

The Effects of Music on Education and Early Literacy: An Insight on Defining
Literacy and the Use of Music in the Classroom

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Abstract

The purpose of this essay is to examine the effects that music has on education and literacy, and to provide insight on how to go about using music in a classroom. First, the essay will define the word 'literacy,' and prove why this is important, and then describe how literacy is taught in a classroom using phonics. Then, it will take a look at how music affects the student brain, and how those effects are linked directly to the way students process reading, writing, and communication. Finally, this essay will look at the direct effects that music has on education and literacy, and how both music instruction and music integrated into a lesson correlate positively with student academic success. It will also take a moment to provide examples of how music can be effectively implemented in a traditional classroom setting. To conclude, the essay considers how this study affects other aspects of education such as the idea of extra-curricular activities, standardized testing, and students with disabilities.

Keywords: music, literacy, education

Introduction

One of the most important jobs of any school teacher, early, elementary, or secondary, is to teach their students the skills needed to correctly read and write. Many students learn the basics of reading and writing when they are of the kindergarten or first grade age, but some do not fully comprehend the concepts until later on in their school careers. Sometimes a student will not master the concepts of literacy even as late as high school. Lately, more and more early educators are trying to get their young students engaged in reading and writing. Teachers want their students to have a strong base in literacy before they get out of those early years since “these skills transcend into every other area of the student’s learning” (Tarbet, 2012). Teachers are attempting to include literacy in every curriculum, and by doing so they are showing their students how important it is, and how “literacy should not be seen as a separate entity” (Tarbet, 2012). Amy Giles (2004) agrees with this, saying that separate subjects should not be “compartmentalized” since “they are connected” (p. 13). Since the ability to read is the starting base for all education, early education teachers are beginning to introduce activities and lessons that promote higher levels of literacy in young learners, meaning students of the preschool and kindergarten age. These educators are also attempting to come up with interactive and fun ways for their young learners to be taught to read and write at an early age, and many of them are turning to music as their answer.

In many schools music is seen as an extracurricular activity. Teachers view music class as a place where students go after school or during one of their free periods, not something that is seen in the classrooms of other subjects. Most educators do not consider music to be a tool that can be used to help their students in the regular classroom, and they write it off as a hobby or special interest that should be pursued in a non-school setting. However, it has been debated for

some time now whether or not music has any kind of direct effect on student learning abilities, and more specifically on early literacy. It has been shown that “teachers can use music to deepen the learning environment in a literacy classroom. Many commonalities exist between music and literacy, especially in the pre-K to second grade years, and therefore music education is a vital element in children’s literary development” (Tarbet, 2012).

In her article on music and early literacy, Tammy Stone (2015) states that “research studies have found that children who participate in music instruction tend to score higher on tests of reading comprehension than children who do not participate in musical instruction” (p. 1). Stone (2015) goes on to explain the multiple ways that music impacts the developing brain from verbal memory and listening skills to vocabulary and phonemic awareness. She also shows how music can impact a child’s learning abilities in more ways than just literacy, proving that music can be a vital asset in all learning environments (Stone, 2015, p. 2-4). Jonathan Bolduc (2008) backs up these ideas in his review of past studies that deal with music and written language in preschool-aged children. Bolduc (2008) was trying to prove whether “musical aptitudes influence emergent literacy abilities or whether on the contrary, emergent literacy abilities influence musical aptitudes” (p. 1). Bolduc (2008) then did a review on eight studies titled “The Quasi-experimental Studies” that tested then compared and contrasted kindergarteners’ literacy levels based on their musical backgrounds (p. 2). Ultimately, Bolduc (2008) came to the conclusion that having a musical background, whether it be home influences or an academic one, enhances literacy abilities. He says that “because music education offers a holistic type of education that may facilitate the development of listening and analysis abilities, it can be used as an efficient complementary educational approach,” and that “musical activities promote the development of three important components that are equally involved in the development of

linguistic abilities: auditory perception, phonological memory, and metacognitive knowledge” (Bolduc, 2008, p. 3).

Though it has been proven by a multitude of researchers in the education department that music does have a positive impact on literacy, many educators are still trying to figure out the why. Educators understand that students typically respond well to music, and that having a musical background seems to improve a student’s cognitive abilities, but they are still wondering what it is about music that triggers a student’s brain for better understanding of reading and writing. Although many teachers in the modern world have successfully began incorporating music into their daily lessons many are still seeking insight on how they also can begin implementing music in their own classrooms.

