual meters perform these meters better than children given typical instruction?

Kindergarten children were divided into two groups, control and experimental. The control group was given one year of instruction in songs written in mixed, unusual, and usual meters. Following the instruction, the children were tested to determine answers to the research questions.

The children being instructed in usual, mixed, and unusual metric patterns performed significantly better on tests involving song material written in usual meters. This would seem to indicate that a wide range of rhythmic experiences can prepare children better for all aspects of rhythm including those experiences normally encountered. DeYarman's study, though relating to rhythmic instruction of kindergarten children, does not discuss the use of speech patterns and rhyming verses as an instructional tool.

Gardner's "Children's Duplication of Rhythmic Patterns" investigated the relationship between psychological processings and rhythmic organization. This study was a
replication of a previous study conducted by Stamback in 1951. The replication was conducted to add statistical procedures, specific norms, and to present a technique appropriate for assessment and training studies. Rhythmic duplication was selected for this study because of its relation to skill in motor activity, reading, organizing and recalling information, and music appreciation.

Subjects used in this study were twenty first graders, twenty third graders, and twenty sixth graders randomly selected from an elementary school containing a mixed predominantly middle class population. The children were given instructions to repeat rhythmic patterns heard via a tape recorder and patterns were played only one time. The child repeated the pattern immediately and responses were recorded via a second tape recorder. Each subject heard twenty items ranging from four to eight taps. Tapes of the sessions were played back and judged by the author and another judge as to accuracy.

Each subject received five scores representing the number of taps correct on each of the 4, 5, 6, 7, and 8 tap item groups. Significant differences were found between age groups, item groups, and individual subject groups using a repeated measures analysis of variance.

The researcher concluded that longer items are more difficult to reproduce than shorter ones. Older subjects
handle both types more successfully than younger subjects. The significance lies in the fact that the number of taps alone does not indicate difficulty in this study. An interesting follow-up study would involve some previous practice on the part of the children (Gardner, 1971).

Klanderman (1979) and Van Zee (1976) investigated aural discrimination in preschool children. Klanderman's study investigated the auditory perception and performance of pitch, rhythmic and melodic elements of singing by three, four and five year old children. The results indicated a significant difference in the rhythmic ability of three, four and five year olds.

Van Zee's study was designed to assess the ability of a random sample of kindergarten children to discriminate aurally differences in pitch, melodic contour, duration of tones, and rhythm patterns in selected musical stimuli; describe differences; and demonstrate an understanding of terms used to describe pitch, melodic contour, duration of tones and rhythm patterns.

Eighty randomly selected kindergarten students were individually tested in the four areas. Test selections were presented via a tape recorder and student responses were tape recorded. Van Zee found kindergarten children able to discriminate "same" and "different" easily in all four areas. The children had a more difficult time verbally
describing the differences; however, the children were able to demonstrate understanding of the differences through performance.

Van Zee concludes that kindergarten children are susceptible to training in discrimination and are more efficient in demonstrating an understanding of duration of tones and rhythm patterns than in verbalizing. She states physical movement plays an important role in developing musical understanding.

Edward Rainbow's (1981) longitudinal study investigating the rhythmic abilities of preschool aged children included the following tasks:

1. Estimate the ability of three year old children to learn successfully selected rhythmic tasks during the course of one school year,

2. Estimate the ability of four year old children to learn successfully selected rhythmic tasks during the course of one school year,

3. Compare the ability of three and four year old children to learn rhythmic tasks,

4. Estimate the learning difficulty rate for each selected rhythmic task at each age level,

5. Estimate the effect of training on the ability of preschool aged children to learn the selected rhythmic tasks.
Fourteen rhythmic tasks were selected. Five involved keeping a steady beat to recorded piano music. Tasks six, seven, and eight required the subject to echo words presented in a rhythm pattern. Tasks nine, ten, and eleven required the subject to clap back a vocalized rhythm pattern. Tasks twelve, thirteen, and fourteen required the subject to echo clap a rhythmic pattern. Responses were videotaped during the regular music class.

Rainbow found the subjects completed the tasks requiring vocal response more successfully than those requiring a physical response. Marching in time to music and echo clapping were very difficult for the children. The analysis of variance showed that older subjects performed significantly better on all tasks except six, seven, and eight. Rainbow concludes that three year old children are able to perceive and duplicate rhythm patterns if the proper method of response is used. As children get older, their abilities in this area improve.

The present study investigated which instructional techniques can be utilized to improve student learning and repetition of rhythmic phrases. Subjects were divided into control group and two experimental groups. Testing procedures and tests were discussed and analyzed in order to analyze the impact of the instructional methodology on the child's rhythmic development. The use of speech
patterns and rhyming verses as an instructional tool in teaching rhythmic phrases was investigated.

Summary

Music educators agree that early training in music is necessary for the child to reach his full musical potential (Caylor, 1979; Child, 1969; Cohen, 1974; Gordon, 1971; Meyers, 1977; Miller, 1977; Simons, 1979; Swanson, 1961). Gordon (1971) states that the musical aptitude of the child is set by age nine and that proper musical instruction prior to that age can raise the child's musical aptitude so that it is set at a higher level than it would have been without instruction. Thus, it is imperative that musical instruction begin at an early age to determine the child's musical aptitude, diagnose deficiencies in various areas, and prescribe treatment in the way of instruction (Gordon, 1971; Gordon, 1979).

Research in the psychology of music has offered several theories as to the method music in general and rhythm in particular is learned. Seashore's (1938) assertion that musicality is innate is in contrast to the theories of Lunden (1953) and Shuter (1968), which center on experience and environment. Gordon's (1971) theory of music aptitude is substantiated by deYarman (1975).

Three predominantly used methods of instruction are those attributed to Dalcroze, Orff, and Kodaly.
While these methods appear interrelated due to some of the instructional methodology used by each, the goals of each of these methods are quite different.

Dalcroze methodology seeks to teach music education through movement alone. All is related to movement or learning through the senses. Notation is not consciously taught, nor is music theory.

The Orff-Schulwerk method is experiential; however, the use of instruments and speech is added to the movement activities of Dalcroze. As in Dalcroze, theory is not emphasized.

Kodaly methodology emphasizes the conscious learning of theory and notation. Little work is done with movement or instruments. The instruments are used only to reinforce the music reading skills.

Research on teaching rhythm to young children shows that a wide variety of rhythmic experiences enables the child to perform both usual and unusual meters with greater ease (deYarman, 1971). While no empirical evidence was given, Rogers and Ebinger (1977) reported gains in several areas using Orff-Schulwerk methodology.

Studies conducted by Jones (1976), Dittemore (1970), Petzold (1966), Cox (1977), and Rainbow (1981) seem to indicate a developmental approach to musical learning. This would call for a developmental sequencing of the instructional tasks to be presented to the children. The work of
Klanderman (1979) indicates the aural discrimination ability of children is developmental. Van Zee (1976) concluded that kindergarten children were receptive to training in aural discrimination.

Studies by Palmer (1974) and McDaniel (1974) indicate musical training is necessary for improvement in criterion areas at the fourth grade level. While the methodology used in the experimental groups did not yield significant differences in all areas, some significant differences between the experimental groups were found.

The study conducted by Gardner investigated the ability of children to reproduce rhythmic patterns. This study did not involve methods of instruction; however, it did discuss the ability of a wide range of children to duplicate rhythmic patterns (Gardner, 1971).

These studies lead one to ask if there is an instructional method which can produce the optimal ability to repeat rhythmic phrases in young children. If so, this method could encourage listening skill development, gross motor skill development, and memory development, areas which contribute to general musicianship and to raising the developmental music aptitude of the child (Gordon, 1971).
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CHAPTER III

PROCEDURES FOR COLLECTING AND TREATING THE DATA

This chapter presents a description of the subjects, selection of the students, selection of the teachers, the training of the teachers, the instruments employed, and the procedures used in collecting and analyzing the data.

Description of Subjects

The school district selected for this study is located north of Dallas, Texas, and has approximately 30,069 students. The district covers a 104.06 square mile area and is classified as residential, 45 percent occupied by industry, and 2 percent classified as farm land. The ethnic composition of the district is 82.20 percent Anglo, 7.67 percent Black, 7.73 percent Spanish surname, and 1.75 percent Oriental. There are 31 elementary schools, 10 middle schools and 4 high schools in this district. At the time of this study, the population of students in kindergarten was 1,979.

Selection of Students

One hundred forty-three students participated in the study. Forty-five students were assigned to
Experimental group A. Experimental group A was taught rhyming verses containing twelve different rhythmic phrases such as "Hickory, Dickory, Dock" (see Appendix A). The children were taught the verses and were given practice clapping the rhythm of the words while they said the verses aloud, as well as repeating the rhythmic phrases without repeating the verses.

Forty-eight students were assigned to experimental group B. Experimental group B was taught to echo clap the rhythmic phrases contained in the verses. However, the children were not taught to associate the clapped rhythmic phrases with the verses.

Fifty students were assigned to the control group. The instruction of the control group emphasized songs, singing games, and seasonal activities. The children did not practice echo clapping or learn the verses.

All students participating in the experimental study were kindergarten age, between five and six years old.

