The Effects of Rhyme and Music on the Acquisition of Early
Phonological and Phonemic Awareness Skills

Tiffany J. Bostelman

Submitted to the Master of Arts in Education Program
of Defiance College
in partial fulfillment of
the requirements for the degree of
Masters of Arts in Education

July 2008

Dr. Fred W. Coulter, Advisor

Dr. Jo Ann Burkhardt, Coordinator,
Master of Arts in Education Program
Chair, Division of Education
Abstract

Sixteen preschool students enrolled in a preschool participated in this study. The purpose of this project was to determine if integrating rhymes and music with early reading instruction increased preschool students’ basic phonemic and phonological awareness skills. The effects of rhyme and music on the acquisition of these skills were made through the use of a phonics program that utilized rhyme as a means of instruction. The change in students’ phonological and phonemic awareness was measured by four monthly assessments using the Dynamic Indicators of Basic Emergent Literacy Skills. Results indicated that as a class, students improved in their early literacy skills.
Acknowledgements

I would like to acknowledge special people who helped me complete this project. First of all, a big thank you goes out to Dr. Fred Coulter who stuck with me and kept me focused on completing this project. Secondly, I would like to thank my boyfriend Thad for his patience and support while I finished this important project. I would also like to thank parents and grandparents for their support and encouragement for without it I could have never have remained as focused and dedicated as I am today.
Table of Contents

**Chapter I: Introduction**
- Statement of the Problem 6
- Justification 7
- Definition of Terms 8
- Limitations 9

**Chapter II: Review of Literature**
- Conclusion 10

**Chapter III: Methods and Procedures**
- Participants 26
- Treatment/Intervention 27
- Instruments/Protocols 30
- Procedures 31
- Timeline 34
- Data Analysis 34
- Conclusion 35

**Chapter IV: Results**
- Letter Naming Fluency 36
- Initial Sound Fluency 37
- Summary 38

**Chapter V: Discussion**
- Meaning of Findings 41
- Summary 44
- Recommendations 44
- Conclusions 45
List of Figures

<table>
<thead>
<tr>
<th>Figures</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Figure 1. Letter Naming Fluency</td>
<td>38</td>
</tr>
<tr>
<td>Figure 2. Initial Sound Fluency</td>
<td>40</td>
</tr>
</tbody>
</table>
CHAPTER 1: INTRODUCTION

As a new preschool teacher, the researcher was looking for ways to improve her students' early literacy skills. She first examined the professional literature regarding phonemic awareness, phonological awareness, and rhyme and music instruction. A review of the professional literature (Armbruster, Lehr, and Osborn, 2001; Gromko and Joyce, 2005; Lombardo, 2005; Mann and Foy, 2003/2006; and Neuman, 2005) indicated the importance of the instruction of phonemic and phonological awareness and how rhyme and music assisted in this instruction. From her observations in several classrooms where she taught added to the students' performance on screenings, she came to the hypothesis that using engaging rhymes and music would be beneficial to her students' early literacy skills. Based on the professional literature and her observations, she decided to investigate implementing a rhyme and music early phonics program for her graduate project to determine if this approach did indeed increase the students' early literacy skills.

Statement of the Problem

The purpose of this project was to determine if integrating rhymes and music with early reading instruction increased preschool students' basic phonemic and phonological awareness. The research questions were (1) How was phonemic awareness defined, according to the professional literature? (2) According to the literature reviewed, how was phonological awareness defined? (3) What was the relationship between phonological and phonemic awareness, according to the professional literature reviewed? (4) What were the benefits of using rhyme and music to early reading instruction as indicated in the professional literature? (5) How
had rhyme and music been successfully integrated with early reading instruction as described in the professional literature reviewed? (6) Did using rhymes and music help preschool students increase their basic phonological and phonemic awareness?

Justification

The justification for the necessity of this project was based upon the researcher's observation of her preschool classrooms. During play based activities in the classrooms, the researcher noticed the students knew few, if any, letters besides those that began their first and last names. Additionally, students lacked the ability to recognize initial sounds in words during their “Get It, Got It, Go!” screening, which tested for early literacy skills. Also, during an IEP meeting with one student’s dually enrolled public preschool teacher, she was told that this student only recognized one letter of the alphabet compared to his peers who recognized several.

Based on the information gathered from observing the early literacy screening as well as the IEP meeting about one of her students, it was the hope of the researcher to raise basic phonological and phonemic awareness of her preschool students through the integration of music and rhyme during early literacy instruction. The researcher expected to determine whether implementing music and rhyme in her early literacy instruction increased her students’ basic phonological and phonemic awareness. The researcher hoped this instruction would assist her students in being successful in kindergarten and beyond. She hoped to use the results to determine whether she could continue implementing similar instruction with future preschool students. The researcher also wished to share this information with her co-workers in
order to better the instruction of all the children within the preschool where she taught.

Definition of Terms

**Grapheme**: Smallest part of a word that represents the sound. (Armbruster, Lehr, & Osborn, 2001)

**Onset-rime**: Parts of spoken language that are not phonemes. Onset is the initial consonant. (Armbruster et al, 2001)

**Phoneme**: Smallest part of spoken language that changes the meaning of words. (Armbruster et al, 2001)

**Phonemic awareness**: The ability to hear, identify, and work with the phonemes in words. (Armbruster et al, 2001)

**Phonics**: The understanding of the relationship between graphemes and phonemes. (Armbruster et al, 2001).

**Phonological awareness**: The term that incorporates phonemic awareness, onset-rime, rhymes, words, and syllables. (Armbruster et al, 2001)

**Preschool**: Federally funded pre kindergarten experience for 3- to 5-year-old typically and atypically developing children.

**Rime**: Contained the vowel and remaining consonants. (Armbruster et al, 2001)

**The Phonics Dance**: A phonics program developed by Ginny Dowd that utilizes rhymes to instruct students in the learning of basic phonological and phonemic awareness. (Dowd, 1999)
Limitations

The research for this project was limited to a rural Midwestern preschool; therefore, the research done in this study was only applicable to a particular setting. Also, students ranged in age from three to five years old and were mixed in developmental level that could influence overall class performance by having students who score very high on the assessment or very low.