As stated above, it has already been proven that music has a positive impact in the learning environment, but there are still many teachers who are unsure of how to go about using music as an effective tool. I plan to discuss how to effectively use appropriate music in a regular classroom in order to enhance early literacy. I would like to open up by first making it clear to my readers what exactly literacy is and how early students learn the skills required in order to obtain a high literacy level. In this article I will shed light on several different aspects relating to the impact of music on early literacy, focusing mainly on the pre-K to first grade ages. It will begin with the discussion of what literacy is and how children achieve normal literacy levels during early cognitive stages. Then it will answer the question and provide more insight on how music promotes student learning. A focus will then be drawn to how music is linked directly with literacy, and how the brain interprets the two to build off of one another. This article will then delve deeper into how an ordinary classroom teacher can effectively use music in day-to-day lessons to improve their student’s understanding of words and language as a whole. Finally,

the discussion will turn to what different types of music are best for the classroom based on how they relate to the students, and also what different types of music are appropriate to use in the public school system and also in respect to how they impact the student brain.

In order to investigate the effects of music on literacy I will look at previous published articles and journals on the subject. I will investigate studies and experiments on the content that have been done on early learners by skilled researchers. I will use these sources to expand upon the known and unknown of the subject, and to validate my own research and knowledge. I will also look into the views of current and past educators and their stances on music and literacy and also on how they both effectively and ineffectively used music in the regular classroom setting. I will also use my own knowledge of the modern public school classrooms and students in relation to how music is viewed in today's society and what kinds of music can and should be used in an appropriate manor for all levels of education.

If used correctly, music can be a huge asset in the world of literacy. Many scholars have already proven that using music in conjunction with reading activities can heighten a student's overall understanding of words and meanings. It has also been proven that children who come from musical backgrounds, or who participate in activities such as choir or band, typically perform at higher levels in the academic world than those who do not. If music is introduced into a child's life during the early educational period, such as in kindergarten or first grade, if not earlier, then that child will have a significantly easier time during his or her early educational career than those children who do not get this opportunity. For this purpose, teachers have been attempting to come up with creative and effective ways to incorporate music in their classrooms. Music can be used as a great educational tool in all classrooms, and educators are beginning to realize this.

The Effects of Music on Education and Early Literacy: An Insight on Defining Literacy and the Use of Music in the Classroom.

It is often said that music is a pathway to the soul, but if one is open-minded and creative enough, then music has the possibility of being the pathway to so much more. Music is a universal language that is shared by many, and it is typical that one of the largest percentages of its audience comes from those that are a part of the younger generations. This being said, there are many students out there who have a strong passion for music, and utilizing this in a classroom could open new doors to great things. Many scholars and educators were first weary about using music in a typical classroom, especially in early classrooms, because they believed that music had a poor impact on a child's life. Jeffery Jensen Arnett (2007) explains this way of thinking in his *Encyclopedia of Children, Adolescents, and the Media*. Arnett (2007) explains how even though music allows adolescents a creative way to deal with their moods and hormones, it is often to be used, when unsupervised, like an abused substance (p. 2). He believes that teens and even younger children start looking toward music and other forms of media as ways to vent their emotions, and it causes negative impacts on their personalities such as aggression and rebellion (p. 566-69). However, if it is used correctly, music can inspire a child to do more than they thought they could, and it also has the ability to help a student in an academic environment.

Here recently, there has been "an explosion of research concerning the effects of musical training on brain development" (Telesco, 2012, p. 1). Many scholars are wondering if this effect on the brain can be properly transferred into the typical classroom, and they have proven that music has a direct effect on the way the student mind works and also a positive correlation with literacy and other learning. However, defining literacy is not the easiest task to complete, so figuring out just how music impacts it is an even harder task. First, one must take a look at just

what literacy is, and then delve deeper into understanding the ways that music has such a strong impact on it. This means figuring out how music impacts the brain and how that correlates with the way one learns. Once it is established how music effects the brain, one can look deeper into how, if utilized correctly, music can be used in a classroom to enhance learning.