Selection of Teachers

Elementary music teachers participating in the study were selected on the basis of their training in music education and the elementary school in which they taught. In order to be selected to participate in the study, the teacher must have had training in either Orff or Kodaly methodology. This training was necessary because the
instructional methods used in the lesson plans for experimental group A were based on Orff and Kodaly methodologies. Therefore, only elementary music teachers who had attended workshops, seminars, or taken coursework in either Orff or Kodaly methodology were considered for use in this study. A determination of teachers eligible to participate, using this criterion, was made by interviewing the elementary music consultant of the district. Fourteen of the twenty-eight elementary music teachers in the district were eligible to participate in this study, based on the previously mentioned criterion.

The second criterion for selection to participate in the study was the school in which the teacher was currently employed. Of the fourteen teachers eligible to participate in the study, seven teachers were employed in schools with a sufficient kindergarten population to allow for adequate sample size. These seven schools were judged by the ethnic make up of the kindergarten and the socio-economic status of the children. The three schools selected for use in the study had music teachers who had been trained in Orff or Kodaly methodology were similar in ethnic make up, and were similar in the socio-economic status of the students.
Training of the Teachers

The three teachers selected to participate in the study met with the investigator in August of 1982 to discuss the purpose of the study, receive lesson plans, and review Orff and Kodaly methodology.

Prior to pre-testing the students, the investigator provided each teacher with a folder containing lesson plans for one month (see Appendix D), a time sheet (see Appendix E), roll sheet (see Appendix F), copies of rhymes used in the study (see Appendix A), and copies of rhythms to be tested (see Appendix A).

The investigator conducted monthly training sessions with the teachers to familiarize them with new lesson plans (see Appendix D), and to discuss each teacher's work with the students.

Instruments Employed

Two instruments were selected to test the hypotheses of this study.

Primary Measures of Music Audiation

The rhythmic portion of the Primary Measures of Music Audiation was selected to ascertain the specific rhythmic aptitude of each child (Gordon, 1979). The Primary Measures of Music Audiation was administered in a pre-test/post-test design to measure the child's rhythmic aptitude
upon entering the experiment, and his rhythmic aptitude at the end of the ten week experimental period.

The **Primary Measures of Music Audiation** was normed on 875 children in grades kindergarten through three in the West Irondequort, New York school district. The reliability coefficients for the kindergarten children on the rhythmic test are Split-halves-.72, Test-retest-.60. These reliability coefficients probably result from a general lack of rhythmic experience on the part of the kindergarten children.

Inverse validity, assuring that the content of the **Primary Measures of Music Audiation** does not duplicate the content of other tests which are specifically designed for other purposes, was measured using scores of the children used to norm the **Primary Measures of Music Audiation** and their scores on various other academic and intelligence tests. The common variance of the **Primary Measures of Music Audiation** and the various academic and intelligence tests was below the 15 percent level; thus the **Primary Measures of Music Audiation** has met this criterion for validity (Gordon, 1979).

**Test of Rhythmic Repetition**

The **Test of Rhythmic Repetition** is a test constructed by the investigator designed to measure the specific ability to repeat rhythmic phrases. The design of the test is
as follows. Twelve rhythmic phrases commonly found in children's rhymes were selected for use in the experiment. Six of these phrases were written in simple meter and six were written in complex meter (see Appendix A). Five nursery rhymes (see Appendix A) were selected containing these rhythmic phrases. A small number of rhymes was desired due to the ten week time period of the study and the young age of the children involved in the study.

An instructional tape recording was made by the investigator. The instructions were read by the elementary music consultant of the district, a person whose voice is unfamiliar to the children. The children were instructed to listen very carefully to the claps they heard on the tape and clap back exactly what they heard. The rhythmic phrases were clapped by the investigator using the metronome marking of 69 for the tempo. This tempo was selected because it is slow enough to clap the rhythms easily, yet not ponderous. The recorded tape was used to pre-test and post-test all the children involved in the study.

This method of testing, that of repeating or "echoing" back a pattern, is a duplication of an instructional technique currently used in teaching rhythm to kindergarten children in Garland. It is a method with which the children and teachers are familiar and was the primary instructional
technique employed throughout the lesson plans provided by the investigator for the teachers (see Appendix D). The reliability of this instrument was tested using interrater reliability. The overall reliability coefficient was 0.95332.

Procedures for Collecting Data

The elementary music teachers selected to participate in the study were made aware during the in-service training period in August of 1982 that their students would be pre-tested in September, 1982, and post-tested in December, 1982, using the Primary Measures of Music Audiation and the Test of Rhythmic Repetition. They were aware that the purpose of the study was to determine a method of rhythmic instruction that produced optimal general and specific rhythmic achievement as measured by these two instruments.

The instruction of the control group emphasized songs, singing games, and seasonal activities. The music teachers were instructed not to engage the children in any type of rhythmic activity. This included echo clapping, patting, clapping to the beat of rhymes, chants, music, or patschen while the children said their names in rhythm.

The instruction of experimental group B included the singing games, songs, and seasonal activities taught to the control group. In addition, the instruction of this group emphasized rhythmic activities such as patting or marching
to the beat of music and rhymes. The children in experimental group B were also taught to echo clap the rhythmic phrases (see Appendix A) contained in the rhyming phrases selected for testing (see Appendix A). The teacher clapped or patted these rhythmic phrases and the children repeated or "echoed" the rhythmic phrase. However, the children in this group were not taught the rhyming phrases or to associate the clapped rhythmic phrases with the rhyming phrases.

The instruction of experimental group A included the songs, singing games, and seasonal activities taught to the control group and the echo clapping and rhythmic activities taught to experimental group B. In addition, the children in experimental group A were taught rhyming verses containing six different simple rhythmic phrases such as "Burney Bee, Burney Bee" and six different complex rhythmic phrases such as "Hickory, Dickory, Dock" (see Appendix A).

The children were taught the rhyming phrases and were given practice clapping the rhythm of the words while they said the rhyming phrases, and practice echo clapping the rhythm of the words.

Following the ten week experimental period, the children were post-tested using the Primary Measures of Music Audiation and the Test of Rhythmic Repetition. Only the test scores of children receiving eight of the ten treatments were included in the analysis of data.
Administering and Scoring the Testing Instruments

The Primary Measures of Music Audiation (see Appendix C) was administered to intact kindergarten classes as a pre-test and post-test under identical conditions in September and December of 1982. The investigator administered the Primary Measures of Music Audiation to the control group at two of the three schools. The Primary Measures of Music Audiation was administered to the other groups by the elementary music teacher and the kindergarten teachers. The administration to the other groups was separate from the administration to the control group due to the scheduling of morning and afternoon kindergarten in Garland.

During the administration of the test, the administrator stopped the tape after each question to allow the children adequate time to circle the answer of their choice. A count of five was allowed for each of the first two questions. On the rest of the first page, the test administrator stopped the tape after each question and counted aloud to three to allow the children adequate time to circle the answer of their choice. On the second page of the test, the tape was not stopped after each question. However, the test administrator did stop the tape at the end of each row to ensure that all the children found the beginning of the next row. The test took approximately 45 minutes to
administer as a pre-test, and 30 minutes to administer as a post-test. The time discrepancy may be due to the familiarity of the children with the test procedures on the post-test.

The Test of Rhythmic Repetition was individually administered to each child by the investigator. The test was administered using two tape recorders, an instructional tape recording, in an isolated area to ensure consistency of testing methods. Each child was told he would play a listening game. The investigator instructed the child to listen carefully to what the lady whose voice he heard on the instructional tape recording said and clapped and to clap back exactly what he heard. The investigator then started both tape recorders. The child heard instructions and clapped rhythmic phrases via the tape recorder playing the instructional tape recording; the instructions, clapped rhythmic phrases, and child's responses to each phrase were recorded via a second tape recorder.

The tape recorder playing the instructional tape was stopped following each rhythmic phrase to allow the child to respond. If the child requested to hear the item again, the investigator replayed the item.

The answer sheets for the Primary Measures of Music Audiation (see Appendix C) were scored by the investigator using scoring masks provided by the publisher with the tests.
Scoring of the Test of Rhythmic Repetition was done by a panel of three experts. This panel consisted of the investigator, an elementary music teacher not otherwise involved in the experiment, and the elementary music consultant of the district. The investigator met with the scorers during the month of November to discuss scoring procedure and provide the scorers with a set of score sheets (see Appendix A) and tape recordings of the student responses.

Each scorer listened to the student response tape and scored each response on a scale from four to zero. If the student repeated the rhythmic phrase perfectly, he was assigned a score of four for that phrase. If one beat was repeated incorrectly, a score of three was assigned. If two beats were clapped incorrectly, a score of two was assigned and so forth so that if the entire phrase was clapped incorrectly, a score of zero was assigned.

The scorer then tallied the scores of each student with a total of 48 points being possible. Each child's scores from all three scorers were summed and a mean score was derived for each child. The mean score was then used in the analysis of data.

