Networks: An Online Journal for Teacher Research

Volume 24 | Issue 1 Article 3

February 2023

The Symbiotic Relationship Between Reading and Music: A Natural Pedagogical Collaboration

Jarrett D. Moore
Black Hills State University, jarrett.d.moore@bhsu.edu

Kathryn Simonyak

Kelsey Ruzicka

Recommended Citation

Moore, Jarrett D.; Simonyak, Kathryn; and Ruzicka, Kelsey (2022) "The Symbiotic Relationship Between Reading and Music: A Natural Pedagogical Collaboration," *Networks: An Online Journal for Teacher Research*: Vol. 24: Iss. 1. https://doi.org/10.4148/2470-6353.1358

The Symbiotic Relationship between Music and Reading:

A Natural Pedagogical Collaboration

Jarrett D. Moore ~ Black Hills State University

Kathryn Simonyak

Kelsey Ruzicka

Abstract

Reading and music instruction can form a symbiotic relationship to positively impact lower-elementary literacy and increase student engagement. In this action research study, cross-curricular instruction between reading and music at the 2nd grade elementary level was taught by both the reading and music teacher. This study employed reading, rhythm, rhyme, instrumentation, writing, physical movement, and song to benefit students' phonemic awareness while reading. Developmental Reading Assessments (DRAs) were used to measure student growth from the start of the study to its conclusion. These DRAs were used as pre- and posttests and were bookended around instruction using reading, rhythm, rhyme, instrumentation, writing, physical movement, and song in the regular and music classrooms. This type of cross-curricular instruction between reading and music reinforced learning in both classroom settings. Results revealed that co-planning reading and music instruction have a positive impact on fluency, comprehension, and student engagement, but that DRAs are not the most accurate tools to measure phonemic awareness.

Keywords: reading instruction, music instruction, elementary education, action research

Introduction

While reading instruction at the primary level is the traditional domain of the regular classroom teacher, literacy expands beyond these limits (Hansen et al., 2014). In fact, Darrow (2008) maintains, "literacy acquisition is a primary concern for all educators" (p. 32) because students use literacy skills in all subject areas, including music. Music is a natural enhancement to reading instruction because students learn musical vocabulary in addition to reading and comprehending song lyrics, and following written instructions. Further, music is a tool to enhance children's appreciation of literature and facilitate a child's practice of reading skills

(Darrow, 2008). Additionally, music helps develop creativity in students when integrated into reading instruction (Paquette & Rieg, 2008).

Foundational reading skills in primary grades are essential for students to be successful independent readers in secondary grades (Stanley et al., 2018). Phonetic skills help readers decode the sounds in a word to gain comprehension. When a reader's phonemic awareness is weak, they will be unable to decode words and the struggle to comprehend can make reading a frustrating and undesirable task. As educators, we encourage our students to become independent readers who find joy in reading so that they can become successful lifelong learners. Constructivist teachers believe that knowledge is gained through social interactions (Vygotsky, 1978) and elementary music instruction is social as students sing together, play instruments together, and perform with and for one another. Poems, rhymes, and songs are used in the music classroom to encourage learning steady beat and rhythm. We sought to discover if poems, rhymes, and songs could be used in both the music and the general education classrooms to encourage participation and develop phonemic awareness with the goal of enhancing reading comprehension. Instead of isolating the use of poems, rhymes, and songs to particular subject areas, we hoped to determine what would happen if the reading and music teacher collaborated to use these tools to reinforce learning in both settings. While the link between music and reading is clearly established in current research, there is little research showing the effects of intentional, cross-curricular collaboration between practicing teachers in primary grades. Therefore, we collaborated on a focused unit of action research that would address the question "What effect does cross-curricular collaboration between music and reading teachers have on a reader's phonemic awareness and engagement in classroom activities?" This study examines

what this collaboration looks like and how it can work to enhance both instructional environments.

Literature Review

Literacy and music are deeply interconnected and research has shown the symbiotic relationship between the two disciplines (e.g., Benz et al., 2016; Darrow, 2008; Hall & Robinson, 2012; Hansen et al., 2014; Zuk et al., 2013). An understanding of this connection will allow reading and music teachers to collaborate to create interventions combining music and foundational reading skills to motivate students to learn and grow. It may also facilitate new and innovative cross-curricular collaborations, especially in primary grades where foundational skills are introduced and developed.

