

Using Music to Teach Phonological Awareness

by

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A thesis submitted to the faculty of

Wittenberg University

In partial fulfillment of the requirements for

DEPARTMENTAL HONORS IN EDUCATION AND UNIVERSITY HONORS

Wittenberg University

May 2024

Abstract

In this study, I analyzed the ways music can teach phonological awareness to contribute to student engagement and literacy achievement. In recent years, literacy achievement has fallen short. With phonological awareness skills contributing to the success of a reader, an improvement needs to be found. Through the completion of teacher interviews and assessing the different outcomes between phonological awareness lessons with and without music, I was able to determine that music has the capability to improve a student's literacy skills. These findings contribute to the field of education by highlighting the need for supplemental instruction and the power that music integration into core content areas can have for students. This study provides insights for future research that can be done in this field to achieve more positive educational outcomes.

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Chapter One

Introduction

Literacy is a huge part of a child's education. From the very first year that they are in school, they are learning important literacy skills. Learning these skills is a key indicator of someone's ability to be literate as they get older. A huge piece of this puzzle is phonological awareness. This is the ability to hear, identify, and manipulate the sounds of spoken language (Scarborough, 2002). This is a critical skill that everyone needs to develop in elementary school. In recent years, literacy achievement has decreased and new ways to teach skills may be worth exploring to try and close the gap. A way that this can be done is through music. Music within education has typically been a "special" that students go to once a week for a short period of time. Research has proven that music is able to enhance one's learning of other skills such as phonological awareness (Bolduc, 2009; Hurwitz et. al, 1975; Wiggins, 2007). The effects of incorporating music intentionally into the general education classroom could help close the gap in literacy achievement for the state of Ohio.

Given the gap in literacy achievement, this study aimed to analyze whether or not music had an effect on the learning of phonological awareness skills in relation to academic performance and engagement. I conducted my study at a small rural school in Ohio. The first part of my study consisted of interviews with both grade-level teachers and the music teacher at the school to get an idea of what is already in place for phonological awareness instruction and music integration. Then, I conducted a series of lessons in a second-grade classroom on an important phonological awareness skill, consonant blends. Some of these lessons used music as an aid to support the students' acquisition of knowledge and the other lessons did not use music.

The results were qualitatively and quantitatively analyzed to see the effects that music has on instruction.

I chose to study this topic because of how important phonological awareness is to student literacy achievement. There is also a natural connection between both phonological awareness and music. Some phonological awareness skills that we see frequently in music are alliteration and rhyming. Alliteration is when the same consonant sound is present in multiple words that are near each other like in the common phrase, “Sally sold seashells by the seashore.” (Invernizzi et. al, 2023). Rhyming occurs when words have the same middle and ending sound. For example, cat, bat, and hat (Invernizzi et. al, 2023). Because of this connection, it could potentially be more relevant to students, engage students, and help to make their learning more concrete. Outside of these skills, there are multiple other phonological awareness skills that are important to literacy success in students that could be taught using music. I aimed to discover whether or not music could be used as a tool to make gains in the literacy achievement gap that is currently present. The primary hypothesis of this study was that using music in phonological awareness instruction would result in increased student engagement and achievement.

Chapter Two

Literature Review

In this study, I wanted to identify whether or not music was beneficial in classrooms while teaching phonological awareness skills. Although many teachers may be using music in their classroom, there is very limited data available on specific instructional practices for teaching phonological awareness using music which shows the importance of analyzing the two domains separately. In this chapter, I will go through three different categories relevant to the study. First, there will be background knowledge given on the current state of music in the schools both within and outside of the music classroom. Then, I will discuss the importance of phonological awareness on early literacy skills. Lastly, I will focus on the intersection of music and phonological awareness instruction.

Music in Education

Typically, we see music offered to elementary students once a week that students attend for a small amount of time. This is typically around thirty minutes. It is separate from the general education classroom and typically focuses on music skills such as singing or playing an instrument. The music teacher typically teaches a wide range of grades in elementary school and covers multiple areas. This is also seen in the Ohio Standards for music. The standards begin as very basic musical ideas such as K.1.CR, which states that students experience a wide variety of vocal and instrumental sounds and then progresses to 1.3.CR where students compose simple rhythms (Ohio Fine Arts Learning Standards, 2022). As the students increase in age, the music teachers typically teach one discipline. This is mostly seen in middle school and high school when they teach band, choir, or orchestra. These standards are more complex and consist of students composing melodies using accompaniment and specific forms of notation. In

elementary music, standards are general music and middle and high school standards are more specific.

In a research study done by Ling-Yu Liza Lee (2009), it was found that when combining music into other skills, students were more motivated to learn the material. In this particular study, the researcher taught three- to four-year-olds four different songs throughout a twenty-four-week period with two lessons a week that focused on learning vocabulary in the English language. Lee recognized how important language and communication skills are to the age group of students she was focused on and incorporated music in order to teach these skills. Not only are these students learning their native language, but Lee used music to teach the concepts in a foreign language, in this case English. In this study, they found that this benefitted the students in multiple ways. Students were learning English and vocabulary better with music. Some vocabulary that researchers focused on were high and low, soft and loud, stop and go, and fast and slow. Students made connections from the songs to the English language. Music forms a bridge for students between the two hemispheres of their brain and allows them to work together to promote complex thinking (Lee, 2009). Students in this study were connecting their knowledge of music and the sounds to their newfound knowledge of the English vocabulary and language.

In another study, researchers investigated the effect that music has on students' emotional development (Blasco-Magraner et. al, 2021). Emotional development is important to students and includes their ability to communicate and collaborate with those around them. In traditional school settings, students are exposed to these opportunities daily which makes emotional development crucial. In this study, researchers analyzed several areas of music used in school. They found that students who were exposed to music were better at recognizing their emotions.

They found the same results in emotional regulation. When looking at the effect on school tasks, researchers found that when video clips and background music were used, students had a more positive mood. These students subsequently performed better on reasoning activities, had higher levels of creativity, and higher motivation.