The consistency of the scorers in assigning scores was determined using a test of interrater reliability. The test was conducted three ways, between all three
pre-tests and the three post-tests; between the three pre-tests; and between the three post-tests. The reliability coefficient for the first test between the three pre-tests and the post-tests was 0.95332. The reliability coefficient for the second test between the three pre-tests was 0.96360. The reliability coefficient for the third test between the three post-tests was 0.97713.
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CHAPTER IV

PRESENTATION AND ANALYSIS OF THE DATA

The effect of rhythmic instruction using rhyming phrases as the instructional method was analyzed. An original population of one hundred seventy-eight students was reduced to one hundred forty-three due to student absence and withdrawal from school. The dependent variables were the post-test scores on the Primary Measures of Music Audiation and the Test of Rhythmic Repetition. Independent variables were the three treatment groups. The covariates were the Primary Measures of Music Audiation pre-test and the Test of Rhythmic Repetition pre-test scores.

Analysis of covariance was conducted for each hypothesis as stated in Chapter I. The six research hypotheses were stated in null form for testing, and the 5 percent level of confidence was used to determine rejection.

Table I presents the mean, median, mode, range of scores and standard deviation of student post-test scores on the Test of Rhythmic Repetition.
TABLE I

MEAN, MEDIAN, MODE, RANGE OF SCORES, AND STANDARD DEVIATION OF SCORES ON THE POST-TEST OF THE TEST OF RHYTHMIC REPETITION

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<th></th>
<th>Mean</th>
<th>Median</th>
<th>Mode</th>
<th>Range of Scores</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>29.04</td>
<td>27</td>
<td>24,32, 35,37, 40,41, 42</td>
<td>2-46</td>
<td>12.040</td>
</tr>
<tr>
<td>Experimental B</td>
<td>40.41</td>
<td>42</td>
<td>45</td>
<td>12-48</td>
<td>7.62</td>
</tr>
<tr>
<td>Experimental A</td>
<td>38.68</td>
<td>39</td>
<td>44,46</td>
<td>20-48</td>
<td>7.93</td>
</tr>
</tbody>
</table>

Table I indicates that the post-test mean and median of experimental group B were higher than those of the other two groups. The mode of experimental group A was higher than that of experimental group B and the control group. Experimental group A obtained a smaller range of scores although the standard deviation of this group is slightly larger than that of experimental group B.

For purposes of clarity, the various hypotheses have been grouped as they relate to the two post-tests.
Effects of Teaching Rhythm Using Rhyming Verses and Repetition of Rhythmic Phrases as Reported by the Test of Rhythmic Repetition

Hypothesis One

Research hypothesis one was restated to read as follows. There will be no significant difference in test scores on the Test of Rhythmic Repetition of kindergarten children who are taught rhyming phrases and are also provided rhythmic practice (experimental group A) and test scores of kindergarten children who have been provided with only rhythmic practice (experimental group B).

As reported in Table II, analysis of covariance yielded an F of 18.1269, which was significant beyond the .001 level.

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>DF</th>
<th>Sum of Squares</th>
<th>Mean Square</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
<td>2</td>
<td>1446.7852</td>
<td>723.3926</td>
<td>18.1269</td>
<td>0.0000</td>
</tr>
<tr>
<td>Within</td>
<td>138</td>
<td>5507.1875</td>
<td>39.9072</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>140</td>
<td>6953.9727</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As reported in Table III, the adjusted group mean for experimental group A was 37.2899. The adjusted group mean
TABLE III
STUDENT MEANS FOR THE TEST OF RHYTHMIC REPETITION

<table>
<thead>
<tr>
<th></th>
<th>Post-Test Means</th>
<th>Pre-Test Means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Adjusted</td>
<td>Unadjusted</td>
</tr>
<tr>
<td>Experimental A</td>
<td>45</td>
<td>37.2899</td>
</tr>
<tr>
<td>Experimental B</td>
<td>48</td>
<td>39.0613</td>
</tr>
<tr>
<td>Control</td>
<td>50</td>
<td>31.4815</td>
</tr>
</tbody>
</table>

for experimental group B was 39.0613. Scheffe's multiple comparisons test was conducted to determine which adjusted means differed significantly. The obtained F ratios are presented in Table IV. The critical value necessary for

TABLE IV
OBTAINED F RATIOS USING SCHEFFE'S MULTIPLE COMPARISONS

<table>
<thead>
<tr>
<th></th>
<th>Control</th>
<th>Experimental B</th>
<th>Experimental A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>0.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experimental B</td>
<td>35.257*</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>Experimental A</td>
<td>20.0226*</td>
<td>1.8262</td>
<td>0.00</td>
</tr>
</tbody>
</table>

*P<.01
rejection of the null hypothesis was 6.14. The obtained F ratio for these two groups was 1.8262 which was less than the critical value; therefore, the null hypothesis that there were no significant differences between experimental group A and experimental group B was not rejected.

**Hypothesis Three**

Research hypothesis three was restated to read as follows. There will be no significant difference in test scores on the Test of Rhythmic Repetition of kindergarten children who are taught rhyming phrases and are also provided rhythmic practice (experimental group A) and test scores of kindergarten children who are not taught rhyming phrases and have not been provided with rhythmic practice (control group).

Analysis of covariance yielded an F of 18.1269, which was significant beyond the .001 level (see Table II). As reported in Table III, the adjusted group mean for experimental group A was 37.2899. The adjusted group mean for the control group was 31.4815. Scheffe's multiple comparisons test was conducted to determine which adjusted means differed significantly. The obtained F ratios are presented in Table IV. The critical value necessary for rejection of the null hypothesis was 6.14. The obtained F ratio for these two groups was 20.0226, which was greater than the critical value; therefore, the null hypothesis that there were no significant
differences between experimental group A and the control group was rejected.

**Hypothesis Five**

Research hypothesis five was restated to read as follows. There will be no significant difference in test scores on the Test of Rhythmic Repetition of kindergarten children who have been provided with only rhythmic practice (experimental group B) and test scores of children who have not been provided with rhythmic practice or been taught rhyming phrases (control group).

Analysis of covariance yielded an F of 18.1269, which was significant beyond the .0001 level (see Table II). As reported in Table III, the adjusted group mean for experimental group B was 39.0613. The adjusted group mean for the control group was 31.4815. Scheffe's multiple comparisons test was conducted to determine which adjusted means differed significantly. The obtained F ratios are presented in Table IV. The critical value necessary for rejection of the null hypothesis was 6.14. The obtained F ratio for these two groups was 35.257, which is greater than the critical value; therefore, the null hypothesis that there were no significant differences between experimental group B and the control group was rejected.
Table V presents the mean, median, mode, range of scores, and standard deviation of scores on the post-test of the Primary Measures of Music Audiation.

### TABLE V

**MEAN, MEDIAN, MODE, RANGE OF SCORES, AND STANDARD DEVIATION OF SCORES ON THE POST-TEST OF THE PRIMARY MEASURES OF MUSIC AUDIATION**

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Median</th>
<th>Mode</th>
<th>Range of Scores</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>24.08</td>
<td>24</td>
<td>29</td>
<td>10-34</td>
<td>5.033</td>
</tr>
<tr>
<td>Experimental B</td>
<td>25.96</td>
<td>26</td>
<td>29</td>
<td>14-35</td>
<td>4.76</td>
</tr>
<tr>
<td>Experimental A</td>
<td>27.18</td>
<td>27</td>
<td>32</td>
<td>15-38</td>
<td>5.21</td>
</tr>
</tbody>
</table>

Table V indicates that the post-test mean, median, mode, and range of scores of experimental group A were all higher than those of the other two groups. However, the standard deviations of both the control group and experimental group B were smaller than that of experimental group A.
Effects of Teaching Rhythm Using Rhyming Verses and Repetition of Rhythmic Phrases as Reported by the Primary Measures of Music Audiation

Hypothesis Two

Research hypothesis two was restated to read as follows.

There will be no significant difference in test scores on the Primary Measures of Music Audiation of kindergarten children who are taught rhyming phrases and are also provided rhythmic practice (experimental group A) and test scores of kindergarten children who have been provided with only rhythmic practice (experimental group B).

As reported in Table VI, analysis of covariance yielded an F of 1.7054, which was not significant at the 0.05 level.

**TABLE VI**

**ANALYSIS OF COVARIANCE RESULTS FOR THE PRIMARY MEASURES OF MUSIC AUDIATION**

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>DF</th>
<th>Sum of Squares</th>
<th>Mean Square</th>
<th>F</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
<td>2</td>
<td>66.5684</td>
<td>33.2842</td>
<td>1.7054</td>
<td>0.1855</td>
</tr>
<tr>
<td>Within</td>
<td>138</td>
<td>2693.3931</td>
<td>19.5173</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>140</td>
<td>2759.9614</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As reported in Table VII, the adjusted group mean for experimental group A was 26.3924. The adjusted group mean
TABLE VII
STUDENT MEANS FOR THE PRIMARY MEASURES OF MUSIC AUDIATION

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Post-test Means</th>
<th></th>
<th>Pre-test Means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Adjusted</td>
<td>Unadjusted</td>
<td></td>
</tr>
<tr>
<td>Experimental A</td>
<td>45</td>
<td>26.3924</td>
<td>27.18</td>
<td>23.88</td>
</tr>
<tr>
<td>Experimental B</td>
<td>48</td>
<td>25.9926</td>
<td>25.96</td>
<td>22.43</td>
</tr>
<tr>
<td>Control</td>
<td>50</td>
<td>24.7539</td>
<td>24.08</td>
<td>21.36</td>
</tr>
</tbody>
</table>

for experimental group B was 25.9926. Therefore, a decision was made not to conduct multiple comparisons between the two groups. The null hypothesis, that there were no significant differences between experimental group A and experimental group B, was not rejected.