Music and Literacy Connections

Music is a part of children's literacy prior to beginning formal schooling (Hall & Robinson, 2012) and the nursery rhymes are widely available (Cardany, 2013) potentially creating common rhyming experiences for children before kindergarten. Throughout childhood, children practice and repeat songs, chants, and rhymes (Paquette & Rieg, 2008) and the language is internalized (Trinick, 2011). While both music and reading instruction in primary grades have inherent value while taught separately, the instructional strategies and classroom activities can be complementary and easily paired to extend learning opportunities (Darrow, 2008; Hall & Robinson, 2012; Smith, 2000; Zuk et al., 2013). This relationship is mutually beneficial to both reading and music instruction and as Hansen et al. wrote, "literacy extends beyond the regular classroom and reading instruction" (2014, p. 1).

Current research on the links between music and reading instruction has found "common brain mechanisms utilized for language, reading, and music skills" (Zuk et al., 2013, p. 8). There

also seems to be links between the organization and structure of music and language (Hansen et al., 2014; Zuk et al., 2013) that allow for mutually beneficial cross-curricular instructional opportunities. Additionally, Benz et al. (2016) suggested structural similarities between music and phonological awareness. This research seeks to test these links in terms of the effects on phonemic awareness and student engagement in classroom activities.

In addition to music and reading being pedagogically connected, a positive relationship has been found between reading and writing. Research with English Language Learners has suggested that the more students read at appropriate levels, the more vocabulary and language structures they will acquire (Wright, 2010). In turn, music and the arts can help students become more creative with their writing. Additionally, music and the arts are perhaps integral to developing students' ability to think and write critically. According to Eisner (1981), students need to be exposed to and work with the arts because if they do not, they "will not be able to write, not because they cannot spell, but because they have nothing to say, nothing to reconstruct from sensory exploration of the environment" (p. 471).

Building Student Engagement and Motivation through Music

As previously discussed, music is a part of children's literacy prior to beginning formal schooling (Hall & Robinson, 2012), but there is an additional effect as it relates to student motivation and engagement. Pre-school music instruction fosters social bonds and can facilitate a motivational and engaged environment (Frasher, 2014; Paquette & Rieg, 2008). Further, there is joy in music which can also be motivating to students (Iwasaki et al., 2013) as well as the development of trust and respect through shared music (Paquette & Rieg, 2013). Smith (2000) encouraged singing and songwriting activities for more direct participation and response in reading instruction. Beyond the social and fun aspects of shared song, there are pedagogical

advantages to linking music and reading instruction. Hansen et al. (2014) pointed to the discovery aspects of music instruction and the exposure to new ideas, while Paquette and Rieg (2008) identified nurturing creativity as an advantage to integrating the two subjects. Finally, the benefits to cognitive development may even be beneficial to students who are not especially interested in music (Benz et al., 2016). Collaboration between the classroom teacher and music teacher can ensure that these opportunities are present for the students. A greater motivation to learn has been observed by teachers who have included music in their reading programs and music teachers have myriad tools to enhance literacy instruction (Frasher, 2014).

According to Paquette and Rieg, songs "can be used to teach a variety of language skills, such as sentence patterns, vocabulary, pronunciation, rhythm, and parts of speech" (2008, p. 228). A typical weekly routine of incorporating singing in the general education classroom can be paired with specific curricular themes (Iwasaki et al., 2013). One example of a cross-curricular unit is the general educator teacher using children's songs learned in music class to design literacy instruction. Smith (2000) used music to teach literacy in the classroom by taking "Twinkle Twinkle Little Star" and setting the tune to a song called the "Short and Long Vowel Song," which was used to reinforce learning of long and short vowel sounds. Students received copies of the lyrics in booklets, read to one another, and illustrated the booklets in addition to singing (Smith, 2000). This process of connecting the two instructional times takes advantage of the natural way children experience language—first through sound and then visually (Hall & Robinson, 2012). Connecting rather than siloing these learning environments has the potential to increase engagement and participation in both classrooms.