Phonological Awareness

Phonological awareness refers broadly to the many different skills that involve the ability to manipulate and hear the sounds of spoken words (Scarborough, 2002). Many skills need to be acquired for students to have phonological awareness. Students need to know that an individual sound in a word is called a phoneme. Within phonological awareness, students are manipulating and hearing these sounds. These sounds do not always directly correlate the number of letters in the word they may be writing. For example, the word ‘chip’ has four letters but only three phonemes because CH has two letters to represent one phoneme. As students progress forward in their knowledge of phonemes and graphemes, the written representation of a sound, they will be able to decode, or read, with more accuracy and encode, or spell, with more accuracy.

Phonological awareness encompasses many different skills such as rhyming, alliteration, segmentation, syllables, deletion, isolation of phonemes, and blending. Phonological awareness is important to reading success and is a skill that begins to develop early in a child’s life and develops into early adulthood (National Reading Panel, 2002).

Emergent Literacy is the first stage of literacy development. Emergent literacy skills are skills that students start to develop from their first interactions with print. These skills are pre-reading skills that prepare the student for further skills that are essential to becoming literate. Phonological awareness, print concepts, alphabet knowledge, and literate language are all part of emergent literacy (Eccles et. al., 2021). Phonological awareness is an integral part of emergent

literacy and continues to develop throughout elementary school. The skills developed here are predecessors of a successful reader. Students' ability to blend words together when given phonemes or identify the number of phonemes in a word relies heavily on the knowledge that they developed during emergent literacy. During that time, students were exposed to print and letters that they are now seeing used in the words around them. This permits them to form connections between graphemes and phonemes. This begins as larger segments of sounds such as words and syllables and further breaks down into individual phonemes (Whitehurst & Lonigan, 2001). Throughout emergent literacy, students are learning the foundation of reading success that will continue to develop.

Reading Success and Phonological Awareness

The science of reading consists of decades worth of research on the importance of foundational skills to develop into successful readers. In a study done by Lea and Ely Kozminsky (1995), they found that early phonological awareness instruction in kindergarten had effects on the reading success of third graders. In the study, half of the students received a phonological awareness program while the other students maintained the typical instructional methods being offered by the school. They were tested in kindergarten and first grade for phonological awareness skills using a standard phonological awareness screener (PAT). This assessment looks at many skills under the umbrella of phonological awareness such as rhyme detection, sentence segmentation, syllable synthesis, syllable segmentation, phoneme isolation, phoneme deletion, phoneme segmentation, and phoneme synthesis. In each of these tasks, the average score for the experimental group was higher than those of the control group. The two most notable tasks were those of phoneme deletion and isolation. In deletion tasks, the experimental group was averaging a 1.50 and the control group a 0.67. In isolation, the experimental group averaged 2.41 while the

control group averaged 1.07. Researchers pointed out that these two skills explained 70% of the comprehension scores they analyzed later. Overall, the PAT scores between the two groups had a difference of nearly seven points with the group receiving phonological awareness instruction showing more success (Kozminsky & Kozminsky, 1995).

In the same study, the researchers analyzed the comprehension abilities of the two sets of students. Comprehension is the ability to recall what they have read in a text. This is important because understanding what they have read will allow them to use their new knowledge elsewhere. Before they can read, they need the basic knowledge of words and their parts. This is what phonological awareness instruction leads them to. In the study, they found a significant difference in the control group and experimental group in comprehension of third grade texts. After their kindergarten year, students took the comprehension test. The experimental group who received the phonological awareness instruction scored an average of 20.0 while the control group scored an average of 15.33. In third grade, the same students were given the same comprehension assessment. The experimental group scored an average of 40.60 and the control group scored an average of 36.93 (Kozminsky & Kozminsky, 1995). These results show that the group who received phonological awareness instruction in kindergarten was now able to comprehend the texts better than the other group. The effects of instruction in kindergarten were still showing a difference two years later. The students who had higher phonological awareness could in turn read better and comprehend text better as they got older.

Typical Phonological Awareness Instruction

Phonological awareness instruction needs to occur explicitly in order for students to begin thinking about individual phonemes more intentionally (Scarborough, 2022). Although many students understand the concept of syllables, rhyming, and alliteration, they need explicit

instruction from a teacher. This will assist in their development of phonological awareness and their ability to read. Special education professors Chard and Dickinson (1999) analyzed the continuum of phonological awareness instruction given the complexity of skills. Students progress in complexity in this order: rhyming, sentence segmentation, syllable segmentation and blending, onset-rime segmentation and blending, and finally blending and segmenting individual phonemes. They also give guidance on how to teach different levels of ability within those tasks. While all students may be working on rhyming, some may be ready for rhyming in multi syllable words, while others are focusing on one syllable words. Chard and Dickinson state that phonological awareness instruction could begin as early as age four (1999). Instruction across the ages may look different as they get more complex but should be engaging and age appropriate. Some strategies include using colorful picture cards, games, props, etc. Chard and Dickinson conclude their research by outlining that phonological awareness instruction has the ability to help fill gaps for students who have reading disabilities (1999).

Current State of Literacy Achievement

The state of Ohio publishes a state report card each year outlining the achievement of schools across the state. Looking at these results helps gain a sense of the learning that is occurring and the students' knowledge. Although the report card reports many different subjects, I chose to first look at the early literacy component K-3 as this is when phonological awareness instruction is most prominent. The state of Ohio scored at a 30.6% achievement rate. This percentage is further broken down into three categories: proficiency in third grade reading, promotion to fourth grade, and improving K-3 literacy. The third category, improving K-3 literacy, was the only category counted across the state and was 30.6%. This means that 30.6% of students in grades K-3 were improving and making gains in that year that were previously

behind the expected norms for the grade level. They look at the students' achievement in fall of 2021, 2022, and the 2022-'23 state test. In the fall of 2022, 44.5% of kindergarten students, 29.7% of first grade students, and 27.6% of second grade students were not on track. Out of these, only 30% of them improved their literacy skills throughout the year (Ohio State Report Card, 2023).