Hypothesis Four

Research hypothesis four was restated to read as follows. There will be no significant difference in test scores on the Primary Measures of Music Audiation of kindergarten children who are taught rhyming phrases and are also provided rhythmic practice (experimental group A) and test scores of kindergarten children who are not taught rhyming phrases and have not been provided with rhythmic practice (control group).
Analysis of covariance yielded an $F$ of 1.7054, which was not significant at the 0.05 level (see Table VI). As reported in Table VII, the adjusted group mean for experimental group A was 26.3924. The adjusted group mean for the control group was 24.7539. Therefore, a decision was made not to conduct multiple comparisons between the two groups. The null hypothesis, that there were no significant differences between experimental group A and the control group, was not rejected.

**Hypothesis Six**

Research hypothesis six was restated to read as follows. There will be no significant difference in test scores on the Primary Measures of Music Audiation of kindergarten children who have been provided with only rhythmic practice (experimental group B) and test scores of kindergarten children who have not been provided with rhythmic practice or been taught rhyming phrases (control group).

Analysis of covariance yielded an $F$ of 1.7054, which was not significant at the 0.05 level (see Table VI). As reported in Table VII, the adjusted group mean for experimental group B was 25.0026. The adjusted group mean for the control group was 24.7539. Therefore, a decision was made not to conduct multiple comparisons between the two groups. The null hypothesis, that there were no significant
differences between experimental group B and the control group, was not rejected.

Discussion

The results of this study provide evidence that some rhythmic ability of kindergarten students can be positively influenced by deliberate instructional efforts. The significant differences between group means on the Test of Rhythmic Repetition which favor both experimental groups and the trend favoring the experimental groups on the Primary Measures of Music Audiation merit further investigation into the raising of rhythmic ability of kindergarten children through instructional methods.

The most interesting finding of the study centers around the lack of significant difference between adjusted mean scores of experimental groups A and B on the Test of Rhythmic Repetition. According to the methodology of Kodaly and Orff, rhyming verses should have increased student understanding and memory of the rhythmic phrases (Landis and Carder, 1974; Rogers and Ebinger, 1997). Therefore, the test scores of experimental group A should have been significantly higher than those of experimental group B.

In actuality, not only were no significant differences found between the adjusted mean scores of the two experimental groups, but also the adjusted mean score of experimental group B was higher than that of experimental
group A. This fact seems to raise a question about the assertion that the use of rhyming verses is a most efficient instructional tool in teaching rhythmic phrases to children.

The higher mean score of experimental group B may be due to the simplified method of instruction used in teaching this group. Instead of teaching rhythm through rhyming verses, teachers simply asked the children in this group to echo clap each rhythmic phrase. These students concentrated on repeating each phrase by clapping and did not have to remember rhyming phrases in addition to the rhythmic phrase.

Similarly the failure of experimental group A to score significantly higher than experimental group B on this test may be due to the addition of the rhyming phrases to the echo clapping. This addition may have caused confusion on the part of the children. Instead of concentrating on the rhythmic phrase, children may have become confused in trying to associate the rhythmic phrase with the rhyming verse and failed to remember the rhythmic phrase correctly.

The significant differences between the control group and both experimental groups seems to substantiate the theories that environment or experience is a significant factor in the child's musical development (Lunden, 1953; Shuter, 1968). Gordon's (1971) theory that developmental music aptitude can be impacted by instruction is substantiated by the significant differences between the groups.
The higher mean score of experimental group A on the Primary Measures of Music Audiation may indicate that the method of instruction used with this group, while failing to raise post-test scores significantly above those of experimental group B on the Test of Rhythmic Repetition, has an impact on the general rhythmic ability of the child.

The lack of significant differences between the group mean score on the Primary Measures of Music Audiation may be due to the developmental capabilities of the child at this age. The tasks required by the Primary Measures of Music Audiation may be such that the child becomes naturally capable of success as he progresses developmentally. The studies of Jones (1976), Dittemore (1970), Petzold (1966), Cox (1977), Klanderman (1979) indicate a natural improvement in melodic and rhythmic tasks as the age of the child increases. Gordon's (1971) theory of developmental music aptitude is substantiated by the gains in test scores. However, Gordon's (1979) assertion that instruction will increase developmental aptitude seems to be refuted.

The ten week experimental period seems to have given the children time to make developmental gains. This is substantiated by the improvement of all three groups in all areas. Therefore, the instructional method did not significantly impact test scores.
CHAPTER BIBLIOGRAPHY


CHAPTER V

SUMMARY, FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

The present research study was an investigation of the influence of rhyming verses on young children's ability to repeat rhythmic phrases. Teachers were given a training session during the in-service period in August of 1982 and training sessions were conducted by the investigator on a monthly basis. In addition, the investigator contacted each teacher weekly to ascertain the time used by the teacher in teaching the methods and insure consistency of teaching methods. Lesson plans for the three groups were provided by the investigator at the monthly meetings. The students were pre-tested in September of 1982 and post-tested in December of 1982.

The purpose of the study was to determine if the teaching of rhyming phrases and verses containing rhythmic phrases facilitates the learning of rhythmic phrases by young children.

A total of 143 kindergarten children completed the study. Three elementary schools participated in the study. Three kindergarten classes were randomly selected from each of the three participating schools and randomly assigned to
either experimental group A, experimental group B, or the control group. In selecting the schools, consideration was given to the kindergarten population, ethnic composition of each school, socio-economic levels of the children attending each school, and the training of the elementary music teacher assigned to each school. In order to participate in the study, the elementary music teacher must have been trained in either Orff or Kodaly methodology.

Two instruments were employed in the experimental study. The Test of Rhythmic Repetition was an instrument constructed by the investigator to measure the specific ability to repeat rhythmic phrases. This test was individually administered by the investigator to each child as a pre-test and post-test. The test was graded by three experts to insure scorer reliability.

The statistical procedure applied to the test results was analysis of covariance. The 0.05 level of significance was selected for rejection of the null hypotheses. The dependent variable was the post-test score on the Test of Rhythmic Repetition. The covariate was the pre-test score.

Comparisons were made between the adjusted group means, and P values were reported for significance at the 0.05 level. When the analysis of covariance reported significance between the adjusted group means, Scheffe's post-hoc multiple comparisons were run. This test reported
significant differences between each experimental group mean and the control group mean. No significant difference was found between the two experimental group means. The findings of the Scheffe post-hoc multiple comparisons were reported with significance being set at the 0.05 level. The mean, median, mode, range of scores, and standard deviations were reported on all groups so that differences could be analyzed.

The rhythmic portion of the Primary Measures of Music Audiation was the second instrument employed in the study. This instrument is designed to measure general rhythmic aptitude in very young children. This test was administered as a pre-test and post-test to the kindergarten students in intact classes. The tests were scored by the investigator using scoring masks provided with the test. The statistical procedure applied to the Primary Measures of Music Audiation test results was analysis of covariance. The 0.05 level was selected for rejection of the null hypotheses. The dependent variable was the post-test score. The covariate was the pre-test score.

Comparisons were made between the adjusted group means, and P values were reported for significance at the 0.05 level. When the analysis of covariance failed to report significant differences between the adjusted group means, a decision was made not to conduct post-hoc multiple comparisons. The mean, median, mode, range of scores, and
standard deviations for each group were reported so that the differences could be analyzed.

Findings

The major findings resulting from analysis of statistical data presented in this study were as follows.

1. No statistically significant differences at the 0.05 level were obtained between the adjusted post-test means of experimental group A and experimental group B on the Test of Rhythmic Repetition.

2. No statistically significant differences at the 0.05 level were obtained between the adjusted post-test means of experimental group A and experimental group B on the Primary Measures of Music Audiation.

3. Statistically significant differences at the 0.05 level were obtained between the adjusted group means of experimental group A and the control group on the Test of Rhythmic Repetition.

4. No statistically significant differences at the 0.05 level were obtained between the adjusted post-test means of experimental group A and the control group on the Primary Measures of Music Audiation.

5. Statistically significant differences at the 0.05 level were obtained between the adjusted group means of experimental group B and the control group on the Test of Rhythmic Repetition.
6. No statistically significant differences at the 0.05 level were obtained between the adjusted post-test means of students in experimental group B and the control group on the **Primary Measures of Music Audiation**.

**Conclusions**

Based on the findings of this study, the following conclusions seemed justified.

1. Rhythmic instruction including rhyming phrases and repetition of rhythmic phrases does not appear to benefit the general rhythmic ability of kindergarten children as measured by the **Primary Measures of Music Audiation**.

2. The general rhythmic ability of kindergarten children does not appear to benefit more from rhythmic instruction which emphasizes rhyming phrases in addition to repetition of rhythmic phrases than from instruction based only on repetition of rhythmic phrases.