Collaboration

While the connection between music and literacy instruction has been well-documented, there is little available research to suggest that teachers are taking advantage of collaborative opportunities to support student learning in this manner, especially at the primary grades level. The majority of the collaboration in our district takes place vertically or horizontally (i.e., at grade level or subject-based across grade levels), but cross-curricular collaborations are rare. Two of the barriers to these collaborations are the demands on teacher's instructional time and a lack of understanding of the natural connection between the two subjects. With the external demands on instructional time, regular classroom teachers may feel pressure to not divert their focus on their mandated curricular goals (Trinick, 2011) and music teachers, with limited time, may not want to stray from explicitly teaching music skills (Darrow, 2008). So, there are legitimate concerns about considering novel collaborative relationships due to accountability measures based on student test scores and limited instructional time. This sentiment, however, ignores how using music and literacy together improves reading (Frasher, 2014) and the similarities between each content area's instructional strategies (Hall & Robinson, 2012). Further, the potential for positive impacts are mutually beneficial to both subjects: music can be effectively integrated into literacy instruction (Hansen et al., 2014; Paquette & Reig, 2008) and reading can be easily integrated into the music classroom (Hall & Robinson, 2012) without sacrificing the integrity of either. This study aims to take advantage of the natural symbiosis between music and reading instruction and foster new, innovative, and intentional collaboration to further student success and engagement.

Methodology

The action research study took place in a public elementary school in a rural Midwestern town. Enrollment in the school was approximately 415 students. The 20 participants in the study were selected through convenience sampling and were split evenly between female and male—10 female and 10 male. The participants ranged in age from 7-9 years old and were in the 2nd grade. Three participants received special education services based on their Individualized Education Plans and one participant was hearing impaired. Participants received a total of 60 minutes of music instruction per week split over two sessions and 360 minutes of reading instruction spread evenly over four school days. Participants received whole group, small group, and individual instruction.

Mixed methods were used to conduct this action research study as both qualitative and quantitative data were collected. The Measures of Academic Progress (MAPS) scores determined the baseline for a Developmental Reading Assessment (DRA) pre-test for each participant. A post-intervention DRA was also administered by the reading teacher. Both teachers collected anecdotal notes through teacher observations and surveys. The reading teacher had participants create a written rhyme and song book with illustrations and the music teacher recorded a final performance of one of the songs for observation by the research team.

Data Collection

Quantitative data were collected by accessing participants' MAPS scores for a baseline to gauge reading level ability and by using pre- and post-intervention DRAs. The DRAs were used as tools to measure participant reading growth. Qualitative data were collected through surveys, teacher observations with anecdotal notes, and a written rhyme and song book. These qualitative data were used to measure participant growth, enjoyment, and engagement.

The study took place approximately mid-February through mid-April 2019. DRA pre-tests were administered during the first weeks of the intervention in the general education classroom. The texts for the DRA assessments were selected from a choice of four texts provided by the assessment basal based on the participants' observed reading level from MAPS data. The DRA pre-test was then evaluated to determine the participant's current reading ability. Pre-test scores were recorded and served as a baseline to measure participant growth. During the next weeks of the study, participants learned two songs and two rhymes at the same reading levels and the rhymes were taken from Rigby Phonics Rhyme Charts. Participants learned the first rhyme and song using rhythmic speech for the rhyme "All Talkers" and the "Sol Mi La" melody of "Rain, Rain Go Away" for the song "Sailor, Sail Away." For both the song and rhyme, the chart with the words were projected on the SmartBoard. The second rhyme, "Alicia's Race" was taught using rhythmic speech, body percussion, unpitched percussion, and the chart with words was projected on the SmartBoard. The song "Smickory, Smackory, Smock" was set to the same "Sol Mi La" melody of "Rain, Rain, Go Away." Participants first learned the melody while viewing the words on the rhyme chart, then added body percussion which moved to barred percussion instruments, and then created movement for the song. Three participants were selected to play metallophones for the song, three participants created and led movements for the song, and the rest served as the singers for the song. After learning both rhymes and songs and having a few weeks to practice, participants took a survey that asked them which song and rhyme was their favorite and why.