The above data highlights the need for supplemental literacy instruction. With that many students performing behind the grade level norms and only a small percentage of them coming back on track after a years' worth of typical instruction, something extra is necessary. The state of Ohio recognizes the need and has written a guide to improve literacy achievement throughout the state. One component outlines the need for multi-tiered support school wide to meet the needs of every student. It is focused on growth and improvement. Another component is to provide educators with professional learning in the science of reading to further their knowledge on instructional strategies for their students. Many of these focused on the theory of the Simple View of Reading which breaks down the three main parts of reading and puts it into an equation. The first piece is word reading or decoding, which is the student's ability to read the words on the page correctly. It then works with the second piece, language comprehension, which is a student's ability to understand spoken language put together to form meaning. When both word reading and language comprehension are high, the students' reading comprehension is subsequently high as well. This is often written as word knowledge multiplied by language comprehension equals reading comprehension (Gough & Tunmer). The Department of Education takes this equation and expands on each part to outline the importance that a student develops each. Furthermore, it supports students' varying needs by differentiating each component to fit the student. The state of Ohio aims to use data-driven decision-making through engagement in the improvement process,

ensure that plans to improve are meaningful, evidence-based, and align to the literacy plan, support the implementation of practices, and provide financial assistance for these efforts (Ohio Department of Education, 2020). Through the outlined plan, The Ohio Department of Education hopes to see literacy achievement in Ohio on the rise in the coming years.

Music and Phonological Awareness

Music and literacy share multiple elements in common and have an important role to the emergent reader as noted by Donna Gwynn Wiggins (2007). Both music and learning to read depend on the student hearing the difference in sounds and shapes of symbols. They are also both read left to right. Aside from these, Wiggins points out that other parallels are phonological awareness, phonemic awareness, vocabulary, and fluency. Wiggins studied a group of preschoolers during a literacy lesson. The preschoolers were engaged in a literacy lesson that integrated music. Students read a book and sang along as the book progressed. Students were extremely energetic and were helping the teacher finish repeating phrases to show their recall of the material. Then, students completed a matching exercise and sang the song through more times where they acted out the story and used musical instruments. Wiggins related this lesson to both music standards as well as the literacy standards to illustrate the connection. In the music standards, students are to use their voices expressively, sing simple songs, experiment with instruments, and demonstrate awareness of the elements of music (Ohio Fine Arts Standards, 2022). In the National Association for the Education of Young Children (NAEYC) language and communication standards, students are to expand their vocabulary, sing simple songs, talk in front of a group, and relate vocabulary to their own experiences (NAEYC Standards, 2005). In this lesson, we see the connection of the two sets of standards by seeing students singing simple songs paired with a book, both of which assist in the expansion of their vocabulary. Students are

also being exposed to print which will help develop the concept of print which is an emergent literacy skill. In a short mini-lesson, Wiggins identified multiple connections that music has to literacy for preschool students.

Music can be used to teach a wide variety of ideas in the classroom, but there has been success in integrating music to teach phonological awareness skills specifically. Jonathan Bolduc (2009) studied the effect of music training programs on the development of phonological awareness skills in kindergartners. The control group used the currently adopted program while the experimental group participated in an adapted version of the music program that aimed to increase interest in reading and writing through music. Before undergoing any musical training, students took a pretest and then retaken the test after the training was completed. The three phonological awareness skills that were assessed were syllable identification, rhyme identification, and phoneme identification. It was found that the experimental group developed stronger phonological awareness skills according to the assessment results. In phoneme identification tasks, the control group improved by 10% and the experimental group improved by 23.4%. For syllable identification, the control group improved by 12.6% and the experimental group improved by 32.5%. For rhyme identification, the control group improved by 11.1% and the experimental group improved by 30.5%. Although both the control group and experimental group had improved phonological awareness skills, the experimental group improved their average score more with the adapted musical program.

Another study focused on the non-musical effects that a music program had on first grade students (Hurwitz et. al, 1975). The researchers had two separate groups of first grade students. They were each at different schools and were taught using different musical programs. The experimental group was taught using the Kodaly music program. The reading abilities of the

students were tested throughout the study. The students were tested at the beginning of first grade, end of first grade, and the end of second grade. At the beginning of first grade, there were no significant differences. At the end of first grade, the control group scored a 72.3 on the achievement test and the experimental group scored significantly higher with an 87.9. Then, a year later the students were tested one final time. The experimental group averaged 90.2 and the control group 83.5. This again shows a significant difference and the continuation of the effects of the program on students' reading abilities. Not only did the experimental group's academic achievement improve, but researchers notated that the students had an increase in motivation and engagement in the material when the Kodaly program was being used in the first-grade classroom.

Phonological awareness is important to the literacy achievement of students. Reading scores are low and need to improve. Prior studies show that there is a link between music and reading. Research on the topic is currently very limited. We need to continue to explore how music can improve a child's phonological awareness skills to improve their engagement and achievement. Next, I will review the methodology for my current study.

Chapter Three

Method

This chapter outlines the methodology that I used to analyze how music integration during phonological awareness instruction improves student engagement and achievement. In my research, I utilized teacher interviews of the school across a variety of grades to gauge how music was currently being integrated. I also taught targeted phonological awareness lessons on consonant blends with and without music. This methodology offers a comprehensive approach to understanding the impact music has in the classroom.

Background

I completed my research and interviews in a Midwest Ohio town. The school I was in is a rural school with a population of almost 900 students and a teacher-student ratio of 1 to 21. Over half of the teachers have been evaluated as accomplished and 41.3% are considered skilled. No teachers have been evaluated as ineffective. Around ninety percent of students are white/non-Hispanic. The other 10% of students are multiracial, Hispanic, or black. Many students, around 350, are economically disadvantaged and the school qualifies for title I funds. With this funding, 48% of students receive free or reduced lunch.