Another limitation to the researcher’s study included the instructional time each child received. Each child in the classroom had the option to participate in the daily teacher led activities. Children were allowed to move on to other activities during this time if they chose to do so. This was a limitation because students received varying amounts of teacher led instruction each day; therefore, no child received the same amount of instruction throughout the week. Due to these limitations, the result of this study cannot be generalized to other preschool classrooms.
CHAPTER II: REVIEW OF LITERATURE

Introduction

The purpose of this project was to determine if integrating rhymes and music with early reading instruction increased low income preschool students' basic phonemic and phonological awareness. The research questions were (1) How was phonemic awareness defined, according to the professional literature? (2) According to the literature reviewed, how was phonological awareness defined? (3) What was the relationship between phonological and phonemic awareness, according to the professional literature reviewed? (4) What were the benefits of using rhyme and music to early reading instruction as indicated in the professional literature? (5) How had rhyme and music been successfully integrated with early reading instruction as described in the professional literature reviewed? (6) Did using rhymes and music help preschool students increase their basic phonological and phonemic awareness?

Research question (1): How was phonemic awareness defined according to the professional literature reviewed?

The information to answer research question one was found through a review of the professional literature. The information obtained seemed to fit into three sections: basic definition, information regarding components of phonemic awareness, and information on the instruction of phonemic awareness.

Basic Definition.

Armbruster, Lehr, and Osborn (2001) found that many people confuse the term phonemic awareness with phonics. Phonemic awareness, they continued was not phonics. Phonics was the understanding that sounds work together to make words.
Gromko and Joyce (2005) added that phonemic awareness involved the ability to hear these individual sounds in words, which were called phonemes. They also added that phonemic awareness concerned the structure of words and the analysis of those words needed at the basic phoneme level started with hearing the similarities and differences in each individual phoneme.

A more thorough definition of a phoneme was given by Armbruster et al. (2001). They stated that a phoneme was the very basic sound in a word. They added that each phoneme comprised the words meaning and that children were able to notice, think, and work with these individual sounds.

Returning to the definition of phonemic awareness, Gromko and Joyce (2005) continued by stating that phonemic awareness moved in a logical order, from word awareness to phoneme awareness. This meant that children discriminated between the sounds of different words before that of individual phonemes. Lombardo (2005) added to this statement by saying that this development was strongly linked to letter-sound knowledge. In conclusion, Gromko and Joyce continued, phonemic awareness was an important predictor of early reading success.

Components of Phonemic Awareness.

Armbruster et al. (2001) explained that there was more to phonemic awareness than just the definition. Phonemic awareness, they continued, was composed of several different components and these components included phoneme isolation, phoneme identity, phoneme categorization, phoneme blending, phoneme segmentation, phoneme addition and deletion, and phoneme substitution. Armbruster et al. defined each of these components.
To begin, Armbruster et al. (2001) stated that phoneme isolation involved children’s ability to hear and distinguish between each sound in a word. They further explained, hearing the same sound in different words was known as phoneme identity. After developing the previous, Armbruster et al. continued, children moved into phoneme blending and this involved children blending the individual phonemes to create and read words.

As children continued in their development, Armbruster et al. (2001) found that children progressed to phoneme categorization, which meant they were able to pick the odd word in a set of three or four similar words. They stated that understanding of the advanced components of phonemic awareness were demonstrated when children not only recognized odd words out, but they began to recognize words when phonemes were added, subtracted, and changed around. These components, Armbruster et al. explained were known as phoneme addition, deletion, and phoneme substitution all of which were included in phonemic awareness instruction.

*Instruction.*

Phonemic awareness and all its above stated components were considered a teachable skill, according to Armbruster et al. (2001). Neuman (2004) added that the teaching of this skill must be continuous throughout the early childhood years. Gromko and Joyce (2004) also stated that instruction in phonemic awareness included letter-sound correspondences alongside letter naming fluency. The reason for this, they explained, was that teaching letters to young children gave them a concrete representation of the phonemes they were hearing. They found that this helped
children internalize the letter-sound relationship. Armbruster et al agreed with this statement and further added that students needed to be taught phonemic awareness alongside letters of the alphabet. They continued to say that this type of instruction allowed children to understand how this skill related to their reading and writing.

In summary, phonemic awareness was a teachable skill that required readers to identify and manipulate individual phonemes in spoken words. It assisted students in better understanding that letters represented sounds in the words they heard. Mann and Foy (2003) found that phoneme awareness was closely associated with early reading and letter-sound knowledge. Instruction focused on teaching this skill and all its components alongside the alphabetic principle to give children a concrete representation of the sound they heard. By utilizing the instruction of this skill, students were better equipped to be successful in reading.

Research Question (2) According to the professional literature reviewed, how was Phonological awareness defined.

In order to answer research question two a review of literature was conducted. Armbruster et al. (2001) defined phonological awareness as a broad term that encompassed many skills such as that of phonemic awareness. They also stated that phonological awareness also included other skills such as rhyme awareness, words, syllables, and onset-rimes. Adding to this definition was a study done by Anthony and Lonigan (2004) that set about to determine a specific definition of phonological awareness based on the study of preschool children. They stated that early phonological sensitivity included work with the same aspects listed by Armbruster et al.
Anthony and Lonigan (2004) continued by stating that phonological awareness was when children thought about the abstract representations of speech or phonemes. One definition they found included phoneme level skills. The authors included this in the definition because it fit their findings regarding the reflection made by children about the abstract phonemes that make up human speech. In addition to phonemes, Anthony and Lonigan also found also that syllables and rimes, included in Armbruster et al. (2001) definition of phonological awareness, were aspects of phonological awareness because they required reflections upon changes in vowel sounds or articulatory cues.

A second definition embedded in the research by Anthony and Lonigan (2004) was that phonological awareness included all subsyllabic skills, which included phonemic awareness. Their definition was substantiated by proponents who argued that units of words such as onset and rime required cognitive reflection about speech. They continued by stating that this was measured by working with onsets, rimes and vowels, which had more than one phoneme. This definition of phonological awareness seemed to build in complexity from the first.