3. Rhythmic instruction including rhyming phrases and repetition of rhythmic phrases does increase kindergarten children's ability to repeat rhythmic phrases as measured by the **Test of Rhythmic Repetition**.
4. Student ability to repeat rhythmic phrases appears to benefit equally from instruction based on repetition of rhythmic phrases and from instruction emphasizing rhyming verses in addition to repetition of rhythmic phrases.

Recommendations

On the basis of findings and conclusions of this study, the following are recommended.

1. Exploration of new methods and techniques to develop general rhythmic ability and aptitude in kindergarten students should be attempted.

2. A longitudinal study of the students in experimental groups A and B would be justified in order to determine if post-test differences on both instruments between the two groups continued.

3. A longitudinal study of the students in experimental groups A and B would be justified to determine if post-test differences would continue to be significantly greater than the post-test scores of the control group.

4. Results of this study indicate that students given rhythmic instruction emphasizing rhyming phrases and repetition of rhythmic phrases score significantly higher on instruments designed to measure the ability
of students to repeat rhythmic phrases than students who are not given this instruction. Therefore, it is recommended that schools teaching music to kindergarten children incorporate these methods in the training of their elementary music personnel.
APPENDICES
APPENDIX A

The Test of Rhythmic Repetition
The Test of Rhythmic Repetition is a test constructed by the investigator designed to measure young children's ability to repeat rhythmic phrases. The children will be instructed to listen very carefully to the rhythmic phrases clapped on the tape recorder and to repeat them (echo the phrase). Each phrase will be clapped once and the child's response recorded via another recorder.

Children's responses will be scored by a panel of three experts. If a child repeats the phrase perfectly, he will receive a score of four for that phrase. If a child claps one beat incorrectly, he will receive a score of three for that phrase and so forth so that a child clapping all beats of a phrase incorrectly would receive a score of zero on the phrase.

**Instructions**

"Listen very carefully to the claps you hear on the tape and try to clap back exactly what you hear. First it is my turn, (claps are heard on the instruction tape). Now it is your turn, (child claps the example). Now listen again, you will hear several different groups of claps. After each one, it will be your turn to clap back exactly what you heard. Try to do your very best. Number one ..."
Examples of Rhyming Verses
Simple

1. *Burney Bee, Burney Bee,*  
   *Tell me when your wedding be,*  
   If it be tomorrow day,  
   Spread your wings and fly away.

2. *Lucy Locket lost her pocket,*  
   *Kitty Fisher found it.*  
   Not a penny was there in it,  
   Just a ribbon around it.

3. *Peas porridge hot,*  
   *Peas porridge cold,*  
   *Peas porridge in the pot,*  
   Nine days old.

Complex

1. *Hickory, Dickory, Dock,*  
   *The mouse ran up the clock.*  
   *The clock struck one, the mouse ran down,*  
   Hickory, Dickory, Dock.

2. *Nose, nose, jolly red nose,*  
   *And what gave thee that jolly red nose?*  
   *Apples and cinnamon, spices and cloves,*  
   And they gave me that jolly red nose.

*Indicates speech patterns to be used in testing.
Scoring Sheet
<table>
<thead>
<tr>
<th>Name</th>
<th>Group</th>
<th>School</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Rhythmic Phrase

<table>
<thead>
<tr>
<th>No.</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>0 1 2 3 4</td>
</tr>
<tr>
<td>2.</td>
<td>0 1 2 3 4</td>
</tr>
<tr>
<td>3.</td>
<td>0 1 2 3 4</td>
</tr>
<tr>
<td>4.</td>
<td>0 1 2 3 4</td>
</tr>
<tr>
<td>5.</td>
<td>0 1 2 3 4</td>
</tr>
<tr>
<td>6.</td>
<td>0 1 2 3 4</td>
</tr>
<tr>
<td>7.</td>
<td>0 1 2 3 4</td>
</tr>
<tr>
<td>8.</td>
<td>0 1 2 3 4</td>
</tr>
<tr>
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<td>0 1 2 3 4</td>
</tr>
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<td>10.</td>
<td>0 1 2 3 4</td>
</tr>
<tr>
<td>11.</td>
<td>0 1 2 3 4</td>
</tr>
<tr>
<td>12.</td>
<td>0 1 2 3 4</td>
</tr>
</tbody>
</table>
APPENDIX B

Letter of Permission From The District
September 13, 1982

Ms. Mary Jane Alexander
3714 Matador Dr.
Garland, Texas 75042

Dear Ms. Alexander:

The research council has concluded their evaluation of your application to conduct a research study in the Garland Independent School District. It with pleasure that I inform you that the council approved your study, "The Influence of Speech Patterns on Young Children's Repetition of Rhythmic Phrases."

You may begin data collection activities in our district any time after September 13, 1982. Notify my office in writing of the date that you will begin your data collection activity and the date on which it will be concluded. Barbara Mason will be your contact person for the district and will assist you by coordinating data collection. You should inform the subjects that your research project has been approved by the Planning, Research, and Evaluation Department.

Three copies of your application to conduct a research study may be picked up from the PRE office. If we do not hear from you within two weeks regarding this, these applications will be discarded. The remaining materials will be maintained in our files.

Speaking for the research council, I wish you the best of success in your research efforts and look forward to receiving a copy of your report. Upon completion, your report should be filed with the Planning, Research, and Evaluation Department. If I may assist in any way, please contact me.

Sincerely yours,

Michael W. Strozeski, Ph.D.

MWS/FS
APPENDIX C

The Primary Measures of Music Audiation
The Primary Measures of Music Audiation is designed to act as an objective aid to the teacher and to the parent in helping each child in kindergarten and grades one, two and three to develop and make the best use of his music aptitudes. The rhythmic portion of the test is designed to evaluate the rhythmic aptitudes of each young child. Through this analysis, appropriate formal and informal instruction can be provided to meet the child’s individual music needs at any developmental period. The test also may be used to identify young children who can profit from the opportunity to participate in additional group study and special private instruction in and out of school. Another use of the test is the evaluation of the rhythmic aptitudes of each young child as compared to the rhythmic aptitudes of other children of similar age. Through this analysis, appropriate formal and informal instruction can be provided further to meet the child’s individual needs at any developmental period.

The Primary Measures of Music Audiation is a tape recorded group test of short music phrases. The rhythm section is recorded on a separate tape and includes practice examples with forty test questions. A child does not need to know how to read a language or music or know numbers in order to use the answer sheet. The child answers the questions presented on the tape by making circles around pictures on the answer sheet.
Each test tape includes approximately 12 minutes of listening time, and 20 minutes of administration. The verbal directions which are read to the children are standardized.

Example: "Find the truck at the top of your paper and put your finger on it. There are two boxes under the truck. The box on top has two faces that are the same because both faces are happy. Put your finger on that box. The box on the bottom has two faces that are different because one face is sad and the other face is happy. Put your finger on that box. Can you guess why there is a circle drawn around the box on top? Listen and I will tell you why. I will play the song that goes with the truck boxes. You will hear the word TRUCK; then, as before, you will hear the word FIRST and the first part of the song, and then you will hear the word SECOND and the second part of the song.

At this point, the tape is started and two identical phrases are played.

"There is a circle drawn around the box with the two faces that are the same because the two parts of the song sound the same."

The test continues in this manner. The tape gives the clue such as, "Truck, Ball, or Apple."

The children find the boxes under that picture. Two rhythmic phrases are played, and the child circles the box containing the appropriate pictures.
Answer Sheet for the Primary Measures of Music Audiation
APPENDIX D

Lesson Plans
Week 1

Control Group

Teacher: Sing "Good Morning Children" on Sol-Mi.
Teach the children to respond, "Good morning teacher.", by having them echo on Sol-Mi.

Sing "How are you today Class?" on Sol-Mi.
Teach the children to respond, "Very fine, thank you." by having them echo on Sol-Mi.

Sing each child's name in the class on Sol-mi, and have the class echo.

Teach the song "Lucy Lockett."

Lucy Lockett lost her pocket, Kitty Fisher
Not a penny was there in it, just
a ribbon around it.

Teach the circle game "Lucy Lockett."
Game: The children stand in a circle. One child is selected to be Lucy Lockett and she walks around the outside of the circle carrying the "pocket," while the children sing the song. At the end of the song, "Lucy" drops the "pocket" behind one of the other children. That child picks up the "pocket" and chases "Lucy" around the circle. If Lucy returns to his/her place before the other child catches him/her, the new child becomes "Lucy."

Sing "Goodbye boys and girls," on Sol-Mi.
Teach the children to respond, "Goodbye teacher" by having them echo on Sol-Mi.
Week 1

**Experimental Group B**

Teacher: Teach the children to sing "Good morning teacher," and "Very fine, thank you," as specified in the plans for the Control Group.

Speak each child's name in rhythm to the steady beat and have the class echo.

Ask the children to listen very carefully to what you are about to clap and try to clap back just like you do. Clap the first three simple rhythm patterns. Pause after each one to allow the class to echo you. If the class does not repeat the patterns correctly, clap each pattern once more and allow them to echo it again.