I will now look at the Ohio state report card for the school district I was completing my research in. I chose to look at this data because it pulls a lot of information from the school's performance throughout the previous year. The report card reports a lot of data on achievement, but I specifically looked at the early literacy component as this is the grade bands and content that I am focusing my research on. The early literacy component measures the school's effectiveness in reading and literacy supports in grades K-3. This district was rated as 83.3%

overall, and this score is further broken down into three additional categories. Proficiency in third grade is 72.2% and is the number of students who scored proficient on the state English test. In order to qualify in this measure, students had to score a 50 or higher. The second component is promotion to fourth grade and 100% of students were promoted. The final component tracks the reading improvement that occurs in grades K-3 for students who have previously been off track but are back on track. This measure uses fall reading diagnostics as well as the state tests but was not reported (Ohio State Report Card, 2023). Another area of the school report card is the gap closing. This school was rated a four out of five stars which exceeds state standards in closing educational gaps. This measure is evaluated to show how well students are meeting performance expectations in different subjects. In English Language Arts, the students' performance goal was 80.5 and they reached 85. For English Language Arts growth, the school fell by 2.3 points. The reason for the school's growth decreasing is because in the previous year the school had more growth in early literacy. Although students were improving it was not as much as they had previously shown improvement for.

Teacher interviews and beliefs on music integration

In order to gather more information on what teachers currently do to integrate music into their classroom as well as their personal beliefs on the idea of using music to teach phonological awareness skills, I conducted interviews with general education teachers. The teachers that I conducted interviews with were three general education teachers and the music teacher. These teachers teach kindergarten, second grade, and third grade. I chose these grades because kindergarten is a grade where students learn many foundational phonological awareness skills. I chose second grade because I was teaching the lessons here and it is another large year for growth. Lastly, I chose third grade because of the third grade reading guarantee and wanted to

see how the teacher in third grade taught phonological awareness skills. I also interviewed the music teacher who teaches grades kindergarten through sixth. During the brief interview, I asked a series of questions related to their beliefs and use of music in the classroom. The questions that I asked the general education teachers and the music teacher differed. This is because the standards for the general education teachers and the music teachers are different. I was interested in seeing how much integration of the two was done in both areas. The questions I asked the general education teachers focused on the strategies they find effective in their classroom for the teaching of phonological awareness skills and how they were using music. For a full list of questions, see appendix A. The questions that I asked the music teacher consisted of questions regarding engagement in her classroom as well as how she is able to assist general education teachers in integrating music into their classrooms. The full list of questions for the music teacher are in Appendix B. After I taught the series of lessons on consonant blends with and without music, I asked the second-grade teacher another set of questions to gauge her thoughts on student engagement and use of music. These questions can be found in Appendix C.

By completing these interviews, I was able to gather a sense of how music was or was not used in this elementary school. Gaining perspective from a wide range of grade levels and the music discipline provided unique perspectives because they are instructing different aged students who are learning different skills related to phonological awareness.

Lesson Plans

In the second-grade classroom, I implemented a total of four different lessons centered around consonant blends. Consonant blends are when two to three consonants are right next to each other in a word, and each give their own sound (Invernizzi et. al, 2023). Examples of blends in a word include the bl in blend, sl in slip, and cr in crate. These relate to phonological

awareness because students need to hear the two consonants and how they seamlessly slide from one to the other in the word. As they hear these consonant sounds, they can then write the words or recognize the word when spoken aloud. I chose this skill because this group of second grade students were completing a review of the subject after the grade level teachers saw there was a gap in the students' knowledge of blends. Two of these lessons incorporated music within them while the other two did not use music. They were taught in two segments, each taking two days. They occurred in back-to-back weeks. The first lesson of each segment did not incorporate music and the second of each included brief exposures to music through YouTube that supplemented the teaching of the blend. These lessons all began with their typical phonological awareness instruction – Heggerty. Heggerty is a curriculum that provides students a short daily lesson on phonological awareness skills (Heggerty, 2020). Through Heggerty, students practice necessary phonological awareness skills that will help them become successful readers. These skills include segmentation of words into phonemes, blending phonemes to form a word, identifying the medial vowel in a word, rhyming, counting the sounds in a word compared to letters, and more phonological awareness skills such as consonant blends and digraphs (Heggerty, 2020). The two weeks when the lessons were implemented consisted mostly of words with blends in them through each activity. It gave a segue into the lesson on the blend of that day. After Heggerty, students would be asked the sounds of the letters in the blends and then the sound together. I would then ask students to raise their hands and give examples of words they know with that blend. Then, students would complete a worksheet about the specific blend. An example of these worksheets can be found in appendix D. On the two days with music, before we discussed the blend and gave examples, students would watch and listen to the short instructional music video. These songs were carefully picked to have a catchy tune that students could easily pick up on

and participate in throughout the song as well as remember after the song is no longer being played. The links to these videos can be found in Appendix E.

The worksheets for each lesson all followed the same structure. The first page consisted of nine pictures. I would read aloud the words that these pictures depicted and ask students to circle the picture if it has the blend and cross it off if it does not have the blend. The reason for me reading it to them is because pictures can be subjective as to what their representation is. Phonological awareness is also based on the students' ability to recognize sounds in spoken language, so I wanted to see their performance on an auditory exercise. On the back side of the sheet, there were printed words and students were asked to circle the words that have the daily bend and underline the blend. This side of the sheet assesses if students were able to recognize the blend in printed words. This tells me that when they come across a word in a story with the blend, they will know how to begin sounding the word out.

Chapter Four

Results

In this chapter I will report the results of my study to answer the question on if music has an effect on engagement and student achievement in phonological awareness instruction. The results will be in two parts. The first part will be the teacher interviews on their current phonological awareness instruction and their beliefs on integrating music. I will be summarizing the interviews and the answers that I received from them. The second part consists of results from the series of lessons taught on consonant blends to the class of second graders. These lessons will be summarized and focused on their achievement on the worksheet as well as their participation and engagement throughout the entirety of the lessons.