Before discussing how music affects literacy first one must look into what literacy actually is. When asked the question, “what is literacy?” some are quick to answer that literacy is the ability to read. In some sense this assumption is true, but literacy goes way beyond the talent of reciting words that are on paper; in fact, defining just what literacy is has become a rather large controversy over the past couple of years. Peter Roberts (1995) explores the many different approaches and challenges to defining literacy in his article “Defining Literacy: Paradise, Nightmare or Red Herring?” Roberts (1995) says that “the range of definitions of 'literacy' and 'illiteracy' advanced in the past half-century is quite remarkable, yet there remains little agreement among 'experts' over what these terms mean” (p. 412). He also states that there may be “no single 'correct' definition of literacy; instead, there are competing accounts” (Roberts, 1995, p. 413). Other scholars agree with this, making statements like “defining the ability as it adheres to society is difficult” and that in order to come up with a meaning the word ‘literacy’ should be “examined through the process of development” (Tsuyuki, p. 1). However, after many a debate, it can be argued that there is a solid definition for literacy. After careful consideration, Kelsey Tarbet (2012) came up with her own definition of literacy that has summed up the all the aspects of literacy into one bundle. Tarbet (2012) believes that literacy is the combination of reading and writing with a hint of communication thrown in, and with that belief she suggests that literacy “is not just concerned with words on paper, but with verbal exchanges as well” (p. 1). Therefore, it can be concluded that in order to have strong literacy skills, a student must

possess the ability to read, write, and communicate effectively with those around him. In order to use this definition of literacy, it means that anyone who desires to label themselves as literate must be able to participate in verbal exchanges, both listening and speaking, in addition to knowing what words on paper mean.

It is important to define literacy because there are a great number of skills involved in being literate. These skills involve more than just being able to write with correct grammar or pick up a novel and understand the plot, “these skills transcend into every other area of the student’s learning, and literacy should not be seen as a separate entity” (Tarbet, 2012). Literacy opens the doors to all the other subjects in the academic career. However, the first step is to become literate, which is a task left for early educators to help the students complete. So, if literacy does in fact include the verbal exchanges in addition to reading and writing, then it would make sense for a literacy program, or an early education classroom that intends to promote early literacy, to include tasks that aid in auditory development. This is explained in the article “Critical Components in Early Literacy—Knowledge of the Letters of the Alphabet and Phonics Instruction,” which makes the statement that “for students to succeed in reading, two components must be in place in our early childhood classrooms: a focus on letters of the alphabet and systematic phonics instruction” (McLemore & Wood, 2001, p. 1). The authors explain how students first must learn how to recognize letters, simply by being able to differentiate between the different shapes used for each individual letter and then accomplishing the task of writing them by themselves. Students are then taught the names of the letter, giving the letters a sound and more of a substantial meaning behind what the letter actually does (McLemore & Wood, 2001, p. 1). McLemore and Wood (2001) then state that the next step taken is to allow children to “connect the letters with the sounds they hear and blend them together to form words,” (p. 3)

and that in order to do this one must be able to “discriminate the smallest units of sound called phonemes” (2), meaning a student must be able to listen before they can truly understand language.

By introducing phonics instruction into an early literacy classroom, a teacher is allowing listening and sound to become one of the main abilities that he or she is depending on, and this also opens the door for music to be used. McLemore and Wood (2001) go into more depth about this idea by stating how teachers are already using rhyme and alliteration in order to teach children how to “discriminate different beginning, middle, and ending sounds” of words (p. 3). They say that there are tons of activities out there that can help to do this, but the use of “songs, poems, and nursery rhymes” seem to be the most beneficial in a classroom because of how well students respond to them (McLemore & Wood, 2004, p. 3). With this being said, McLemore and Wood (2001) are showing that not only can music be used as a learning tool, but it is also almost necessary in the early stages of literacy. In fact, “many top educational researchers recommend integrating music into phonological awareness instruction. These researchers recommend songs, and specifically rhyming songs, as an effective mechanism for building phonemic awareness with children in early childhood classrooms” (Stone, 2015, p. 4). Music helps these kids differentiate sounds and also allows them to draw connections to the letters and words that they already know through rhyme and alliteration. Music can and should be used in teaching literacy.

Before one can further determine the effects that music has on education, they must first look at how it directly impacts the human brain. There have been many studies that suggest that music has many different positive influences on the brain, and many of these studies show that the parts of the brain that music has a direct impression on are also the parts of the brain used in most educational or learning scenarios. Daniel Abrams (2013) and his fellow authors help to

