

Music and Literacy

Prioritizing Instrumental Music Education at the Middle School Level

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Abstract: This paper explores the relationship between instrumental music training and literacy. Research shows that instrumental music training (such as band) has a positive impact on literacy rates and on learning in general. This relationship was not seen for choral studies but specifically for instrumental music education. When implemented correctly, music training supports the learning of students and boosts their reading levels. The quality of the music instruction also affects the outcomes. Through an exploration of these studies and their results, this paper argues that quality instrumental music training (i.e., quality band programs) leads to higher literacy rates, as measured by state test scores.

Introduction

While in Southeast Asia on a study abroad trip, I had the opportunity to attempt communication with many non-English speakers. In a music store in Vietnam, I encountered a young man who spoke no English. Since I spoke no Vietnamese, we attempted to communicate with a language we were both familiar with—music. The young man began playing a familiar American tune on a flute from the shop, and a connection was made. It is very easy to discount the importance of music until that is the only common language that you share with another person. In this situation, the dialogue was with someone who spoke a foreign language. Likewise, in conversations between teachers and students it can sometimes feel as though two different worlds are being bridged and two different languages are being spoken. Music can serve as that bridge between worlds.

As an educator in the field of language arts, one of the issues I face is the low reading levels of my students. Unfortunately, this issue is not limited to students within my school, nor is it limited to students living within my district. Poor literacy skills are a common problem across the country. Low literacy levels can affect students in every subject area and can lead to student frustration in school, as students who cannot read struggle to catch up to their peers. As a result, according to Hernandez (2011), “One in six children who are not reading proficiently in third grade do not graduate from high school on time, a rate four times greater than that for proficient readers” (p. 3). Not only do those reading below the level of proficient have trouble graduating on time, but as Hernandez states, “The rates are highest for the low, below-basic readers: 23 percent of these children drop out or fail to finish high school on time, compared to 9 percent of children with basic reading skills and 4 percent of proficient readers” (p. 3). The importance of literacy is clear: Students with low literacy levels are less likely to graduate from high school.

With all the content that language arts educators are required to teach, if other educators can reinforce or assist in teaching reading skills or closing the gap between

those reading below proficient levels and those who are not, this burden can be lessened. Music education may have the answer. According to Weidner (2013), “literacy has become less about the actual act of reading and more about the constituent skills that are required to be a literate individual” (p. 55). It is important to examine the implications of that statement relating to various disciplines outside of English language arts (ELA). If literacy includes skills that can be taught in fine arts, for example, this can ease the strain on language arts educators and can give struggling readers an opportunity to catch up to their peers.

Additionally, educators strive to tailor their lessons and classroom activities to fit the interests of their students. Resources like Flocabulary exist to appeal to students’ appreciation of rap music as well as to create catchy rhymes with which students acquire new vocabulary. Music motivates students to learn, and it can motivate them to become better readers. Not only will this motivate students, but also studies, such as that done by Johnson and Memmott (2006), have demonstrated the link between instrumental music training (such as in band or orchestra programs) and increased test scores at the middle school level. Instrumental music study over time has been linked to changes in the brain that can impact reading (Hansen & Milligan, 2012). Instrumental music training leads to higher test scores and changes to the brain that cannot be ignored by educators. Band and orchestra programs should be a priority in both elementary and music education.

Music and the Brain

In order to address the connections between music education and literacy, it makes sense to begin by examining the connections between how the brain processes music and how it processes language. For early readers, spoken language is extremely important to the development of literacy. “Children who enter school with weaker verbal abilities are much more likely to experience difficulties learning literacy skills than those who do not” (Roth, Paul & Pierotti, 2006, para 2). This means that without these fundamental language skills, children will already be at a disadvantage. According to the studies that cited below, instrumental music training impacts the brain in a positive way, leading toward higher benefits in core subjects.

Hansen and Milligan (2012) explained, “Music training influences auditory discrimination, the ability to discern nuance in sound” (p.76). They stated that the brain changes as a result of music training, which in turn affects language development. The authors referenced a study completed by Schlaug, Norton, Overy, and Winner, who looked at the differences in overall brain development after instrumental music training. In this study, the researchers were attempting to determine if differences in brain development seen in adult instrumental musicians were something that developed “as a result of musical training during sensitive periods of brain development” or if this existed prior to music training (Schlaug, Norton, Overy, and Winner, 2005, p. 222). To determine if these brain changes were a result of music training, the researchers completed various ability tests as well as brain scans on children aged five to seven years. After one year of music training, the researchers reported that children in the experimental group showed higher scores on some of the behavioral tests—fine motor and auditory discrimination skills—and other tests showed

“trends in the anticipated direction” (p. 224). In addition, brain data did show some changes in the experimental group that were not present in the control group.

Because their study showed only “trends,” Schlaug, Norton, Overly, and Winner (2005) also added a second age group to their study to determine if these trends would continue. In this second study, the same tests were completed on students aged nine to eleven who had already undergone four years of instrumental music training. They compared their behavioral test results and brain changes to a control group of students who never received music training. Overall, the study showed that the trends seen in the initial study with young children increased with age. The connection between instrumental music training and the effect on the brain was apparent. As Hansen and Milligan (2012) also stated, there was a link between this part of the brain and how it processes sound as well as how it processes language.