Teacher Interviews

At this particular school, the music teacher, Mrs. Emigh, teaches kindergarten through sixth grade music. She sees students twice every six school days for forty minutes. She explained to me that most all of the students are engaged when they are in music class. She attributes this to the pacing of the activities being fast as well as the students getting to use their whole body to participate. Mrs. Emigh believes that if there is a way for music to be included in the general education classroom that it should be done because it offers the students another way to learn. Mrs. Emigh is available to teachers if they have any questions or need support in using music in their classroom. After talking to the teacher to see what their needs are, she would offer help in any way that she is able. This could range from offering resources she knows or making a recording of the music that they need. Because students only go to music class twice every six days, she has difficulty incorporating general education skills into her lesson plans. Mrs. Emigh has been teaching for many years and used to teach a unit on the Underground Railroad when

that grade was learning it, but she did not have enough time to get to everything, so it had to be cut out. She does, however, incorporate classroom skills within her lessons when the opportunity arises and is relevant to the music content. For example, she talks about syllables when transferring lyrics to notated rhythms. She has also called upon students' knowledge of fractions to help them understand the math behind rhythms and their names. She explained that with the demand of the music content standards as well as preparing for performances, there is just not enough time to "take deep dives" into full unit lessons on classroom skills.

I interviewed Ms. Miser at the school I completed my research in to get a perspective on music in her kindergarten classroom. Currently, she uses Heggerty, Visual Phonics, and Core Knowledge Language Arts Skills (CKLA) to teach phonological awareness. She likes these curricula because they use a combination of visual and kinesthetic approaches to learn early literacy skills. In Heggerty and CKLA, students often sing nursery rhymes with the goal of identifying the rhyming words in them. She explains that for both Heggerty and Visual Phonics, students manipulate sounds within words by using their hands and arms. Outside of these curricula, Ms. Miser uses Play-Doh and sand for students to practice writing their letters. She likes giving them another form of practice that is hands on. With her use of different curricula as well as adding in her own activities, she gives students multiple ways to practice that suits the needs of each student in her classroom. To her, the most effective strategies are strategies that use a kinesthetic approach. Students are demonstrating those literacy skills with their hands, arms, and legs. Students with special needs and speech IEPs are also benefiting from these strategies. They get to visualize letter sounds that they are not remembering when only hearing them orally.

After I learned more about Ms. Miser's instruction on phonological awareness, I wanted to see if and how she was incorporating music into her instruction. Ms. Miser uses music all of

the time in her classroom. She explained that not only does she introduce concepts through music, but she also uses it as a review tool. Ms. Miser said, “I have never come across a student who didn’t benefit from learning a concept through music.” Students of all different abilities are able to use music to learn and she noted that even her lowest achieving students have been able to learn hard concepts when being taught with songs and rhymes. Ms. Miser is creative in using music and makes up her own songs and rhymes for everything in her classroom, spanning all of the subject areas as well as school rules and daily routines. Jack Hartman and Scratch Garden are YouTube pages she frequents to teach these skills (Hartman, n.d., Garden, n.d.). She likes them for their interactive components and feels that it is an easy way to incorporate music into the curriculum. Nothing is holding Ms. Miser back from using music in her classroom. Music is implemented in her lessons and throughout the day to get the day started, end the day, and used as a calming tool. Ms. Miser explained to me that “our (her and her class’s) day never exists without a song!”

I also interviewed a third-grade teacher, Mrs. Stuart. Mrs. Stuart has been teaching for many years in the district and has a lot of experience in using many techniques to teach her students. In response to her current strategies that she uses to teach phonological awareness skills, she explained that by third grade, the students should already have mastered the skills. When she does return to these skills, she says she finds it best to put the skills in context by using literature to help students brush up on these skills. She has created multiple binders of different pieces of literature that she will use if it is necessary. When it comes to using music to help amplify her phonological awareness instruction, it was explained that she does not use it for that because it is review but does use music in other domains that are more third-grade friendly. She shared a story with me about a student of hers who also attends the same church as her. One

Sunday at church there was a question asked about the continents, and her student quickly named all seven of them. At school the next day, this student said, “that song you taught me really helped me remember!” Although this is unrelated to phonological awareness skills, this shows the power that music can have on students’ knowledge of any subject. Mrs. Stuart talked about how music helps because students remember it. Mrs. Stuart said that “this act of remembering can be used for many years to come and can be helpful in tasks that require them to recall their knowledge on formal assessments like quizzes and tests, but also in informal ways like a conversation they may have outside of school.”

Before I conducted lessons in the second-grade classroom, I interviewed Mrs. Lester about her beliefs on integrating music in her phonological awareness instruction. A strategy that she uses frequently is read-alouds, specifically read-alouds with books that have been purposefully chosen such as books with many rhymes, alliteration, and repetitive patterns. She says these help students recognize phonological elements. She also uses the Heggerty curriculum each morning which allows students to practice blending and segmenting words into individual sounds. Mrs. Lester also uses games that engage students to practice different skills. These games consist of rhyming games or word-building games. Lastly, Mrs. Lester uses a code chart book that the CKLA curriculum uses. Students learn the different patterns in words and color their code book based on the sound and the pattern’s frequency in words. Mrs. Lester likes this because students are able to make the connection from the sound they hear to the spelling. Mrs. Lester feels that the most effective strategy that she uses is Heggerty. When asked about using music to teach phonological awareness skills, she explained that she often uses songs that she finds on YouTube. She does believe that music is an effective tool and said, “students are

engaged, and recall is stronger for many students.” There is nothing holding Mrs. Lester back from using music in her instructional strategies for phonological awareness.

After I had taught the series of lessons in the classroom, I re-interviewed Mrs. Lester to gain her perspective on the lessons. She said she saw a difference in the students’ participation and much more engagement when music was being used. She believes that the music helped students recall and learn. When asked if her thoughts had changed on incorporating music into phonological awareness lessons, she explained, “I have known this is an effective method for teachers to use, especially with elementary students.” She also said that she would like to start using it more frequently now that she has seen it used and that there is still nothing holding her back.