explain just what the brain does when a person listens to music in their study titled “Inter-Subject Synchronization of Brain Responses during Natural Music Listening.” The authors did multiple tests in which they had their test subjects listen to a wide range of music and then assess their brain activity through the use of MRI. The brains’ activity was projected on the screen, and the authors could see that music had a direct correlation with activity in the temporal lobe, the frontal lobe, and the fronto-parietal cortex, which all have a direct impact on how the brain processes language and words that are written, spoken, heard, or read (Abrams et al., 2013, p. 1462-1467). The authors concluded that “music listening elicits consistent and reliable patterns of time-locked brain activity in response to naturalistic stimuli that extends well beyond primary sensory cortices” (Abrams et al., 2013, p. 1468), meaning that music affects the brain on a deeper level than most would think. The conclusion of this study also suggests that listening to music can have an extremely positive effect on the way that a student processes words. If music is used in conjunction with effective literacy teaching techniques, a student’s brain would be more accustomed to this type of thinking, and would therefore have an easier time when it comes to literacy. Susan Hallam (2012) backs this up in her article also by explaining how “extensive active engagement with music induces cortical re-organization producing functional changes in how the brain processes information. If this occurs early in development the alterations may become hard-wired and produce permanent changes in the way information is processed” (p. 4). This proves that if music is introduced into an early literacy classroom, it could influence a child’s brain for the rest of their lives, making tasks such as reading, memorizing, and critical thinking easier.

Other studies show that the best way to track how music affects the brain is to look at the brains of actual musicians of all ages. George Hicks (2014) breaks this down in his article “How

Playing Music Affects the Developing Brain.” Hicks (2014) did an interview with a neuropsychologist named Nadine Gaab, who did an experiment where she “gave complex executive functioning tasks to both musically trained and untrained children while scanning their brains in MRI machines” (2014). At first, it was hard to tell “whether musical proficiency makes for better executive functioning or vice-versa,” but it soon became clear that it was the former rather than the latter (Hicks, 2014). After studying the MRIs and looking particularly closely at the prefrontal cortex, the experiment concluded that “musically trained children and professional adult musicians have better executive functioning skills compared to their peers who do not play a musical instrument” and that “children who are musically trained have more activation in these prefrontal areas compared to their peers” (Hicks, 2014). This is because playing an instrument involves a lot of skill and uses a large amount of brain systems, such as the auditory, motor, emotional, and executive functioning systems. The brain has more activity going on when playing an instrument and it is use to this rigorous thinking pattern which is then carried over into the educational setting.

Music has the ability to be used as a tool for literacy and for helping to promote learning in general. Susan Hallam’s (2012) article describes all the areas of education that music has an impact on, including language skills, numeracy, creativity, social development, and overall intellectual development (p. 6-16). Hallam (2012) explains not only how music improves on the abilities of listening and speaking to promote language skills, but also how music improves “special reasoning” which is one of the skills required to do mathematics (p. 11). She also proves through an experiment conducted on 3-4 year old children that music improves creativity, she had a group of pre-school children engage in singing and other musical activities, and concluded that when compared to other children that did not engage in any kind of music, the musical group

scored higher in creativity, abstract thinking, and improvising (Hallam, 2012, p. 16). In order to succeed at school a student also must have decent social skills so as to communicate effectively with teachers and their peers. She sums it all up nicely in her endnote, stating that music “is also beneficial to the development of social skills and can contribute to health and well-being throughout the lifespan and can therefore contribute to community cohesion providing benefits to society as a whole” (Hallam, 2012, p. 22). Teaching can be used to promote all types of skills involved in education.

So, rounding it back to literacy, the most important contribution that music has on education is that on the development of reading, writing, and auditory skills. This influence is especially noticed when it is used in an early classroom setting such as preschool, kindergarten, or first grade. It has been proven and even stated in multiple circumstances that “scientific research supports the use of music in early literacy instruction and also provides evidences for the positive impact of music instruction on early literacy skills” (Stone, 2015, p. 8). Hallam (2012) describes how music’s effects on language skills then directly affect the development of reading (p. 8). She also describes a study in which music was introduced to an experimental group of children 4-5 years old with a control group that received no contact with music; both groups took the same literacy test, and the experimental group scored significantly better not only on reading abilities, but also at understanding the meaning of the text (Hallam, 2012, p. 9). They study concluded that “very brief training (10 minutes each week for 6 weeks) in stamping, clapping and chanting in time to a piece of music while following simple musical notation had a considerable impact on reading comprehension in children” (Hallam, 2012, p. 10). Stone (2015) proves that listening to music “impacts a student’s brain functioning in processing language, which in turn impacts reading subprocesses like phonemic awareness and vocabulary [which]

ultimately impact a student's ability to read with comprehension" (p. 2). Hallam (2012), in turn, also proves how music instruction, as in teaching a child how to play a musical instrument, has similar, if not exceedingly better, effects on literacy. She states that learning to play an instrument increases verbal memory which therefore makes it easier for a student to remember words (Hallam, 2012, p. 10). It is not completely necessary to teach students how to play an instrument, though this is extremely helpful for the student brain also, but instead "to teach through music," meaning to teach through the use of made-up songs or chants, or in-class music listening (Telesco, 2010, p. 9).