Music and Phonological Awareness

In addition to research on the influence of music in language development and its effects on the brain, it is important to examine the link between music and phonological awareness. This relates to how we break down the individual sounds we hear when learning a language. Hansen and Milligan (2012) state that, “internalizing and discriminating sound is a process that is common and foundational to both” music and reading (p. 76). For young children, a lack of phonological awareness can greatly affect their ability to decode or “sound out” words. Hansen and Milligan explained the connections between music and language learning, specifically relating to phonological awareness in early readers. Both music and language, they propose, are connected to listening: young children are involved in the early reading process prior to beginning to decode words. Additionally, “while researchers cannot determine exactly what aspects of musical training cause these advantages for musicians, they encourage musical training in schools with opportunities for auditory training for people with and without speech-encoding deficits” (p. 77).

Since research has solidified the connection between music training and reading, some educators have worked to combine the two to enhance the learning of students. Standley and Hughes (1997) worked to create a specialized music and pre-reading/pre-writing program to be used as an intervention for four and five-year-old children with disabilities. The music sessions included in this curriculum were successful in improving the reading and writing of the students involved. The program was then adapted for a study done in Quebec. Bolduc (2009) sought to confirm other studies that found links between phonological awareness and music by implementing a music curriculum from Standley and Hughes’ program (1997) that was adapted to fit the kindergarteners in the study. Over the course of 15 weeks, 104 children with similar backgrounds were put into either the adaptation of Standley and Hughes’ music program (experimental group) or followed curriculum issued by the Quebec Ministry of Education (control group). According to Bolduc (2009), this had some similarities in the music instruction to Standley and Hughes’ program, but Standley and Hughes’ music program (1997) was specifically tailored to aid with pre-reading and pre-writing skills in children. The results showed a significant difference in the growth of phonological awareness--the experimental group showed

higher improvement in this area. The data demonstrated that this music education program benefitted students learning to read and write.

Music and Older Students

At the middle and high school levels, reading standards focus on reading comprehension and texts that are more complex than are age-appropriate. In order to fully examine how music education impacts literacy, research done with older students should be examined. The issue then becomes more complex because general music classes are not always required for middle and high school students. Instead, students often have the option to enroll in band/orchestra, choir, or discontinue their study of music. In addition, research conducted with older students regarding literacy is also primarily focused on state test scores, as these are readily available and consistent across state borders in the United States. Johnson and Memmott (2006) and Kinney (2008) looked at the connections between these state test scores and involvement in music programs. Kinney looked at achievement test scores for middle schoolers at a Midwest metropolitan area to determine if band or choral participation impacted these scores. Participants in the study included students in grades six (273 students) and eight (215 students) from two schools labeled “in need of improvement.” The study found two things. First, students who participated in the choral program did not demonstrate a difference in achievement when compared to students who did not participate in a music program, and second, students in the band program showed greater improvement in achievement scores overall. However, Kinney cautioned that “higher test scores before students’ enrollment [in the band program] indicates that band may attract higher achieving students from the outset” (p. 8). Despite the suggestion that higher achieving students may be attracted to band or orchestra programs, the evidence that instrumental music training creates changes in the brain implies otherwise.

Examining over 4,000 older elementary and middle school students, Johnson and Memmott (2006) looked at the relationships between state test scores (math and English) for students across the country and the quality of the music programs at their schools. Music education professors at universities located in each respective region of the country identified which schools had “exemplary” and which had “less than ideal” or “deficient” music education programs. At the elementary level, 1,119 third and fourth grade students were put into two groups that were based on the quality of the music program at their schools. The researchers then compared this data to students’ state test scores for the 2004–2005 school year. At the elementary level, the researchers found that, although the West coast region generally had lower English test scores for schools with a higher-quality music program, the overall results for all regions indicated that schools with better music programs had 22% better English test scores than schools with lower quality music programs.

At the middle school level, Johnson and Memmott (2006) examined other variables in addition to the quality of their school’s music program. All students were either coded as “instrumental,” “choral,” or “non-music” students. Furthermore, some of the schools selected had high-quality band programs but lower-quality choral programs, so additional categories were added for this difference. With 3,620 eighth and ninth grade students involved, the data showed:

Students at schools with excellent music programs generally performed better on standardized tests than students at schools with lower-quality music offerings. Students at schools with poorer instrumental programs outscored the students who had no music at all, and the students who participated in poor choral programs scored the worst in every region. (para 23).

The findings suggest that music programs at the elementary and middle school levels influence students' reading test scores, but choral programs do not follow the same trends as instrumental music programs.

Conclusion

Due to the existing connections between instrumental music education and language learning, phonological awareness, and increased test scores, instrumental music education should be prioritized at the middle school level. For language arts educators who are struggling to teach students who are reading below grade level and do not have additional instruction time to help these students, music education may be part of the answer. Bolduc (2009) suggested that improvement in reading is demonstrated by young children in music education programs, but for those students who have not had the same music instruction and are now older, there may still be a benefit to studying music. If students can be encouraged to study music over time, particularly by learning to play an instrument, this may improve their overall reading and writing skills. Additionally, using music programs that are tailored to reading and writing like that used by Standly and Hughes (1997) can offer those benefits while not sacrificing music as a fine art content area.

With a focus on quality music education at a young age, particularly on programs designed to include reading and writing, language arts educators are likely to see an improvement in literacy. Schools should be encouraged to make instrumental music a bigger part of their core academics at the middle school level, and higher quality instrumental music programs should be prioritized. Not only do music programs providing students a creative outlet, but they also make them better overall students with stronger literacy skills. Learning is the goal educators have for their students, and quality instrumental music programs may be a valuable support.

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Melissa Brown currently teaches middle school English language arts and drama in the Toledo area. She graduated from the University of Michigan-Dearborn with a Bachelor of Science in political science then went on to complete her teaching licensure through the LAMP (Licensure and Master's Program) program at the University of Toledo.