The reading teacher used these same rhymes and songs in the general education classroom. The participants started writing "All Talkers" and "Sailor, Sail Away" in their rhyme and song books prior to learning the song and rhyme in music class. After the introduction to

both of the rhymes and songs in music class, the participants wrote out “Alicia’s Race” and “Smickory, Smackory, Smock.” The teachers observed and documented progress in learning through teacher journals. In the following class periods, participants continued to perform the two songs and rhymes using the methods described above and took a reading attitude survey and a music attitude survey in the respective classrooms. The final class periods of the study concluded with a final performance of both rhymes and songs, a recording of “Smickory, Smackory, Smock,” continued teacher observation, and a post-intervention DRA.

Data Analysis

The pre- and post-intervention DRAs provided the quantitative data to show the effects of the intervention on reading levels. The qualitative data, including teacher-researcher journals, participant surveys, and the written rhyme and song books were analyzed to gauge the impacts of the intervention on participant engagement in classroom instruction. All data sources indicated positive change in both reading levels and participant engagement.

DRA Results

The pre- and post-intervention DRA data showed that every participant made reading gains, advancing their scores by 1 level where possible. As seen in Table 1, the number of students achieving the highest possible score doubled. A DRA level of 28 was the highest possible score, so participants who pre-tested at a DRA 28 could not be tested any higher. However, these participants improved their time by an average of 20 seconds and achieved 100% accuracy while reading a new page of the story on the DRA. While there is no longitudinal, district-level data available to which to compare this growth, it is notable that the end of 2nd grade goal for all students is level 28 and 60% of participants in this study reached that level a month prior to the end of 2nd grade.

Table 1

Number of Participants at each DRA Level Before and After Intervention

	Pre-Intervention	Post-Intervention
Level 10	1	0
Level 12	2	1
Level 14	2	2
Level 16	0	2
Level 20	3	0
Level 24	6	3
Level 28	6	12

Note. The highest possible score was Level 28, the goal by the end of 2nd grade.

Participant reading errors were analyzed and the majority of the errors were either meaning or visual errors. This indicated the participants understood what they were reading or knew the meaning of the story, but said a different word that still made sense in the story. For example, a participant said, "he *stopped* in the middle of the road" instead of "he *stood* in the middle of the road." Although the word was read incorrectly, the word the participant stated still made sense and did not change the meaning of the sentence. This error was a visual error where the participant said the words stopped and stood looked alike visually.

Teacher Journals

Teacher journals were analyzed both individually and as a group for themes and distinct changes and patterns in participant behaviors, engagement, depth of questioning, and quality of discussion. The anecdotal notes from the music teacher's journal provided evidence that participant questioning improved both in frequency and quality. Prior to the intervention, participant questions were often cursory and technical, mainly concerning completion of instructional tasks (i.e., where to stand during singing practice, what to do next, etc.) or unrelated to the class activities. Gradually, and after repeating the poems and songs in the study for

multiple class periods, participants started to ask specific, probing questions about the content. In the rhyme "Alicia's Race," Alicia says, "I'm just beat." A participant asked what that phrase meant and a discussion started exploring the meaning of the rhyme. Also, in the rhyme "All Talkers," participants began asking questions about the words in the rhyme. For example, one participant asked, "What is a preacher?" and other participants shared their answers and another discussion began. Additionally, after the words of each rhyme and song were taught, instrumentation and movement were added to "Alicia's Race" and "Smickory, Smackory, Smock." Lastly, participants were eager to play instruments, clap, or incorporate movement to the two selections without specific direction from the teacher, indicating a higher than normal engagement with the class content.

The reading teacher documented the number of times they corrected participant reading and spelling in daily work and identified an increase in the use of the correct reading and spelling of the different spelling patterns learned from the rhymes. When used in the participants' everyday reading and writing, the participants were able to decode and spell the word with this pattern correctly more often. For example, in the rhyme, "Sailor Sail Away," the participants learned the "ai" long "a" spelling pattern and were able to correctly read and write words with that pattern. Participants also tried adding rhymes into their own writing. In one participant's writing, the participant wrote, "my dog has a black nose and white toes" to describe the dog. Before the participant edited their writing, they had written, "my dog is black and white." After the participants were taught the song with instruments and movement, several participants began using a melody or movement to help them with their everyday reading and writing. The participants would often add a tune to the guided reading books they were reading for the week.