The third definition also showed that phonological awareness increased in complexity as children moved through it. Anthony and Lonigan (2004)'s third and final definition of phonological awareness included isolating and working with word segments. They stated that this definition of phonological awareness was linked to instruction in alphabetic principles as well as the other aspects described.

Phonological awareness also included the concept of phonological sensitivity. Anthony and Lonigan (2004) stated that Stanovich (1992) described phonological
sensitivity as a movement from broader to narrower phonological units. Armbruster et al. (2001) added to this by stating the broader phonological sensitivity was the ability to identify and make rhymes and syllables; whereas, narrower sensitivity included onset-rime identification and phoneme identification. In addition, Anthony and Lonigan stated that this development indicated that the beginnings of phonological skills that led to more advanced skills, such as phonemic awareness.

In summary, phonological awareness involved working with phonemes, rhymes, words, syllables, and onset-rimes. Several definitions that increased in complexity indicated that phonological skills seemed to move in a logical order on the basis of difficulty. In addition, phonological awareness included phonological sensitivity, which also moved in a logical order from broader to narrower. Broader sensitivity included manipulation of rhymes and syllables and narrower included manipulation of phonemes. Finally, according to Anthony and Lonigan (2004), this development indicated that children's beginning phonological skills set the stage for more advanced ones such as phonemic awareness. The next section discussed this important correlation between phonological awareness and phonemic awareness.

*Research Question (3): What was the relationship between phonological and phonemic awareness, according to the professional literature reviewed?*

The information used to answer research question three was gleaned from a review of the professional literature. Armbruster et al. (2001)'s definition of phonological awareness gave the first indication that a connection existed between phonological and phonemic awareness. They stated that phonological awareness was a broad term that included the ability to work with rhymes, words, syllables, onset,
rime, and phonemes. In other words, Armbruster et al. stated, phonemic awareness was a category under the heading of phonological awareness. Other authors also found this relationship.

Anthony and Lonigan (2004) stated this relationship in their article that delved into a specific definition of phonological awareness based upon a study of preschool children. They found that phonological awareness occurred when children consciously thought about the abstract parts of speech. They continued by explaining that this definition included phoneme level skills. They further concluded that phonological awareness included all subsyllabic skills, such as phonemic awareness. Gromko and Joyce (2004) found this relationship was reciprocal. They stated that phonemic awareness required children to understand the phonological make up of words and that each word consisted of differentiating sounds.

Anthony and Lonigan (2004) found further evidence that a relationship existed. They stated in their definition of phonological sensitivity that later stages included manipulation of phonemes. The development of such sensitivity, they continued, proposed that children moved from very basic knowledge of phonological skills to more advanced ones such as phonemic awareness and that this development was related to the development of cognitive ability. Overall, Anthony and Lonigan found that individual abilities such as phonemic awareness were not separate ones but part of the same overall phonological ability.

Further adding to the idea that phonemic awareness was part of the broader term of phonological awareness was a study done by Goswami (1999). She stated that a growing number of studies showed the developmental progression from large
phonological units to smaller ones, such as phonemes. Mann and Foy (2003) added that early reading skills and phonological awareness were aided by instruction of both phonological awareness and phonemic awareness. Likewise, they continued, children’s phonological awareness was enhanced when they received both of these trainings.

In summary, phonemic awareness and phonological awareness were connected. Neuman (2004) stated that phonemic awareness was a more advanced phonological awareness skill. This statement was supported by varying definitions of phonological awareness, all of which concluded that phonemic awareness fell under the broader term. Instruction in both phonological and phonemic awareness both aided in children’s early literacy training.

Research Question (4): What were the benefits of using rhyme and music to early reading instruction as indicated in the professional literature?

A review of literature was conducted to answer research question four. In their article, Grornko and Joyce (2005) stated that many researchers have discovered that children showed what they knew by utilizing gesture, shapes, color, movement, and non-verbal communication long before they became formal readers. Neuman (2004) added that texts utilizing movement, music and rhyme, such as those written by Dr. Seuss, assisted young children in developing both phonological and phonemic awareness. The next sections broke down the benefits of rhyme/rhythm and music.

Benefits of Rhyme/Rhythm

The biggest proponent of rhyme as a beneficial factor in children’s early literacy learning was the author Goswami’s (1999). She found that children benefited
from instruction in phonological awareness including rhyming prior to formal literacy instruction. In fact, Goswami found connections between preschool children’s knowledge of rhyme and their success in reading and spelling.

Knowledge of rhymes, according to Goswami (1999), was a predictor of early literacy success because it was the child’s earliest contact with segmental awareness. She also continued that exposure to rhymes and the development of rhyme awareness assisted children in developing basic phonemic awareness. She further stated that children gained the benefit of having a scaffold for spelling because rhymes generally provided them with spelling sequences that were consistent. As cited in Goswami (1999) Bradley and Bryant (1978, 1983) found evidence in preschool children that knowledge of rhyme was a predictor of early literacy skills because instructing children to differentiate words by their sound components further enhanced these skills. Goswami backed up this statement through the investigation of several studies that showed a connection between single word reading and the ability to rhyme in children ages 3-4. She also added that in another study done by Bryant et al (1990) as cited in Goswami (1999) that the use of simple nursery rhymes enhanced 5- and 6-year-olds’ reading success. In fact, Goswami stated that nursery rhymes provided children with the ability to better work with phonemes and, in turn, assisted in their reading success.

Mann and Foy (2006) also found a connection between utilizing rhyme in instruction and early reading. They found that children’s love of rhyme lent to their ability to hear letter sounds and also provided a tool with which to make learning letter sound relationships easier. This was concurrent with Goswami (1999)’s
conclusion that children who appreciate rhymes learned basic phonemic awareness skills more easily.

**Benefits of Music**

Several authors found that children’s reading ability benefited from the integration of music into classroom instruction. In fact, Smith (2000) stated that music assisted with more than just reading; it also helped children’s overall learning including social-emotional skills. Butzlaff (2000) added that music provided several tools that aided children.