Throughout the school that I completed my research, music has been used in many ways to help students learn. In Ms. Miser’s kindergarten classroom and Mrs. Lester’s second grade classroom, students are using music to build upon other curricula such as Heggerty, CKLA, and Visual Phonics. They are also using music to supplement with other additional activities that are used in their classrooms frequently. In Mrs. Stuart’s third grade classroom, although she does not use music for phonological awareness skills, she implements music to teach other third grade content. In each of the three classrooms, the teachers report seeing a positive impact on their students’ learning when using music. Students are engaged, focused, using the song outside of the school setting, and truly love when they get to learn in that way. YouTube, specifically Jack Hartman and Scratch Garden, was noted multiple times as the place to find catchy songs to help students learn. With many years of experience from each of these teachers, they understand the importance of students developing phonological awareness skills that will help them become better readers and writers, especially in Mrs. Lester and Ms. Miser’s classes where they are

building a foundation. There are many ways that these teachers are teaching these skills like rhyming, alliteration, blends, digraphs, short and long vowels, decoding, encoding, etc., but music is a staple in each of their classrooms to supplement the instruction on these necessary skills. In addition to the methods being used by these teachers, the music teacher, Mrs. Emigh, is there to offer support in whatever way that they may need it. Although she is unable to do much with the content learning standards in her class time, she recognizes the importance of making connections when she can. She also sees every day how engaged her students are in music class which remains consistent with what the grade level teachers have seen in their room when they incorporate music.

Lesson Observations

Throughout the implementation of the lessons, I primarily focused on the students' engagement and participation. I also analyzed the worksheets that they completed directly following the lesson and tracked any changes in performance. I will now discuss each of these points in correspondence to the lessons.

The first lessons I will discuss will be the lessons on the blends SL and CL. SL was taught without music. First, I completed Heggerty which consists of many key phonological awareness skills. The three main skills that were focused on in these Heggerty lessons were blending phonemes, segmenting words into phonemes, and encoding. I also focused on the student's engagement/disengagement. I noted engagement when students were keeping eyes forward, completing the hand motions in Heggerty, speaking the parts of Heggerty, participating in discussion by raising hand, answering prompts, etc. I noticed disengagement when students were looking around the room, not staying in their seats, not doing the hand motions for Heggerty, not speaking aloud Heggerty prompts, and not willing to participate in discussion.

When students were blending phonemes, I provided them with the phonemes like in the example word *blast*. I said the phoneme sounds rather than the letters. Students then repeated the sounds and blended the word to say *blast*. The next skill, segmenting, involved students hearing a word such as *blast* and then students were to ‘chop it up’ into the sounds. They would say, “b-l-a-s-t, *blast*.” The final skill was encoding. I said a word, students broke it up into the sounds they heard, then they spelled the word. This skill helps students transfer the knowledge of phoneme sounds to how they would write the word. After Heggerty, I briefly taught the concepts of a consonant blend in a class wide discussion. I introduced them to the SL blend and gave them multiple words as examples, then I asked them for examples. Some students were eager to share and came up with a variety of words. Other students were less engaged in this and did not raise their hands to participate but were looking around the room. Around 25% of the students were actively participating in this discussion based off of hands raised. Students then started on the worksheet. The first page featured pictures of words with and without the SL blend. I read these aloud and instructed students to circle pictures of words that they heard the SL blend sound and to cross off the ones that did not. As I said the words, a handful of students would say it slower using the skill of breaking apart phonemes like in Heggerty. However, most were very quickly circling or crossing off.

I taught the CL blend the following day. After Heggerty was completed, the CL blend was taught in a whole group setting. Students were asked what C sounds like and then L. They then blended them together and correctly said the CL sound. A song on the CL blend was then shown. Students were invited to sing along and interact with the video shown. Throughout the song, students slowly started singing, dancing, and clapping with the song as they became more comfortable. Before we moved to the worksheet, we reviewed the CL blend as a group. I asked

students to raise their hands and give examples of words with this blend, just like the day before. Immediately, hands were in the air. Nearly the entire class was raising their hands ready to provide a word for the CL blend. We then moved into completing the worksheet for the CL blend. Like SL, I read the first page, and they circled words with the SL blend. Unlike the day before, students were humming the words quietly and a few were even singing the sound aloud to help them. Others were tapping out the words like they are used to doing. Students were utilizing this new song about the CL blend to help them determine if the CL blend was in the word I had said.

When looking at the achievement level on the SL and CL lesson segments, there was improvement in many students in the CL lesson that utilized music. Fifteen students were present for both the SL and the CL lesson, and their data was included in this comparison. Of these students, five students improved on the recognition of sounds and circled more blends correctly during the CL lesson. Eight students circled all pictures correctly on both the SL and the CL lesson. Two students had a slight decline in performance on day two and circled some of the non-blend CL words in the picture. Pictures that depicted curl, cold, and call were the most missed by these two students. On the back of the worksheet students had a list of words and circled the words with the blends in them. During the SL worksheet, thirteen of the fifteen perfectly recognized the blends in the words. The other two students had missed circling two of the SL blend words. During the CL worksheet, all fifteen students circled all of the words correctly.

The following week, I taught the second segment of lessons on the blends BR and CR. I started with BR. I followed the same format with Heggerty, discussion, and then a worksheet for the BR blend. At this point, students were very familiar with the lesson and many asked, “are we going to hear another song?” or “is there another video to watch?” When I answered them and

said that there was not today, many were disappointed. Engagement was lower in Heggerty than previous days. The same students who are always active participants in Heggerty were still participating, but the students who do not always participate were not participating and required many reminders. After Heggerty, we talked about the BR blend, and I again asked for some examples. Some students shared and then we moved on to completing the worksheet. On this day, I saw less hands than the day we had learned with music. All students present completed the worksheet and if they were using a skill to hear the blend, they would tap it out. I noted that students seemed very disengaged with the worksheet. Students' focus was wandering to look out the window, tapping their pencil, talking, and overall, not engaged with the lesson as a whole.