The next step in making music an interactive and positive tool on education and literacy is to effectively use it in a classroom. It must be considered that not all students will have the chance to take up a music class due to poverty or other personal reasons. Though it seems that one of the best ways for students to get the most out of music is to learn how to play an instrument, not every family can afford this, and not every student is interested. This leaves early educators as one of the main people in a student's life who can introduce them to music in an educational setting. Judy Fletcher (2014) explains her first experiences of using music in her own classroom. She talks about how she first just turned on the classics in the background while her students worked, stating that "most of the students appreciated the addition of music during testing or lab periods, and they could even identify some of the classical pieces" (Fletcher, 2014, p. 8). She then mentions how she "couldn't help feeling there was more to know about learning and music—all kinds of music" (Fletcher, 2014, p. 8). Fletcher (2014) slowly started integrating many different types of genres into her "classroom playlist" and playing them to keep students focused and productive (p. 9). Fletcher's (2014) approach to music was to just play it in the background, but it can also be incorporated directly into lessons. In their article, McLemore and

Wood (2001) provide a sample lesson that was effectively used by an actual early education classroom teacher. The teacher used the story *Clifford's ABC's* in order to allow the children to recognize the letter 'c' and the sound /k/ as it occurs within the text. The teacher read the story aloud to the class and then brought attention to the letter 'c' at the beginning of Clifford's name (McLemore & Wood, 2001, p. 5). She then taught them the following song:

"Clifford
(Sung to the tune of "Bingo")
I have a dog that's big and red,
And Clifford is his name-o.
/k/ /k/ /k/ Clifford,
/k/ /k/ /k/ Clifford,
/k/ /k/ /k/ Clifford,
And Clifford was his name-o" (McLemore & Wood, 2001, p. 5).

The students then go on to make connections between the letter 'c' and the sound /k/ within other words that they already know (McLemore & Wood, 2001, p. 5). The same teacher has another song that she has her kids sing daily. The teacher "fills a large bag with objects from the classroom" and then has her students sing:

"In My Bag
(Sung to the tune of "Where, Oh Where?")
Who can guess what's inside of my bag?
Let me peek in and see
It starts with (beginning sound)
And ends with (rhyme)
Who can guess for me?" (McLemore & Wood, 2001, p. 6)

The students then sound out the word together and write it down (McLemore & Wood, 2001, p. 6). These students got to learn letters and words in a creative way that incorporated music in ways other than just having it play in the background.

Another aspect that determines the effectiveness of music in the classroom is what types of music should be used and how each one can have a different effect or outcome. First and foremost, it should be considered, as Teresa Martinez (1994) talks about in her article "Popular

Music in the Classroom: Teaching Race, Class, and Gender with Popular Culture,” that some students may be offended by certain words or lyrics used in different song genres (p. 262). She also proves that, though one must be cautious of what is played for students, a teacher must be open-minded about what types of music is suitable for their individual classroom (Martinez, 1994, p. 260). Many experts argue that classical music is the best for studying and concentration, and even an experiment proved that “Mozart’s music is able to “activate” neuronal cortical circuits related to attentive and cognitive functions not only in young subjects” but adults as well (Verrusio et al, 2015, p. 154). Though classical music is arguably the best music to promote study and concentration, finding a young student, in the modern era, who is largely interested in this genre, comes few and far between. Robert Glover (2013), in his book titled *Teaching politics beyond the book: Film, texts, and new media in the classroom*, talks about how hip hop is one of the ever growing sources that teachers need to learn how to utilize. Not only does hip hop meet the criteria for teaching with music, but, in higher level classrooms, “hip hop provides a framework for teaching about the social problems facing marginalized people in the United States and abroad” (Glover, 2013, p. 110). Hip hop gets students involved in the class and with current events going on in the rest of the world. If a teacher finds the music to be appropriate for the age group and the class personality, then hip hop would be a great tool to attempt to utilize.