One tool Butzlaff (2000) suggested was that music and text must both be read from left to right, which helped children learn a basic print concept. Also, he continued that both phonological awareness and listening to music asked children to be sensitive to differentiating tones and this meant that students had to be able to hear the differences between both musical notes and phonemes. Lamb and Gregory (1993) concurred that this discrimination between musical sounds related to children’s later reading performance.

Butzlaff (2000) continued that music aided children in learning letter-sound relationships because they learned that each musical tone related to notations on a page and by understanding this relationship, children more easily understood that each letter had its own unique sound. He also added that children were engaged in reading overall when they were asked to learn song lyrics. Adding to this, Gromko and Joyce (2005) found that children who were engaged in music instruction outperformed their peers in reading tasks.
Some specific examples of how music instruction benefited children’s reading were provided by Lamb and Gregory (1993). They found children around the world had enhanced reading performance due to music instruction. One example they gave was that children in Hungary had significant improvements when the Kodaly system of music instruction was introduced. The Kodaly system, stated Lamb and Gregory, used folk songs to teach music. Lamb and Gregory also found that American children taught by the Kodaly system also showed gains in reading performance. They also found that a program initiated in schools in England promoted a program that stressed teaching children to differentiate between pitch and rhythm, which was known as Reading 360. They explained that children taught with this program were better able to distinguish between phonemes, better able to hear rhyme and alliteration and gained fluency because they understood the flow of language.

Another reason to support the use of music in the classroom, Lamb and Gregory (1993) explained, was that the ability to hear the different sounds in speech required children to hear different frequencies of sound. This development, they continued, was supported through music because music asked children to work with different pitches which in turn helped children better hear sound differences in speech. Interestingly, they discovered that when tested, children who scored high on pitch discrimination also scored high on tests of phonemic awareness and reading fluency. This result was supported by Gromko and Joyce (2005)’s findings that kindergarten children who received music instruction demonstrated better understanding of phonemic awareness than peers their age who were not exposed to
music. Lamb and Gregory concluded that music should play an integral role in primary school instruction.

In summary, rhyme and music both benefited children’s phonological and phonemic awareness. Through instruction using these two tools, children learned to discriminate between the speech sounds and become more fluent readers. Lombardo (2005) stated that through nursery rhymes, children learn about words that sound the same, they become entwined with the flow of language and develop the basic skills they needed to become successful readers. In addition, according to Lamb and Gregory (1993), the ability to distinguish between the sounds in language better allowed children to learn to read easier and that music was the apparatus to support this. In short, music and rhyme provided children with the tools necessary to become successful readers according to the many authors reviewed.

Research Question (5): How had rhyme and music been successfully integrated with early reading instruction as described in the professional literature reviewed?

Through a review of literature, the researcher was able to answer the fifth research question. Educators, Smith (2000) stated, had suggested ways to utilize rhyme and music to instruct primary learners in their basic reading skills. One way, he found, was that singing was used to illustrate how sounds in words were taken apart and put back together in order to create many of the words in our spoken language. He explained that songs, such as Oopples and Boo-noo-noos, B-A-Bay by The Limelighters, and the ABC song, were used to teach children how to substitute phonemes, and enhance letter naming fluency. Smith continued by stating that once children had learned the ABC song, a chart was created to visually show the printed
letters to give students a concrete representation of what they were hearing. He also added that the teacher had the children chant each letter out of order and created follow up activities such as matching games to facilitate fluency.

In addition to music, Lombardo (2005) found rhymes were also used in reading and writing instruction. One way to assist in using rhymes when teaching early literacy instruction, she stated, was to present a visual form of the rhyme on a chart, chant the rhymes, and act them out in order to address each individual learning need in the classroom. Lessons, she added, were instructed around rhymes to teach alliteration and word families. She also added that discussions about the rhymes facilitated the teaching of story concepts and created the important connections to real life that made the learning meaningful to the child and therefore; more effective. Lombardo also explained that not only beginning readers benefited from instruction with rhymes. She added that older readers also benefited because they had the opportunity to practice writing familiar words with the assistance of rhymes by answering questions posed about each rhyme.

In summary, both Lombardo (2005) and Smith (2000) agreed that there were many ways to utilize music and rhyme in early literacy instruction. Rhymes and music both enhance children's ability to hear and work with individual phonemes and practice phonological skills necessary to be successful readers. Many songs existed that were used to teach initial sound fluency as well as letter naming. Nursery rhymes were a way to instruct children to better understand concepts such as word families. Music and rhymes when added to instruction facilitated phonemic and phonological
awareness through teaching children to more closely discriminate the sounds in
language.

Conclusion

Upon completion of the review of literature, the researcher drew several
conclusions. First, phonemic awareness was defined by Armbruster, Lehr and Osborn
(2001), Gromko and Joyce (2005), Lombardo (2005), Man and Foy (2003) and
Neuman (2004) as a teachable skill that asked children to work with the individual
sounds in words or phonemes. Second, Armbruster et al. (2001) and Anthony and
Lonigan (2004) provided a definition of phonological awareness. They stated that
phonological awareness was a broad term that included work with rhymes, onset-
rimes, syllables, and also phonemes. Anthony and Lonigan further explained several
definitions of the term that seemed to move in order from simple to more complex
and described that phonological awareness required children to reflect on the abstract
concepts that make up human speech patterns. Phonological awareness, they added,
moved in a logical sequence from broader ideas such as rhymes and syllables to a
much narrower and more focused concept of phonemes.

This leads to the third conclusion drawn about the connection between
phonological and phonemic awareness. Armbruster et al. (2001) best stated this
connection in their definition of phonological awareness that encompassed many
concepts including that of phonemic awareness. Gromko and Joyce (2004) added that
a reciprocal relationship existed between the two: children needed phonemic
awareness to understand the phonological make up of words and that words were
made up of differing sounds. Instruction in both of these skills, Man and Foy (2003) explained aided in a child’s early reading success.