The following day, I taught the CR blend, this time incorporating music in between Heggerty and the worksheet. When the screen came on with a video, many were very excited about the song. They showed their excitement by cheering and I even had a few students thank me for showing them a video. It took less time for students to start interacting with the video. They were clapping and singing along in no time. Just like in the lessons before, I asked for examples with the blend in it. After the music, almost the entire class was raising their hands ready to share a word with me. Students were sitting up and attentive to the words their peers were providing and were eager to answer. Throughout the worksheet, I saw the same results. More students had stopped tapping it out and were instead singing the song from the video to help them determine if the word had the CR blend or not. I observed a small group of students, around six or seven, using both the song and tap out the word. There was even an increase in those using the song from the CL lesson to this lesson on CR. During the CR worksheet, approximately 75% of the students in the class were connecting the worksheet to the song they had heard whether it be through humming, mouthing the words to the lyrics, or very quietly

singing it to themselves. I noted this by writing down names of students who I saw and heard using the song.

During the BR and CR lesson segment, there was apparent growth in knowledge of blends. Fifteen students completed both lessons in this segment. Eleven students had perfect scores on the blend recognition picture side of the worksheet for both the BR and CR blend. This is an improvement from eight during the SL and CL lesson segment. Three students made improvements from the BR lesson to the CR lesson. Only one student had a decline from the BR lesson to the CR lesson. On the backside of the worksheet, all fifteen students had perfect performance in recognizing the blends in a list of words.

Chapter Five

Discussion

Throughout this chapter, I will discuss the key takeaways from the research I studied, my interviews, and the lessons I taught on blends with and without the integration of music. As I discuss the results, I will align them with my research question: Does using music in phonological awareness instruction increase student engagement and achievement?

Teacher Interviews

I conducted interviews with grade level kindergarten, second, and third grade teachers to gauge an understanding of their phonological awareness instruction and their beliefs of using in their classroom to teach phonological awareness. In each grade level, I saw many common themes across the teachers' beliefs on the use of music within their classroom that I will expand on.

Each teacher in the grade level classroom explained that when they use music, they see an increased level of engagement across their class. Mrs. Emigh also stated that most kids are engaged in music lessons during music class. Students are interacting with the material in a way that is beneficial to their recall of the knowledge when using music as a support. In Mrs. Stuarts' class, she explained that music was beneficial in her students' lessons on continents and in both Mrs. Lester and Mrs. Miser's classes music was beneficial to teach different aspects of language like rhyming, alliteration, syllables, etc. This is consistent with the study completed by Lee (2009) who taught students vocabulary in a new language using music. Lee found that students retained the new material much better as well as interacted with it better when put in music form. In the study completed using the Kodaly music program (Hurwitz et. al, 1975), the researchers

noted the same outcome of more energy, engagement, and motivation. Not every lesson will initially strike a student as being interesting or entertaining, but by providing an additional support with the integration of music into the lesson, more students will be engaged, which will help them take in the information being presented.

Integrating music can be as simple or as complex as a teacher would like it to be. Many teachers, including Ms. Miser and Mrs. Lester, use pre-made music tracks available on YouTube. These are easily accessible and include songs that cover many different skills and content areas. These also provide a visual along with the music. If a teacher was interested in creating a song based on the content in their curriculum, they could always use the school music teacher as a resource. Mrs. Emigh, the music teacher at the school where I completed my research, explained that there is not enough time to focus on both the music standards and the content standards in the short amount of time she spends with students, but that she is able to help teachers locate resources or record tracks if needed. With this resource available to teachers, they could find more opportunities to integrate music in their classroom. In the study by Hurwitz (1975), teachers were using the Kodaly music program which showed a positive correlation with phonological awareness abilities. Kodaly does not have direct ties to phonological awareness, but researchers found that it did have an effect on literacy performance (Hurwitz, 1975). This shows that there may be programs that already have elements that combine the two domains. If these are available for schools to adopt, the integration could happen more naturally yet still have the same effect on students in their knowledge of other content areas.

Throughout my conduction of interviews, I saw that music was a common thread in each of the classrooms that I visited. It was aiding in their instruction of the curricula that the school had already adopted. I went into each interview unsure of what to expect from the different

teachers as they had different levels of experience in teaching and were taught at different ages. Because they all do incorporate music in some way, there is evidence to show the many capabilities that music has across the lower elementary grades. My research was conducted in a K-3 setting but would be interesting to see if the use of music being beneficial to instruction is also occurring in the upper elementary grades. As students progress in school, the academic content standards become more rigorous, similar to the music content standards. By integrating them together, students have the potential to increase their achievement in both areas.

Interviewing teachers was a beneficial and necessary piece of the research that I conducted as it gave me insight to the current use of music across elementary school. Students spend very limited time in music class and because of this not much integration can be completed during that small amount of time. However, teachers in grade level classrooms are integrating music in cohorts with the school adopted curricula using pre-made music they find on the internet. They primarily see a difference in the engagement of their students which remains consistent with the currently published research. A teacher needs to know their students to know how they best learn, but Ms. Miser stated that she has never seen a student not benefit from music integration.

Consonant Blend Lessons

In the series of four lessons taught on consonant blends, Mrs. Lester and I observed the stark difference between when the lessons incorporated music and when they did not. Not only was engagement higher class-wide, but students' performance on the short worksheet was also different in the lessons with and without music. Using the songs gave students more exposure to words with the specific blend and without the music, students were not engaged and not provided with words that they could share and discuss.

I used songs in the CR blend and the CL blend lessons taught on the second day of that learning segment. In the previous days, engagement was low and there was not much participation, but on these days, the engagement was much higher. Students were excited to have both the visual of the video and the music. On the second day with music, students were even asking for music and had much more energy. They sang along, danced, and then applied it to their worksheet. When students knew that music would be a part of that day's lesson, they showed even more interest in the topic through more participation in conversation and Heggerty. Herwitz (1975), Wiggins (2007), and Blasco-Magraner (2021) all noticed increased engagement and motivation in their research as well. With literacy performance being at a 30.6% in the previous school year for the state of Ohio (Ohio State Report Card, 2023), something that increases student motivation and achievement could be beneficial to literacy performance. This would hopefully raise the literacy performance score. In multiple observational and quantitative studies, including my own, this integration of music was proven beneficial.