Using music in a regular classroom of any subject is a new and emerging part of early education. The different types of effects that music has on the human brain correlate directly with the areas of the brain that are used during reading, writing, and auditory skills. More and more teachers have begun to take part in introducing music into their regular classrooms by either allowing music to play in the background, letting their student listen to their own individual music, or even coming up with creative lessons that involve the students making

music on their own. There is no end to the different ways and ideas that music can be incorporated into any type of learning, and a teacher should not limit himself to the different genres of music used or the different types of instructional methods when first planning on ways to incorporate music into a lesson. Music has the ability to change the way education is viewed, and it can and should be utilized daily as a resource for both teachers and students. Students will not only benefit mentally from the use of music in the classroom, but they will also be excited about the prospect of using something they already know and love in the school setting.

Conclusion

This paper has taken a variety of resources and used them to define literacy and state the importance behind doing so. After defining literacy it was stated how literacy is taught to young children, and how phonics should be used in an early education literacy classroom. Since the use of auditory stimulus is already being used then it only makes sense to begin utilizing music in a regular classroom in order to help students succeed in the academic world. It was proven through the use of MRI that the same areas of the brain are used when listening and playing music that are used when reading, writing, speaking, and listening. Because of this, it can be concluded that listening to music or having a background in music instruction has a direct and positive correlation with the student mind, and therefore have a positive impact on the way a student processes information that is received at school. Music can have a positive impact on all types of learning, as in numeracy, creativity, social skills, and overall intellectual development. Most importantly, music has a direct correlation with literacy skills. After looking at many experiments and studies, it was shown that students who have some sort of background with music scored significantly higher on literacy tests than their peers who had no interactions with

music. However, in order to truly make music an effective tool, a teacher must be able to know how to incorporate it into their regular classroom. Teachers can simply play music in the background of the classroom to increase concentration and productivity, or they can start having their students make up songs and chants to help them with their studies as was shown in the McLemore and Wood (2001) article. Finally, it is important to consider the types of music that one should use in a scholarly setting, and make sure that the music is appropriate but also interesting and helpful for the students.

It can be concluded that music has a positive impact on the student mind, correlating directly with literacy and other areas of learning. Music is not only an entertaining form of media, but, in today's society, it is a way to teach. Since phonics is being used more and more in early education classrooms to teach young students the difference between words, sounds, and letters, it was only a matter of time before music got incorporated into daily lessons. Having young children chant, sing, or listen to music while doing their work helps their minds focus on the task at hand, but also helps them engaged in the lesson. Music also has strong effects on the workings of the brain, specifically the same parts of the brain that are used for literacy skills. If children are introduced to music at an early age, their brains will become accustomed to this line of thinking and be more ready and willing to do so when it is time to read, write, and communicate. In addition, if music is used side-by-side with the teaching of literacy, the student brain will be able to process the information easier because those parts of their brains will already be stimulated due to the music.

This study provides insight on more than just the study itself. For example, this study shows how extra-curricular activities, such as music instruction, provide more to students than people think. It is said that "extracurricular activities provide a channel for reinforcing the lessons

learned in the classroom, offering students the opportunity to apply academic skills in a real-world context, and are thus considered part of a well-rounded education,” and that “recent research suggests that participation in extracurricular activities may increase students' sense of engagement or attachment to their school, and thereby decrease the likelihood of school failure and dropping out” (1995). Extra-curricular classes should be a normal part of secondary school since it offers so much to the students. The study also proves that music allows students to perform higher on tests which could include standardized testing. In fact, it was even proven that “students in high-quality school music programs score higher on standardized tests compared to students in schools with deficient music education programs, regardless of the socioeconomic level of the school or school district” (“Music education and brain development”), and scores “revealed that students in elementary schools with superior music education programs scored around 22 percent higher in English and 20 percent higher in math scores on standardized tests, compared to schools with low-quality music programs” (Brown). Music instruction could not only improve a student as an individual, but could also improve a school rating based on standardized testing. Finally, using music in the classroom could also have extra benefits to any students with special needs. Music can “improve attention, concentration, impulse control, social functioning, self-esteem, self-expression, motivation and memory” in students who suffer from ADD or ADHD along with several other mental disorders (Sze and Yu, 2004, 341). So, using music in the classroom or having students have some form of music instruction effects not only the way individuals learn, but could also have positive impacts on the way extra-curricular activities are viewed by schools, standardized testing scores, and how special needs children’s needs are met. In addition, this study has shown that “music has the power to entrain us; we should not think twice about harnessing its power to carry our children along and teach through

its captivating essence (Telesco, 2012, p. 17). Music has the power to change the course of education, and it is possibly even the future to higher literacy around the world.

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