Another conclusion of the researcher regarded the use of rhyme and music in early literacy instruction. Many benefits of using both rhyme and music existed. One such benefit, Foy and Mann (2006) found was that teaching rhyme appreciation helped children to better differentiate the sounds of letters and allowed them to better manipulate the sounds of speech. In addition, Goswami (1999) found that children who were successful at rhyming at age three were better able to read single words at age four. Music also had many benefits to early literacy instruction. One such benefit was suggested by Smith (2000) in that music enhanced not only reading but also other aspects of education, such as social-emotional development. Lamb and Gregory (2000) described that the ability to distinguish between phonemes depended upon the child’s ability to hear audible differences in pitch and frequencies and that music was used to assist students with hearing such differences. The use of both provided a scaffold to the understanding of phonemic and phonological awareness and was integrated into instruction several ways. Lombardo (2005) stated that kids are into movement. Clapping, singing, and rhyming all, according to Lombardo, helped children better understand phonemic and phonological awareness. Smith (2000) suggested songs such as Oopples and Bo-noo-noos and the ABC song were used with visual aids to teach fluency of letters and phoneme substitution. Charts, chanting, and acting out rhymes, added Lombardo, needed to be used in order to teach to each learning style within a classroom. By combining music and rhyme with everyday
instruction, the skills necessary for early reading success, phonemic and phonological awareness, were enhanced.

After reviewing the literature, the researcher became familiar with the use of rhyme and music to teach phonemic and phonological awareness, as well as the concepts themselves. She believed this strategy to be the best when it came to her preschool students and thusly began to plan and implement her research project.
CHAPTER III: METHODS AND PROCEDURES

The purpose of this project was to determine if integrating rhymes and music with early reading instruction increased preschool students’ basic phonemic in addition to their phonological awareness. In order to make this determination the teacher asked six research questions. They were: (1) How was phonemic awareness defined, according to the professional literature? (2) According to the literature reviewed, how was phonological awareness defined? (3) What was the relationship between phonological and phonemic awareness, according to the professional literature reviewed? (4) What were the benefits of using rhyme and music to early reading instruction as indicated in the professional literature? (5) How had rhyme and music been successfully integrated with early reading instruction as described in the professional literature reviewed? (6) Did using rhymes and music help preschool students increase their basic phonological and phonemic awareness?

In order to answer the sixth question (Did using rhymes and music help preschool students increase their basic phonological and phonemic awareness skills?), the teacher taught the names of the letters and their sounds using the Alphabet Chant portion of *The Phonics Dance* (Dowd, 1999). In order to discover if any gains were made in acquiring basic phonological and phonemic awareness skills, the teacher used the letter naming fluency and initial sound fluency portions of the Dynamic Indicators of Basic Early Literacy Skills (DIBELS; Good & Kaminski, 2003) assessment before the onset of instruction. A monthly assessment was conducted in order to determine how students acquired these skills during the course of instruction in this program.
Participants

At the onset of this project sixteen children participated in the instruction ranging in age from three to five years old. They were enrolled in a homogenous preschool classroom in a small, rural town in a Midwestern state. Due to the range of their ages, the participants were a developmentally and academically diverse group. Their diversity led to differences in their ability to learn and retain information, as well as their mastery of what was being taught in the classroom to differ. In terms of gender, the class was comprised of an even split of eight males and eight females.

Sixteen children were assessed initially in December. Through the course of the project, six children left and three entered the program so the number of participants varied throughout instruction. The children did not have to participate in an assessment, so the number of children assessed at each interval varied from checkpoint to checkpoint.

Treatment/Intervention

The intervention used during this project was the implementation of a program that used rhythm and movement to instruct students in the basic phonics principles. Students were instructed using the Alphabet Chant portion of The Phonics Dance (Dowd, 1999). The Phonics Dance was developed by Dowd whose inspiration came from the language in her first-graders’ stories that led Dowd to develop a spiral approach to teaching language arts using rhyme and movement. This means that instruction started with the basics, which was letter and letter/sound correspondence and continually built upon itself as students progressed in their mastery of the material. The Phonics Dance started basic and continuously built upon previous
instruction as students continued through the program. Repetition was the motto of this program because the information taught in the program was reviewed every day (Dowd).

The Alphabet Chant portion of the dance focused on teaching letter names and sounds as well as a word association for each letter. The first step in the Alphabet Chant was for the teacher to lead the students in saying the sound of the letter being taught. Next, students said the word association that accompanied each letter. Finally, students said both the letter sound and the letter name in order to finalize the connection. Dowd (1999) suggested that at the beginning of the year, the first four letters be introduced (i.e. A, B, C, and D in order). The remaining alphabet letters should not be excluded but rather each letter whose rhyme was not being introduced should be pointed to and the letter name said in order to stress the importance of all the letters in the alphabet to the students. She stressed that even though the students were not learning a particular rhyme, teachers should not leave out those letters. Dowd also pointed out that sticky notes were placed on the letter picture to indicate the letter or letters being focused on that day. The sticky notes let children know which letters they were learning or reviewing during that day’s Alphabet Dance. As students became experts at recognizing each letter, a sticker was added to the sticky note to show that mastery was achieved. Each week during the school year, two to three letters were introduced depending on how well students mastered each letter and letter-sound taught. Dowd suggested that mastery was determined via observations and various assessments conducted throughout the year.
This project measured students’ progress from between the months of December 2006 to March 2007. During this time, the Alphabet Chant was implemented two times a day for 5-10 minutes each. The first instructional period was scheduled right before lunch at around 11:15 A.M. The second instructional period took place between the afternoon snack period and the afternoon gross motor period at around 3:15 P.M. A combination of whole group instruction and small group instruction was used to implement the Alphabet Chant.

The instructor followed most of the prescribed instructions for implementing the chant but changed some components to make it more developmentally appropriate for preschool children. One of the changes was that letters were introduced one at a time and at a rate of one per week in order to ensure mastery of each letter rather than introducing four at a time. Also, one of the rhymes was changed because the original rhyme created for the letter C was too difficult for the younger children to understand. At the beginning of the week the rhyme and dance was introduced and then reviewed each day subsequent to its introduction. The way the rhymes were said varied on a daily basis where one day the rhymes were chanted and other days they were sang in order to further engage the preschool students in the instructor’s classroom.