Phonological awareness is important to the success of the reader (National Reading Panel, 2002)). In these lessons, students learned the phonological awareness skill of a consonant blend. Consonant blends are when two to three consonants are right next to each other in a word, and each give their own sound (Invernizzi et. al, 2023). On the back side of the worksheet, students had a list of words that they were reading and then circled the words with the consonant blend present. Throughout the worksheets, students excelled at recognizing the blends. By the second segment of lessons, all students who participated missed zero words on the back of the paper. Because students knew the sound of the blend, they were able to use their skills to read the word. When students come across words in their reading, they will be able to read words with consonant blends in them. In the research completed by Kozminsky and Kozminsky (1995), they

saw that students with phonological awareness instruction were better readers and comprehended texts better. This relationship makes the solidification of skills valuable for students as they will continue to read for comprehension throughout school and life. Although students could have learned the blends through lessons without the use of music, the music makes the learning memorable, and material stays with the students for a longer period of time.

Limitations

There are a number of limitations to the research that I have conducted. The first is that I had a small sample size of only 24 students. Among these 24 students, there were many absences throughout the four days that I taught the lessons. This caused me to only have data on 15 students for each segment of blends lessons who were there for both lessons. With more students and a larger sampling group, the data has the potential to show more about the achievement across the lessons. Another addition could be to do lessons with music that is pre-made like I did as well as lessons with songs that are created by the teacher in conjunction with the music teacher. This could add more engaging elements like instruments and movement and be even more purposeful. These two styles of integrating music could be compared with no music to further show the differences. I only completed instruction for two days using music and two days without. Due to time and scheduling constraints, the four lessons were not taught in four consecutive days but had the weekend in between which is the reason for being taught in two segments. Lastly, the group of second grade students, although I had relationships with them, were not part of my personal class. I did not regularly teach them lessons in my teacher preparation program at this time, so there may have been hesitation on both of our parts in the instruction.

Future Research

Through the completion of my research on the effectiveness of integrating music into phonological awareness instruction, I was met with the challenge of having little research to draw from. The topic of music integration into the general education classroom as a whole has not been researched to the extent that it could be. Finding specific studies on phonological awareness instruction with music was even more of a challenge. Phonological awareness is a predecessor of successful reading which makes it that much more important. I recommend more research on this material to create an educational system that recognizes the benefits of music integration and the role it plays on literacy success. It is being used and this can be seen through the multitudes of YouTube videos, but with even more purposeful use, the growth of students' literacy could be improved. There is work that needs to be done to improve the current state of literacy achievement and as more support is researched, we can find more ways to help students. As educators, our main goal is to teach our students and continue to foster their learning growth. More research would provide the resources that educators need in order to integrate music successfully into their instruction.

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Appendix A

General Education Teacher Interview Questions

1. What are the instructional strategies that you use to teach students emergent literacy and phonological awareness skills?
2. Which of these strategies have you found to be the most effective in your classroom?
3. Have you ever used music to teach these skills?
4. What are your thoughts on incorporating music into your instruction to emulsify your instruction on emergent literacy and phonological awareness skills?
5. Is there anything holding you back from using music in your instruction?

Appendix B

Music Teacher Interview Questions

1. What is the engagement like when students are in music class?
2. Do you think that music should be used in general education classroom to help amplify the teacher's instruction on certain topics such as phonological awareness and emergent literacy?
3. In what ways can you support a classroom teacher if they want to or do use music in their instruction?
4. Do you ever incorporate their skills from their general education classroom into your instruction with the students? Why or why not?

Appendix C

Post-Lesson Interview Questions

1. Did you see a difference in the students' participation, engagement, etc. when I used music in the lesson compared to when I didn't?
2. Do you think that using music helped instruction?
3. Have your thoughts changed on your view of incorporating music into a lesson on emergent literacy or phonological awareness skills?
4. Would you be interested in trying to use music in your classroom more frequently now that you have seen it used?
5. Is there anything holding you back?

Appendix D

Lesson Worksheet

CL Blends

Name _____

Circle the words that have the CL Blend

Put an X through the words that do not have the CL Blend

1. 	2. 	3. 
4. 	5. 	6. 
7. 	8. 	9. 

Clown

Cell

Clean

Call

Clever

Clap

Cable

Cool

Clear

Ceiling

Claw

Cellar

Clamp

Crawl

Cruel

Appendix E

Lesson Videos

Rock ‘N Learn, R.N. (2022, Oct. 1). *CL Blend Sound | CL Blend Song and Practice | ABC Phonics Song with Sounds for Children* [Video]. Youtube.

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Appendix F

IRB Paperwork

WITTENBERG UNIVERSITY

IRB PETITION REVIEW

IRB Tracking Number: IRB 004-202324 (revision 2)

Date of Review: 10/5/2023

Principal Investigator's Name: Dr. Kristin Farley

Co-Investigator(s)'s Names: Sophia Thompson

PROJECT TITLE: *The Effects of Music on the Development of Emergent Literacy and Phonics Skills*

Documents Reviewed:

1. IRB 004-202324 review revision 2.docx
2. Informed Consent Form Interviews.docx

Overview of Research Being Proposed:

Researchers will interview elementary school teachers about emergent literacy and phonics skills and will conduct an experiment testing the effectiveness of lessons using music compared to lessons not using music.

Determination of Type of Review (I.e., Exempted, Expedited, Full-Board):

Exempt under 45 CFR 46.104(d)(1)

Questions or Required Modifications for the Investigator(s). *Submit modifications as highlighted text or in tracked changes within the original document(s). Re-name the modified document to indicate the original document has been updated (I.e., Witt-IRB-petition-survey-research-version2.docx).*