The implementation of these new strategies was not prompted by the reading teacher and seemed to increase participant engagement in independent and guided reading.

Music and Reading Attitude Surveys

The music and reading attitude surveys were intended for participants to give feedback on the effectiveness of incorporating music into reading instruction. On the music survey, the 50% of participants agreed that music helps them learn new words. Additionally, no participant disagreed with the statements "I feel happy when I listen to music" and "I am good at playing music and/or singing." The reading survey yielded similar results as 70% of participants indicated that reading is important and 75% indicated they learn new things when they read. All 20 participants answered that they believe themselves to be good readers.

Favorite Survey

The favorite survey asked each participant to select their favorite rhyme, favorite song, and explain their reasoning. The favorite rhyme was "All Talkers" with 61% of participants preferring this piece. The justification for this preference was that it reminded participants of themselves and their home life (e.g., "it's more like me" and "because it reminds me of my family") and it was aurally pleasing (e.g., "it's kind of like rock and roll" and "it sounds cool and amazing"). "Smickory, Smackory, Smock" was the favorite song at 71%. Participants preferred this song because it allowed them to participate (e.g., "because I can do the actions" and "because we get to do instruments") and they enjoyed the content of the song (e.g., "because it has more detail and a good rhythm" and "it has more details"). Overall, survey data showed that some participants' preference was reflected by adding movement and instrumentation and, for others, the subject matter of the rhyme influenced their preference.

Rhyme and Song Book

The written rhyme and song book was broken up into four different sections, one for each rhyme and song. The procedure included participants copying the words of each rhyme and song from the SmartBoard. Once they were finished, participants drew pictures that went along with the rhyme or song. The first two sections of the rhyme and song book—"All Talkers" and "Sailor Sail Away"—were completed before they learned them with the music teacher. Participants struggled with these two sections as they found it difficult to read and understand the words without context. Therefore, participants' pictures did not particularly align with the action of the rhyme or song. The second half of the songbook—"Alicia's Race" and "Smickory, Smackory Smock"—was completed after participants learned them in the music classroom. This made a significant difference in how the participants were able to write and draw in the songbooks. Most participants did not need the words written on the SmartBoard because they remembered the tune and were able to recall the words from memory. Their pictures were much more relevant as well.

Discussion

The purpose of this study was to determine if cross-curricular music and reading instruction affect a reader's phonemic awareness and engagement in classroom activities. Data indicated three key findings showing a clear symbiotic relationship between reading and music instruction in primary grades. First, using music, rhyming, and movement increased student engagement in both music and reading instructional activities. Similar to previous studies (e.g., Frasher, 2014; Iwasaki et al., 2014; Paquette & Rieg, 2008), findings suggest music instruction is motivating, engaging, and even joyful. Second, instructional collaboration and coordination between music and reading teachers was a key factor in encouraging the increased student engagement through continuity between the classes. This was observed by the reading teacher

when participants would use the aspect of rhythm and rhyme in their own writing as in the example above about the rhyming sentence used to describe a dog. In the music classroom, students were eager to sing, move, and play instruments to the song. This continuity aligns with existing research (e.g., Hall & Robinson, 2012; Trinick, 2011) illustrating the similarities that exist between the two instructional settings and that collaboration boosted student learning rather than detracted from curricular goals. Third, glimpses of improved reading comprehension were shown in the participants' questioning of the subject matter of the rhymes and poems and greater fluency in their reading and writing. There was positive growth in the DRA scores and times, but it is unclear as to whether phonemic awareness can be directly measured with this assessment. While we can assume a better phonemic awareness would contribute to an increase in DRA levels, the data cannot claim this intervention improved phonemic awareness in isolation.

Our findings highlight several benefits of this novel collaboration. For instance, participants were better able to write and illustrate rhymes and songs during reading instruction after they had been exposed to the same rhymes and songs in the music classroom. In the music classroom, participants seemed to be more creative and inventive in their movements and instrumentation when the content was used in both instructional settings. Using a familiar melody—"Rain, Rain, Go Away"—to teach poems and rhymes consistent with Smith's (2000) research may have helped students improve their reading fluency and engagement with the subject matter as well. Professionally, and beyond the instructional value, the collaboration was an insightful and instructive vision of what collaboration can mean beyond the usual arrangements of vertical and horizontal professional learning communities. The fine arts have traditionally been excluded from planning and collaborating with the core content areas and this

is a detriment to both instructional areas. New and innovative collaborations should be encouraged among teachers, administration, and district-level personnel.