Students were also instructed in small group settings. The instructor added a word wall portion to instruction. During small group instruction, she asked students to help develop a list of words for the letter introduced that week to add to the word wall. Words the students suggested were placed with a picture and posted under their corresponding letter on the classroom’s Alphabet Dance wall. The word wall was then reviewed during afternoon instruction.
During the afternoon instruction, the instructor at first reviewed each letter rhyme and dance, as well as the word wall words that went with each. As the number of letters students learned grew, the instructor reduced the amount of word wall words reviewed to two or three per session to keep the preschool students engaged. The instructor asked two or three students to pick a letter to review. The instructor then led the students in the letter rhyme chosen and then said each word wall word. Students repeated the word after the instructor, emphasizing the sound made by the letter as they repeated the word. A copy of each week's letter rhyme was also sent home to the parents so that parents could review the letter rhymes their children learned at school.

Instruments/Protocol

The DIBELS (Good & Kaminski, 2003) was the instrument used to determine the students' progress. Due to the fact that the teacher was in a preschool setting that was not using the DIBELS as one of its regular assessments, the teacher obtained copies of the materials via the DIBELS website. Permission was granted by Good and Kaminski on their website to use the materials for educational purposes. Copies were then made of the scoring sheets and the student copy of the letter-naming sheet and pictures for the initial sound fluency were laminated.

The letter-naming fluency test checked each child for the number of letters he or she could correctly name in one-minute. The student was presented with a sheet containing about 110 letters. The initial sounds fluency test checked to see how many initial sounds per minute a student could identify. The student was presented with four sheets that contained four pictures apiece. The teacher's copy had questions that
matched with each sheet of pictures. Students were scored either 0 or 1 depending on their responses to the questions. A zero was scored if the child did not answer or incorrectly answered and a 1 was given for correct responses. The instrument used did not penalize students for their dialect or speech impediments. Students were not required to stop at a particular time; instead, their scores were based on the amount of time it took them to answer all the questions asked.

Procedures

To begin the project, the teacher presented her proposal to her preschool supervisor and literacy coordinator. After discussing the project and how it would assist students in becoming more prepared for kindergarten, the teacher was granted approval to conduct the project from her supervisor and literacy coordinator. The teacher asked the supervisor if a letter should be sent home to the parents to explain what was taking place in the classroom and the supervisor saw no need for a letter since scores of individual students were not going to be reported. Instead, the teacher explained to each parent about the Alphabet Chant and explained that she was conducting a research project and was assessing the students to see how much knowledge they had retained. None of the parents objected and one parent even volunteered to assist with producing materials for instruction. The project measured each student's progress over a four-month period from December 2006 to March 2007.

Assessment was conducted before instruction began and subsequent testing was done once a month around the same time by using the DIBELS (Good & Kaminski, 2003) assessment tool for letter naming and initial sound fluency.
For this study, the initial assessment was conducted before instruction began in December. All of the students’ assessments was administered by the teacher and was conducted in the classroom. The sometimes noisy environment caused some distraction during the administration of the test. Students were called one by one and asked if they wished to assist the teacher. Students who refused were not forced to comply, but rather, the teacher would ask if the student was sure and then mark “refused” next to their name on his or her scoring table. Students were assessed individually; however, the data was aggregated and reported as a class. Scores gathered from the assessment were entered in a database of the teacher’s construction and scores added together in order to obtain a class total to determine where the students began as a class.

After they sat down for the assessment, students were asked to assist the teacher and state whether they wanted to do letters first or pictures. The language was used to simply show what was being done for the preschooler. (Letters referred to the letter naming fluency and pictures referred to the initial sound fluency test.) During the letter naming fluency test, students was given oral directions on how to respond and also told that the teacher wanted to see how many letters they could name before the timer sounded. The timer was set to one minute. The teacher recorded the results of the test on each student’s individual score sheet. The results were how many letters they correctly named in one minutes time.

Immediately following the letter naming fluency assessment (assuming the child chose that assessment first), the teacher conducted the initial sound fluency assessment. Again, students were given oral directions about how to respond. The
timer was set to a maximum of five minutes to see how long it took each individual child to complete the assessment since the scores for this portion were time sensitive. Student scores were recorded on their individual score sheets and once completed, were entered into the teacher’s database to determine a class score for both the letter naming and initial sound fluency assessments.

The letter naming fluency assessment section measured how many letters a child could correctly name in one minute both lower case and upper case. Students were presented with a page of letters in random order both upper and lower case. At the time of the assessment, some of the letters had been taught and others had yet to be introduced. Students were asked to name the letter the teacher pointed to and say what they thought it was. Scores were recorded on the individual score sheets and then in the teacher’s database.

The initial sound fluency assessment measured phonological awareness, as well as a child’s ability to say the sound heard at the beginning of a word. Specifically it would tell the teacher if the student understood the sound made by certain letters or groups of letters. The teacher recorded the scores for each child as he or she responded to the prompts. These scores were then placed into the teacher’s database to determine a class total. Both assessments were conducted monthly from December until March.

**Timeline**

In September 2006, the teacher approached her supervisor and literacy coordinator and asked for her approval of the project. Implementation of the Alphabet
Chant portion of *The Phonics Dance* (Dowd, 1999) began in December 2006 after the initial assessment was conducted. A routine for instruction was established prior to implementation by a consensus of the teacher, her co-teacher and teacher’s assistant. The teacher determined on a week to week basis whether an additional week needed to be spent on a letter or if the students were ready to learn an additional letter the following week based on how well the students were grasping the letter introduced in a particular week.

The initial DIBELS (Good & Kaminski, 2003) assessment was given in December 2006 prior to instruction. In addition, students’ were retested on the 15th of each subsequent month until March 2007 using the same DIBELS assessment tool. The same K-1 benchmark assessment tools were used as a check of a student’s progress.

**Data Analysis**

The DIBELS (Good & Kaminski, 2003) assessment of letter naming and initial sound fluency (K-1 benchmark portion of the assessment) was administered and analyzed via the format and materials obtained from the DIBELS website.

Students’ scores from December until March obtained through the use of the DIBELS (Good & Kaminski, 2003) were written on each student’s individual score sheet and then entered in the database created by the teacher. After each month’s assessments was recorded into the database, the scores were averaged in order to determine a class average for each month for both letter naming and initial sound fluency. The teacher was analyzed the data to see if there was an increase in the
class's total score from the initial onset of instruction until the ending assessment in March.