Teach the song "Lucy Lockett" to the children as specified on the plans for the Control Group and play the game for the remaining time.

Teach the children to sing, "Goodbye teacher," as specified in the plans for the Control Group.

**Experimental Group A**

Teacher: Teach the children to sing "Good morning teacher," and "Very fine, thank you," as specified in the plans for the Control Group.

Speak each child's name in rhythm to the steady beat and have the class echo.

Tell the children that they are going to learn a new rhyme today about a bee who is going to get married. Ask them to listen carefully while you say the rhyme. Say Burney Bee. Now, tell the children you are going to say a little of Burney Bee and then it will be their turn. Speak one measure of Burney Bee and ask the children to echo.

Teach the rhyme Luck Lockett in the same manner as Burney Bee.

Teach the children to sing "Goodbye teacher" as specified in the plans for the Control Group.
Week 2

Control Group

Teacher: Sing "Good morning children" on Sol-Mi.

Class: Answers, "Good morning teacher," on Sol-Mi.

Teacher: Sing, "How are you today class?," on Sol-Mi.

Class: Answers, "Very fine, thank you," on Sol-Mi.

Henceforth, the previous part of the lesson will be referred to as the "Greetings."

Teacher: Teach the children a new song. Ask the children to listen carefully while you sing the song and see if they can tell you what the song is about. Sing Engine Number Nine for the children.

\[
\begin{align*}
S & S & M & M & S & S & M & S & S \\
4 & 4 & & & d & & & & I \\
4 & 4 & & & & & & & d \\
\end{align*}
\]

Engine, engine number nine. Going down the central line. See it sparkle, see it shine. Engine,

\[
\begin{align*}
M & M & & & & & & & d \\
M & M & R & R & D & & & & &
\end{align*}
\]

T and C: Children and teacher discuss the subject of the song, trains.

Teacher: Sing the song one phrase at a time.

Class: Echo.

Teacher: After the class has echoed the song successfully and can sing the song through without stopping, ask the children to stand up and form a train.

T and C: Sing the song while walking around the room like a train.

Teacher: Sing goodbye as specified in plans for week 1.

Class: Sing goodbye as specified in plans for week 1.
Week 2

Experimental Group B

T and C: Greetings

T and C: Say names in rhythm.

Teacher: Tell the children that today we will do something new with our names. We will say our names while we pat our knees. Show the children how to pat their knees to the steady beat while saying your name in rhythm. Say several children's names in rhythm to the steady beat. Ask the children to pat their knees with you and say their names one at a time. After each child says his name, the class will echo.

Class: Pats their knees with the teacher. Each child says his name while he pats his knees and the class echoes.

Teacher: Remind the children of the clapping you did last week. Tell them that we are going to practice clapping again today. First they are to listen carefully to what you clap, then they are to clap back just what they heard. Clap the first three simple rhythm patterns. Then clap the next three simple rhythm patterns.

Class: Echo claps one rhythm pattern at a time.

Teacher: Remind the children of the song, "Lucy Lockett." Sing the song with the children.

T and C: Sing "Lucy Lockett."

Teacher: Teach the children how to play the circle game as outlined in the plans for Control Group in Week 1.

T and C: Play "Lucy Lockett."

T and C: Sing "Goodbye."

Experimental Group A

T and C: Greetings

T and C: Say names

Teacher: Teach the children how to pat their knees and say their names in rhythm as specified in the plans for Experimental Group B, week 2.
Week 2

**Experimental Group A (Continued)**

Teacher: Ask the children if they remember the rhymes they learned last week in class. Remind them of the rhymes, "Burney Bee," and "Lucy Lockett." Tell the children that you are going to practice saying the rhymes. First you'll practice Burney Bee. You will say a little of Burney Bee and they will echo you.

Teacher: Say Burney Bee one phrase at a time.

Children: Echo

T and C: Say all of the rhyme together.

Teacher: Now tell the class you are going to do something new with Burney Bee. Ask the class to listen carefully and tell you just what you are doing that is different. Say the rhyme and clap the rhythm of the words. Now ask the class to echo again only this time, you will clap each word as well as say the rhyme.

Class: Echos one line at a time, saying the words and clapping the rhythm of the words.

Teacher: Tell the class that you can do the same thing with "Lucy Lockett" that you did with "Burney Bee." Show them how to say Lucy Lockett while you clap the rhythm of the words. Ask the class to echo you while you say Lucy Lockett and clap the rhythm of the words.

Class: Echos Lucy Lockett one line at a time, saying the words and clapping the rhythm of the words.

T and C: Sing Goodbye.

Week 3

**Control Group**

T and C: Greetings

T and C: Sing names

Teacher: Show the children the sand blocks and let each child play with them. Tell the children you are going to play a game with the sand blocks.
Week 3

Control Group (Continued)

Remind the children of the song "Engine, Engine Number 9." Ask the children to sing the song with you.

T and C: Sing "Engine, Engine Number 9."

Teacher: Now ask the children to make a train. Choose one child to play the sand blocks while the train walks around the room. Continue singing and walking until all the children have had a turn to play the sand blocks.

T and C: Walk around the room singing "Engine, Engine Number 9," and playing the sand blocks.

T and C: Stop at the door and sing goodbye.

Experimental Group B

T and C: Greetings

T and C: Pat knees and say names to beat.

Teacher: Remind the children that last week they clapped six special rhythms. Ask the children to listen carefully while you clap each rhythm pattern. After you clap, it will be their turn to echo just what you clap. Review the six simple rhythm patterns by echo clapping with the children.

Class: Echo claps the six rhythm patterns.

Teacher: Teach the children a new song, "Engine, Engine Number 9." Teach the song in the manner specified in the plans for the control group, Week 2.

Class: Echos the song.

T and C: Make a train and march around the room singing "Engine, Engine Number 9."

T and C: Sing goodbye at the door.

Experimental Group A

T and C: Greetings

T and C: Pat knees and say names in rhythm to the beat.
Week 3

Experimental Group A (Continued)

Teacher: Ask the children if they remember the rhyme, "Burney Bee." Ask the children to say "Burney Bee with you.

T and C: Say "Burney Bee."

Teacher: Ask the children to say "Burney Bee" again and to clap every word.

T and C: Say "Burney Bee" clapping every word. If the class is unsuccessful, repeat the rhyme one line at a time and have the children echo. Then ask them to do the entire rhyme again.

Teacher: Ask the children if they remember "Lucy Lockett."
Ask the children to say "Lucy Lockett" with you. Ask the children to listen carefully while you say the rhyme and clap every word. Then ask the children to listen again and after you say and clap each line of the rhyme, it will be their turn to echo you. Be sure to repeat any line they miss.

T and C: Say and Echo Lucy Lockett.

T and C: Sing goodbye.

Week 4

Control Group

T and C: Greetings

T and C: Sing names

Teacher: Tell the children you have a new song to teach them. Ask them to listen carefully while you sing the song, then it will be their turn to echo you. Sing "Rise, Sally Rise."

Class: Listens then echoes the song.
Control Group (Continued)

Here sits a mousie, in her little housie.
No one comes to see her except her grandma mousie.
Rise Sally rise, wipe your sleepy eyes.

Turn to the east and turn to the west and

Teacher: Ask the children if they know what month it is.
Class: Answers that the month is October.
Teacher: Ask the children what happens in October.
Class: Answers that during October we celebrate Halloween.
Teacher: Tell the children that now you are going to teach them a Halloween song. They are to listen very carefully while you sing the song and after you have finished, they will echo you.

Tell me how you fly.
Tell me what you see.
Tell me what you do.

Tell me how you fly. I fly on a broom stick
Tell me what you see. I see a jack-o-lantern
Tell me what you do. I come on Halloween and

High in the sky.
Looking at me.
Scare you Boo!

Class: Echos the song.
T and C: Sing the song with appropriate motions.
Week 4

Control Group (Continued)

T and C: Sing "Engine Number 9"

T and C: Sing Goodbye.

Experimental Group B

T and C: Greetings

T and C: Pat knees and say names in rhythm to beat.

Teacher: Tell the children that they are going to do some echo clapping. First it will be your turn. You clap the six simple rhythmic phrases.

Class: Echos the six simple rhythmic phrases.

Teacher: Tell the class that you are going to clap some new patterns and they must listen very carefully. Clap the six complex rhythmic phrases. Be sure to repeat the phrase if the class has trouble echoing.

Class: Echos the complex rhythmic phrases.

Teacher: Now teach the children "Old Mrs. Witch" as specified in the plans for the Control Group Week 4.

T and C: Sing Engine Number 9 to the door.

T and C: Sing Goodbye.

Experimental Group A

T and C: Greetings

T and C: Pat knees and say names in rhythm to beat.

Teacher: Tell the children that today they're going to learn a new rhyme. Ask them to listen carefully to you say the rhyme and then echo you. Teach Peas Porridge Hot.

Class: Echos. (Many of the children may already know this rhyme. If this is the case, review it briefly and go on to "Nose, Nose Jolly Red Nose.")
Week 4

Experimental Group A (Continued)

Teacher: Tell the children that you are going to teach them another new rhyme. Teach in the manner specified in Week one for Burney Bee.