One limitation of this study was that the DRA assessment is not the most appropriate assessment to use to determine whether the participant's phonemic awareness improved. The DRA is effective at determining a student's fluency and accuracy rate while reading rather than determining a students' phonemic awareness. Consequently, the DRA is not as effective at evaluating the skills students use to decode unknown words within the text. Nevertheless, DRA data indicated that each participant realized gains based on the pre- and post-intervention scores.

Despite this limitation, this research suggests a positive connection between music and reading instructional collaboration as well as the benefit of working on the same content between the two classrooms. Additionally, the data indicate increased student engagement resulted from this intervention and our professional engagement increased as well. In regard to our practice, we intend to seek out new and innovative collaborations to maintain curricular continuity and believe school and district-level administration should advocate for the same. It is clear that student engagement and motivation were positively impacted by this collaboration and we believe experimenting with inventive ways to integrate music and the fine arts into core instructional content would be beneficial to student learning. In terms of future research, it would be useful to extend the current findings by seeking further, more long-term opportunities to facilitate collaboration among teachers and make the most of opportunities in which the curriculum would be conducive to cross-curricular instruction. Specific to reading and music connections, it would be worthwhile to track the sequence and timing of innovative and creative thinking by participants to isolate the effects of the individual parts of the intervention.

References

Benz, S., Sellaro, R., Hommel, B., & Colzato, L. S. (2016). Music makes the world go round: The impact of musical training on non-musical cognitive functions—a review. *Frontiers in Psychology*, *6*, 2023. https://doi.org/10.3389/fpsyg.2015.02023

Darrow, A. A. (2008). Music and literacy. *General Music Today*, *21*(2), 32-34. https://doi.org/10.1177/1048371308316411

Cardany, A. B. (2013). Nursery rhymes in music and language literacy. *General Music Today*, *26*(2), 30-36. https://doi.org/10.1177/1048371312462869

Eisner, E. (1981). Mind as cultural achievement. *Educational Leadership*, *38*(7), 466-471.

Frasher, K. D. (2014). Music and literacy: Strategies using comprehension connections by Tanny McGregor. *General Music Today*, *27*(3), 6–9. https://doi.org/10.1177/1048371314520968

Hall, S. N., & Robinson, N. R. (2012). Music and reading: Finding connections from within. *General Music Today*, *26*(1), 11–18. https://doi.org/10.1177/1048371311432005

Hansen, D., Bernstorf, E., & Stuber, G. M. (2014). *The music and literacy connection.* Rowman & Littlefield.

Iwasaki, B., Rasinski, T., Yildirim, K., & Zimmerman, B. S. (2013). Let's bring back the magic of song for teaching reading. *The Reading Teacher*, *67*(2), 137–141. https://doi.org/10.1002/TRTR.1203

Paquette, K., & Rieg, S. A. (2008). Using music to support the literacy development of young English language learners. *Early Childhood Education Journal, 36*(3), 227-232. https://doi.org/10.1007/s10643-008-0277-9

Smith, J. A. (2000). Singing and songwriting support early literacy instruction. *Reading Teacher, 53*(8), 646-650.

Stanley, C. T., Petscher, Y., & Catts, H. (2018). A longitudinal investigation of direct and indirect links between reading skills in kindergarten and reading comprehension in tenth grade. *Reading and Writing*, *31*(1), 133-153. https://doi.org/10.1007/s11145-017-97776

Trinick, R. M. (2011). Sound to sight: The use of song to promote language learning. *General Music Today*, *25*(2), 5-10. https://doi.org/10.1177/1048371311402066

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes.* Harvard.

Wright, W. E. (2010). *Foundations for teaching English language learners: Research, theory, policy, and practice*. Caslon.

Zuk, J., Andrade, P., Andrade, O., Gardiner, M., & Gaab, N. (2013). Musical, language, and reading abilities in early Portuguese readers. *Frontiers in Psychology*, *4*, 288. https://doi.org/10.3389/fpsyg.2013.00288