Conclusion

After developing the procedures and determining a schedule for data collection, the teacher began implementation of the Alphabet Chant. In order to answer the research question (Did music and rhyme help preschool students increase their basic phonological and phonemic awareness?) an initial assessment was taken to determine where the class began as a whole. For the subsequent months following the initial assessment, students were re-evaluated to determine if the class scores had increased or decreased. The final assessment was to be taken in March 2007. Each month's scores were recorded and averaged in a database of the teacher's creation. When all the scores had been entered and totaled, the teacher began to examine and interpret the results obtained through her study.
CHAPTER IV: RESULTS

Introduction

The purpose of this project was to determine if integrating rhymes and music with early reading instruction increased preschool students' basic phonemic in addition to their phonological awareness. In order to make this determination the teacher asked six research questions. They were: (1) How was phonemic awareness defined, according to the professional literature? (2) According to the literature reviewed, how was phonological awareness defined? (3) What was the relationship between phonological and phonemic awareness, according to the professional literature reviewed? (4) What were the benefits of using rhyme and music to early reading instruction as indicated in the professional literature? (5) How had rhyme and music been successfully integrated with early reading instruction as described in the professional literature reviewed? (6) Did using rhymes and music help preschool students increase their basic phonological and phonemic awareness?

In order to answer the sixth research question, data was collected using the DIBELS (Good & Kaminski, 2003) assessment instrument that was conducted between the months of December 2006 through March 2007. For the purpose of this study, the letter naming fluency and the initial sound fluency assessments were used. According to Good & Kaminski, letter naming fluency was defined as the ability to name a number of letters in a predetermined time period and initial sound fluency was defined as the amount of initial sounds named in a predetermined amount of time.
Letter Naming Fluency

In order to determine whether rhyme and song were assisting the students in their acquirement of beginning phonological and phonemic awareness; data was collected using the results of the DIBELS (Good & Kaminski, 2003) assessment once a month for four months during the months of December through March. Results indicated that as a class, letter naming fluency improved dramatically over the four-month period.

December was the initial assessment before instruction was started. Scores for letter naming ranged greatly from between 0 letters recognized to 26 letters recognized per minute. The average score for the class in letter naming fluency amounted to 4.62 letters recognized per minute.

After one month of instruction, an assessment was conducted again in January. The average score for the class rose from 4.62 letters per minute to 7.92 letters per minute. The range of scores once again varied. This time the scores ranged from 1 recognized letter up to 36 letters recognized per minute.

In February a third assessment was conducted to determine how students progressed after two months of instruction. This time the average score rose once again to 10.1 letters per minute. High and low scores ranged this time from a low score again of 0 to a high score of 56 letters per minute.
The final assessment was conducted in March. The final average score for the assessment period was 13 letters per minute. The high and low scores ranged from a low score of 0 to a high score of 61 letters recognized per minute. Figure 1 below visually shows the average class scores over the whole four-month period of December to March.

![Figure 1: Average of class’s letter naming fluency](image)

The chart showed that in December the class letter naming fluency score was 4.62 letters per minute. In January, letter naming fluency moved to 7.92 letters per minute. February showed the score increased to 10.1 letters and finally in March, the final score for letter naming fluency was 13 letters per minute. Over the four month period an average growth of about 6 letters per minute was observed.

Initial Sound Fluency

Another assessment was conducted to further determine if students’ basic phonological and phonemic awareness benefited from the utilization of rhyme and music. The assessment used was once again the DIBELS (Good & Kaminski, 2003) assessment but this time the initial sound fluency portion was used. The assessment
was conducted side by side with the letter naming fluency during the same four months of December through March. The scores showed that the scores fluctuated over the four-month period.

The first assessment was conducted in December before instruction began. The average score for the start of the assessment period was 1.77 initial sounds per minute. The scores ranged from a low score of .31 sounds per minute to a high score of 4 sounds per minute.

After one month of instruction, another assessment was conducted in January. The overall average score after one month of instruction went up to 2.53 initial sounds per minute. The high and low scores went up slightly from a low score of .33 sounds per minute to a high score of 5.2 sounds per minute.

In February, a third assessment was conducted. This assessment followed two total months on instruction in the Alphabet Dance. During this month, the average class score declined slightly to an average of 1.86 initial sounds per minute. The high and low scores ranged from a high score of 1 sound per minute to a high score of 3.2 sounds per minute.

Finally, the last assessment was conducted in March. At this point, three months of instruction were completed. The average class score rose again to a score of 2.043 initial sounds per minute. The low score for the month of March was .86 sounds per minute. The high score for this final month was 3.27 sounds per minute. Figure 2 below showed how the scores ranged over the four-month period.

The figure below shows the scores for initial sound fluency. In December, the initial sound fluency average was 1.77 sounds per minute. In January, the number
jumped to an average of 2.53. February showed a drop to 1.86 sounds per minute and finally in March, the score ended at 2.043. An average growth of .273 initial sounds per minute was observed.

![Bar chart showing average initial sounds per minute by month]

Figure 2: Average of class’s initial sound fluency

Conclusion

In conclusion, the results from the DIBELS (Good & Kaminski, 2003) showed an overall increase in both letter naming fluency and initial sound fluency. Data was collected over a four month period from December 2006 to March 2007 in both areas and involved sixteen children overall. Scores in letter sound fluency increased by an average of 6 letters per minute over the four month period. An average of .273 sounds per minute was recorded over the same four month period. After the scores were recorded, the researcher began to analyze the scores.
CHAPTER V: Discussion

The purpose of this project was to determine if integrating rhymes and music with early reading instruction increased preschool students’ basic phonemic and phonological awareness. The research questions were (1) How was phonemic awareness defined, according to the professional literature? (2) According to the literature reviewed, how was phonological awareness defined? (3) What was the relationship between phonological and phonemic awareness, according to the professional literature reviewed? (4) What were the benefits of using rhyme and music to early reading instruction as indicated in the professional literature? (5) How had rhyme and music been successfully integrated with early reading instruction as described in the professional literature reviewed? (6) Did using rhymes and music help preschool students increase their basic phonological and phonemic awareness?