After teaching both rhymes tell the children that you will now say each rhyme and clap every word. First have the children echo you one line at a time, then ask the children to say and clap each rhyme in its entirety. Say and clap all four rhymes.

Class: Says and claps all four rhymes.

Teacher: Tell the children you are going to teach them a new song. Teach "Old Mrs. Witch" in the manner specified in the plans for the Control group, Week 4.

T and C: Make a train, sing "Engine Number Nine" while marching to the door.

T and C: Sing Goodbye.

Week 5

Control Group

T and C: Greetings

T and C: Sing names

Teacher: Ask the children if they remember the song about the mouse that they learned last week. Sing "Rise, Sally, Rise," have the children echo you one phrase at a time. They sing the entire song.

Class: Echoes the song, then sings it without echoing.

Teacher: Tell the children that now they will play a game while singing the song.

Game: Children stand in a circle. One child is selected to be Sally. Sally sits in the center of the circle and does appropriate motions to the words while the other children sing the song.
Week 5

Control Group (Continued)

Ex.: Rise--Sally stands; wipe your sleepy eyes--Sally wipes his/her eyes; Turn to the East--Sally turns around, hand extended, pointing in front of him/her. The child Sally is pointing to at the end of the song, on the word "best" is the new Sally. If Sally is male, you may use his name instead of Sally. Play the game until all of the children have had a turn.

Now ask the children to sing, "Old Mrs. Witch."

Class: Sings "Old Mrs. Witch" with appropriate motions.

Teacher: Tell the children you have another Halloween song for them.

Song: To the tune of One Little, Two Little, Three Little, Indians.

"One little, two little, three little, witches. Fly over haystacks, fly over ditches. Fly around the moon without any hitches. Hey! Ho! Halloween's here."

T and C: Sing the song with appropriate motions.

T and C: Sing "Engine, Engine Number Nine and make a train; walk to the door."

Experimental Group B

T and C: Greetings

T and C: Pat knees, say names in rhythm to the beat.

Teacher: Tell the children that now the class is going to clap its rhythmic phrases. Echo clap all twelve rhythmic phrases, some may have to be repeated two or three times.

Class: Echos rhythmic phrases.

Teacher: Tell the class that you have a new song for them to learn:
Week 5

Experimental Group B (Continued)

\[
\begin{array}{cccc}
D, D, D, M & S & M & M \\
F, F, R & R & R & D
\end{array}
\]

See my feet go walking, walking up the street.

See my feet go walking, listen to their beat.

Teacher:  

\[
\begin{array}{cccc}
\times & \times & \times & \times \\
\end{array}
\]

Class:  

\[
\begin{array}{cccc}
\times & \times & \times & \times \\
\end{array}
\]

T and C: Sing "Old Mrs. Witch."

Teacher: If there is time, teach "One Little, Two little, Three Little Witches," follow method specified in Control Group lesson plans, Week 5.

T and C: Sing Engine Number Nine and make a train; march to the door.

T and C: Sing Goodbye.

Experimental Group A

T and C: Greetings

T and C: Pat knees, say names in rhythm to the beat.

Teacher: Ask the children to say the rhymes with you. Say the four rhymes learned to this point.

Now tell the children you are going to teach them a new rhyme -- "Hickory, Dickory, Dock." Teach the rhyme by having the children echo you phrase by phrase.

T and C: Clap the rhythm of all the rhymes while saying the words.

Teacher: Teach the children, "One little Two little Three little, Witches," following the manner specified in Control Group lesson plans, Week five.

T and C: Sing Old Mrs. Witch.
Week 5

Experimental Group A (Continued)

T and C: Sing Engine, Engine Number Nine; make a train and march to the door.

T and C: Sing Goodbye.

Week 6

Control Group

T and C: Greetings

T and C: Sing names.

Teacher: Tell the children you have a new song for them, one they can play a game with.

Song: The Goblin in the Dark

Tune: The Farmer in the Dell

Words: "The goblin in the dark, the goblin in the dark. High ho the scarey oh, the goblin in the dark.

The goblin picks a ghost, the goblin picks a ghost. High, ho the scarey oh, the goblin picks a ghost.

The ghost picks a witch, the ghost picks a witch. High, ho the scarey oh, the ghost picks a witch.

The witch picks a broom, etc.

The broom picks a cat, etc.

The cat picks a bat, etc."
Control Group (Continued)

Game: All the children stand in a circle. One child is chosen to be a goblin. He/she is given a construction paper goblin to hold. During the verse, this child selects a child to be the ghost. The ghost is given a construction paper ghost to hold. The game continues until all the shapes have been given out, at this point the game is begun again with a new "goblin" and played until each child has had a turn.

T and C: Play game

T and C: Sing Halloween songs. If there is time, teach the children another new Halloween song, "Halloween is Coming."

Song:

```
S  S  M  L  S  M

"Halloween is coming. Oh what fun for me."

D,  D,  D,  D,  M,  S,  S,  S,  S,  D,

Watch the things I do, and guess what I will be.
```

While the children sing the song, one child acts out what he/she will be on Halloween. Following the song, the other children try to guess what the child will be. The one who guesses correctly gets to act out who he will be.

T and C: Sing Engine, Engine, Number Nine. Make a train and walk to the door while singing.

T and C: Sing goodbye.

Experimental Group B

T and C: Greetings

T and C: Pat knees, say names in rhythm to the beat.

T and C: Sing Names

T and C: Echo clap all rhythmic phrases. Be sure to repeat any phrases the children have trouble with.
Week 6

Experimental Group B (Continued)

Teacher: Teach the Goblin in the Dark by echoing each Phrase as specified in the lesson plans for the Control Group, Week 6.

T and C: Sing the "Goblin in the Dark" and play the game as specified in the lesson plans for the Control Group, Week 6.

T and C: Sing "Old Mrs. Witch," and "One Little, Two Little, Three Little, Witches."

T and C: Sing "Engine, Engine, Number Nine," make a train and march to the door while singing.

T and C: Sing goodbye.

Experimental Group A

T and C: Greetings

T and C: Pat knees and say names to beat.

T and C: Sing names.

T and C: Say all five rhymes.

T and C: Say all five rhymes while clapping the rhythm of the words.

Teacher: Teach "Goblin in the Dark" by echoing as specified in the lesson plans for the Control group, Week 6.

T and C: Sing "Goblin in the Dark" and play the game as specified in the lesson plans for the Control Group, Week 6.

T and C: Sing "Old Mrs. Witch" and "one Little, Two Little, Three Little, Witches."

T and C: Sing "Engine, Engine, Number Nine," make a train and march to the door while singing.

T and C: Sing Goodbye.
Week 7

Control Group

T and C: Greetings

T and C: Sing names

Teacher: Tell the children you have a new story for them. Tell the story of the frog and the bird using the poster and story provided. (This story deals with high and low sounds.) Discuss high and low sounds with the children. Have them identify examples of sounds as either high or low.

Teach the children a new song: "Up the Ladder".

```
Up the ladder we must go, sometimes fast and sometimes slow. Step by step and never stop, 'till we reach the top.
```

```
Down the ladder we must go, sometimes fast and sometimes slow. Step by step and sound by sound, 'till we reach the ground.
```

Teach "Up the Ladder" by having the children echo you phrase by phrase.

Tell the children you are going to teach them a new Thanksgiving song, "High Ho the Wagon." Ask them to listen very carefully and echo you phrase by phrase (or one line at a time).
Week 7

Control Group (Continued)

Song: "High Ho the Wagon"

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High ho the wagon, pumpkins piled so high.

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High ho the wagon, good old pumpkin pie.

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High ho the wagon, turkey comes to town.

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High ho the wagon, turkey roasted brown.

T and C: Sing "Engine, Engine Number Nine." Make a train and walk to the door.

T and C: Sing Goodbye

Experimental Group B

T and C: Greetings

T and C: Pat knees and say names in rhythm to the beat.

Teacher: Tell the children that today you have a new friend for them to meet. (Bring out the marionette which has been provided.) Tell them that this friend is going to help them sing a song they already know, "See My Feet Go Walking." Sing the song with the children and ask them to march to the beat just like their friend does, (move the feet of the marionette in time to the beat of the music). The song is found in the lesson plans for this group, Week 5.

T and C: "See My Feet Go Walking"

T and C: Clap all twelve rhythm patterns beginning with number twelve. Repeat any patterns the children have difficulty with.
Week 7

**Experimental Group B (Continued)**

Teacher: Tell the children you are going to tell them a special story about a frog and a bird. Tell the story provided for the Control group, Week 7, using the poster. Discuss high and low sounds with the children.

Teacher: Tell the children that now you are going to teach them a new Thanksgiving song. Teach "Hi Ho the Wagon," as outlined in the plans for the Control Group, Week 7. (If there is time, include "Up the Ladder," in this week's plans prior to "Hi Ho the Wagon."

T and C: Sing "Engine, Engine Number Nine." Make a train and march to the door.

T and C: Sing Goodbye.

**Experimental Group A**

T and C: Greetings

T and C: Pat knees and say names in rhythm to the beat.