Meaning of Findings

The findings indicate that the students made progress in acquiring early phonological and phonemic awareness skills. Their progress as measured by the DIBELS (Good & Kaminski, 2003) at one month intervals over the course of the four month intervention period. The Phonics Dance (Dowd, 1999) was implemented as the intervention to help students learn letters of the alphabet along with the sounds attributed to each letter. Through rhythm, rhyme, and motions students learned how to recognize and say the sound of letters of the alphabet.

These findings were important to help indicate that students need more than rote memorization of letter names and sounds to begin to learn to read. It supported what the literature stated regarding how rhyme and music helped students to better
understand and make the connections between the letters and individual phonemes each letter creates; it made what they were learning more meaningful which in turn made what they were learning easier to understand and comprehend.

In the area of letter naming fluency, this part of literacy instruction was important because students need to be able to recognize the letters of the alphabet as well as the sounds they represent. The Alphabet Dance portions of The Phonics Dance (Dowd 1999) helped students not only recognize these letters but also learn their corresponding sounds simultaneously through the use of rhymes that are both meaningful and engaging.

Evidence of students' comprehension of the skills being taught was evident through the results of the DIBELS assessments conducted once a month for a four month period. The students' scores rose steadily through the four month period making noticeable increases among the monthly assessments. Scores ranged from 4.62 letters recognized per minute at the start of the project to an average of 13 letters at the end. In December, the class averaged a score of 4.62 letters per minute. This was at the start of the project before any instruction had been given. Finally, in March, the score increased to a total of 13 average letters per minute. Letter naming fluency provides the foundation to becoming a literate reader. Nevertheless, knowing names of the letters was the only piece of the puzzle. Therefore, coupled with letter naming, the researcher decided to also investigate The Alphabet Dance’s (Dowd 1999) affect on preschool student’s acquisition of initial sound fluency.

The growth in the area of initial sound fluency was not a steady increase, but fluctuated from the first month to the last. This showed that students attained more
knowledge through the use of rhyme in instructing the letter sound connection part of literacy from the first month to the last. Growth was not as steady because different students were constantly enrolling in and leaving the program during the instruction and assessment period. Letter sound instruction was more difficult to conduct when students would leave and new students would enter the program, because instruction had to start from the beginning of the alphabet. Growth in letter recognition may have seen even more considerable gains had students been retained in the program and had the full benefit of instruction. Instruction and assessment for the project was also conducted during the same four months as the letter naming portion of the project. At the start of the project in December, the class average for knowing initial sounds was 1.77 sounds per minute. Even though the score dropped in the month of February due to some students leaving the program and gaining new ones, the overall score by the end in the month of March went up to a class average of 2.043. This showed an overall gain from start to finish of the project.

Another piece of evidence demonstrating the efficacy of instruction was that children continued the learning in the classroom. Many children would find letters around the classroom, point to them and know their word association or would even start saying the rhyme. The younger children who were just learning to recognize letters used the rhyme to help them figure out the letter they were looking at. Children also began to anticipate learning new letters. At the start of each week, students would ask the teacher if they would be getting a new letter friend. They would be disappointed if a new letter friend was not introduced. The assessment only assessed how The Phonics Dance (Dowd, 1999) affected the students’ acquisition of early
phonological and phonemic awareness how the instruction affected the students’ drive to learn and how they used what they were learning was an added bonus.

The consistency of the findings was strengthened by the process of assessing the students with the same assessment instrument over a period of four months. The procedures were identical for each student assessed and therefore the procedure was consistent for all students. The different aspects of DIBELS (Good & Kaminski, 2003) used to assess the student’s acquisition of the knowledge indicated the overall progression over the four month period to be a positive one and that rhyme and music positively influenced the student’s early phonological and phonemic awareness skills.

Summary

The purpose of this project was to determine if integrating rhymes and music with early reading instruction increased preschool students’ basic phonemic and phonological awareness. Sixteen students in the class were instructed for four months in the Alphabet Dance portion of Ginny Dowd’s Phonics Dance (1999). Assessment through the DIBELS (Good & Kaminski, 2003) was conducted in each of the four months from December to March. The results showed an overall improvement in both letter naming and initial sound fluency over the four month instruction and assessment period. The conclusion can be drawn that a program utilizing rhyme and music would be beneficial to preschool students in acquiring early phonological and phonemic awareness skills.

Recommendations

If any further research on this topic was to be conducted there were several recommendations to be considered. First of all, the turnover of children was one
aspect that needed to be addressed. A teacher or researcher in this type of preschool program must understand that children will be coming and going frequently and the test group may not be the same throughout. This means that instruction will have to be restarted each time a large group of new students entered the classroom. A suggestion that could be made was to make sure and surround the children with supports to help enhance instruction. Also, continue with repetition of all letters and rhymes. For new students, rhymes may need to be repeated more than once the first several times the rhymes are introduced.

Another recommendation for future research would be to assess the children with the instrument for more than the four month period chosen here because of the amount of turnover possible in preschool classrooms. By doing this, it may give a better idea of how the children are really grasping instruction. During the course of this project, not all of the letters were introduced before the end of the assessment period. By continuing the research for longer than the four month period shown here, it may allow for instruction in the entire alphabet and allow for better planning around eventualities that come up in the preschool classroom that may interrupt instruction.

Finally, the last recommendation would be to include parents as much as possible throughout the course of instruction. This would be especially helpful when new children enroll in the class. By explaining to parents what was being taught and provide them with the means to continue instruction at home. This partnership between the school and home can greatly enhance the children’s education in general and early literacy skills in particular.
Conclusions

In conclusion, this study sought to show how rhyme and music influenced the acquisition of early phonological and phonemic awareness skills of preschool students. The study was conducted over a four month period and results both from the assessment and in classroom observations indicated that rhyme and music had a positive affect on students' abilities in acquiring early literacy skills. Students who master these skills will better understand further literacy instruction easier to comprehend as they continue on the road to becoming readers.
References