T and C: Sing names

T and C: Say all rhymes then say the rhymes and clap the rhythm of the words.

Teacher: Tell the class that now you are going to play a game. You will clap a part of the rhyme without saying the words and they will tell you the words that go with it. (Go over all twelve rhythms in this way)

T and C: Play "Rise Sally Rise" as specified in the plans for the Control Group, Week 5.

T and C: Sing "Engine, Engine Number Nine." Make a train and march to the door.

T and C: Sing Goodbye.
Week 8

Control Group

T and C: Greetings

T and C: Sing names

Teacher: Tell the class that you are going to learn a new song today and play a new game with that song.

Song: The Farmer in the Dell
Tune: Traditional
Verses: 1. The Farmer in the Dell
2. The Farmer Takes a Wife
3. The Wife Takes a Child
4. The Child Takes a Dog
5. The Dog Takes a Cat
6. The Cat Takes a Rat
7. The Rat Takes the Cheese
8. The Cheese stands alone
9. The Farmer in the Dell

Game: The children stand in a circle around the farmer. As the children march around the farmer, he chooses a wife who joins him in the center. The wife chooses the child and so forth until the cheese is chosen. When the cheese is chosen the others leave the center of the circle and the cheese "stands alone". This person becomes the farmer for the next game.

T and C: Sing "Hi Ho the Wagon."

Teacher: Tell the children you are going to teach them another new Thanksgiving song.

Song: Five Fat Turkeys

4
4 D, D, R E M D, S, S, D, D, R
"Five fat turkeys are we, we slept all night
M M D, S, S, S, D, D, D, R R
in a tree. When the cook came around, we
M M M F F S M D, S,
couldn't be found. So that's why we're here,
T, D, D, you see"
Week 8

Control Group (Continued)

T and C: Sing "Engine, Engine Number Nine." Make a train and walk to the door.

T and C: Sing Goodbye.

Experimental Group B

T and C: Greetings

T and C: Pat knees and say names in rhythm to the beat.

T and C: Sing names

T and C: Echo clap all rhythms in random order, giving emphasis to those rhythms the children have difficulty repeating.

Teacher: Teach the song, "The Farmer in the Dell" and the game to go with it as specified in the plans for the Control Group, Week 8.

Class: Sing and play, "The Farmer in the Dell."

T and C: Sing all Thanksgiving songs.

T and C: Sing "Engine, Engine Number Nine," make a train and march to the door in rhythm to the beat of the song.

T and C: Sing Goodbye.

Experimental Group A

T and C: Greetings

T and C: Pat knees and say names in rhythm to the beat.

T and C: Sing names

T and C: Say all the rhymes and clap the rhythm of the words.

Teacher: Tell the class now they are going to try something new. Ask them to try to clap the rhythm of the words to the rhymes without saying the words.
Week 8

Experimental Group A (Continued)

Class: Claps the rhythm of the words to the rhymes.

Teacher: Teach the song, "The Farmer in the Dell" and the game to go with it as specified in the plans for the Control Group, Week 8.

Class: Sing and play, "The Farmer in the Dell."

T and C: Sing all Thanksgiving songs.

T and C: Sing "Engine, Engine Number Nine," make a train and march to the door in rhythm to the beat of the song.

T and C: Sing Goodbye.

Week 9

Control Group

T and C: Greetings

T and C: Sing names

Teacher: Ask the children what holiday we will celebrate during the month of November. Ask them why we celebrate Thanksgiving. After several have answered, explain why we celebrate this holiday. After a brief explanation, tell the children that you are going to read them a story about the very first Thanksgiving. (Read Hooray for Thanksgiving, do not teach the special parts this first time through). After the first reading, tell the class that now they will be able to do something very special. Explain that this time when you read the story, they will get to say special parts. Teach the special parts for each of the characters in the story.

T and C: "Hooray for Thanksgiving"

Teacher: Tell the children that now they will learn a new song about Pilgrim and Indian children. Teach the song by having the children echo you.
Week 9

Control Group (Continued)

Song: Plymouth Town

Tune: One Little, Two Little, Three Little Indians

Verses: 1. Pilgrim children dressed in gray,  
on that first Thanksgiving Day.  
Indian children dressed in brown,  
came to visit Plymouth town.

2. 'Round the table gathered all,  
underneath the elm tree tall,  
On that first Thanksgiving Day,  
children bowed their heads to pray.

T and C: Sing all other Thanksgiving songs.

T and C: Sing, "Engine, Engine Number Nine," make a train  
and walk to the door.

T and C: Sing Goodbye.

Experimental Group B

T and C: Greetings

T and C: Pat knees and say names in rhythm to the beat.

T and C: Sing names

T and C: Echo clap all twelve rhythms in a random order.  
Be sure to give emphasis to those rhythms the  
children have difficulty repeating.

Teacher: Teach, "Hooray for Thanksgiving." Follow method  
specified in the lesson plans for the Control  
Group, Week 9.

Teacher: Teach "Plymouth Town" following method specified  
in the lesson plans for the Control Group, Week 9.  
After teaching the song, ask the children to  
sing the song and pat the steady beat.
Week 9

Experimental Group B (Continued)

T and C: Sing "Engine, Engine Number Nine," make a train and march to the door in rhythm to the beat of the song.

T and C: Sing Goodbye.

Experimental Group A

T and C: Greetings

T and C: Pat knees and say names in rhythm to the beat.

T and C: Sing names

T and C: Say all rhymes and clap the rhythm of the words.

Teacher: Tell the children they are going to play the listening game again. You will clap a part of one of the rhymes, they echo you and then tell you the words that go with the rhythm they clapped.

T and C: Clap and echo all twelve rhythms, the children tell the teacher the words that go with the clapped rhythmic phrase.

Teacher: Discuss Thanksgiving with the children. Then tell them the Thanksgiving story, "Hooray for Thanksgiving." Teach the story and activity as outlined in the lesson plans for the Control Group, Week 9.

Teacher: Ask the children to play a memory game with you. Tell them you want to see if they can clap the words to each rhyme without saying anything. (Start the children on each rhyme but have them clap the majority of the rhyme without assistance).

T and C: If there is time remaining, sing the previously learned Thanksgiving songs.

T and C: Sing "Engine, Engine Number Nine," make a train and march to the door in rhythm to the song.

T and C: Sing Goodbye.
Week 10

**Control Group**

T and C: Greetings

T and C: Sing names

Teacher: Ask the children if they remember what you talked about last week. Discuss Thanksgiving with the children to refresh their memory.

Ask the children if they remember the story you told them about Thanksgiving. Review what each character in the story said, ex.: Puritan women—"Mercy Me!". Tell the children that today they will do something new with the story. Divide the class into four parts, two sections of boys and two sections of girls. These say the parts for the Indian men and women and the Puritan men and women. All the children say the parts for the Puritan minister, turkeys, corn.

T and C: "Hooray for Thanksgiving."

Teacher: Tell the children that today is a special day. Today they are going to learn about some musical instruments. Ask the children to close their eyes and listen carefully. While their eyes are closed, play a drum. Ask the children what they heard, after several responses, show the drum. Play the instrument for the children, then allow each child to carefully play the drum. Continue in this manner for the triangle, tambourine and sandblocks.

T and C: Sing all Thanksgiving songs.

T and C: Sing "Engine, Engine Number Nine," make a train and walk to the door.

T and C: Sing Goodbye.

**Experimental Group B**

T and C: Greetings

T and C: Pat knees and say names in rhythm to the beat.

T and C: Sing names
Week 10

Experimental Group B (Continued)

T and C: Thoroughly review all rhythmic phrases. Clap rhythmic phrases in order one through twelve and in a random order. Concentrate on any phrases the children seem to be having difficulty echo clapping.

Teacher: Review "Hooray for Thanksgiving" as specified in the lesson plans for the Control Group, Week 10.

T and C: Perform "Hooray for Thanksgiving as specified in the lesson plans for the Control Group, Week 10.

Teacher: Introduce the instruments as specified in the lesson plans for the Control Group, Week 10.

T and C: Sing all Thanksgiving songs.

T and C: Sing Engine, Engine Number Nine, make a train and march to the door on the steady beat.

T and C: Sing Goodbye.

Experimental Group A

T and C: Greetings

T and C: Pat knees and say names in rhythm to the beat.

T and C: Sing names

T and C: Thoroughly review all rhythmic phrases and speech patterns.
1. Say all rhymes and clap every word.
2. Teacher claps the rhythmic phrases and the children echo clap and tell the words that go with each phrase.
3. The children clap the speech patterns without speaking the words.

Teacher: Review "Hooray for Thanksgiving" as specified in the lesson plans for the Control Group, Week 10.

T and C: Perform "Hooray for Thanksgiving" as specified in the lesson plans for the Control Group, Week 10.
Week 10

**Experimental Group A (Continued)**

T and C: Sing all Thanksgiving songs. (If there is time, introduce the instruments as specified in the lesson plans for the Control Group, Week 10.)

T and C: Sing Engine, Engine Number Nine, make a train and march to the door on the steady beat.

T and C: Sing Goodbye.
APPENDIX E

Master Time Sheet
### MASTER TIME SHEET

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APPENDIX F

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