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## Evaluation of Intensive Music Instruction and Academic Success

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BY

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### ABSTRACT

*This study sought to examine the benefits of intensive music instruction to academic success. Students who are enrolled in music education program have higher standardized test scores compared to those who are not engaged in a music education program. Previous research has demonstrated the benefits of music training on a number of cognitive functions including verbal memory performance. Based on the study, it was observed that students who study music outperform better than their non-music peers in assessments of recalls, retention of verbal information's and foster superior working memory. Also, music education prepares students for learning by helping to develop their basic mental skills and capacities. One of the recommendations made, was that music educators should adapt and again show that music education is necessary for a well-rounded and all-inclusive education regardless of the means of assessment and evaluation.*

**Keyword: Intensive, Music, Instruction, Academic and Success**

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### Introduction:

Music is an important part of human development that carries an emotional force in our day to day activities. It enhances our emotional well-being both in aspect of academics, culture and personal believe. Music instruction has special contribution towards boosting academic success and it is an important part of the education of a well-rounded student. As one of the arts, it balances the study of sciences and humanities to give students a creative outlet and exposes them to another sphere of learning. Music is taught from elementary to high school, and there are many different components to the subject. Classes can teach students to read and write music, to sing and play instruments, or focus on the history of music. Music instruction seeks to develop children's musical skills, expand their interpretative abilities and increase their overall appreciation of music (Teach.Com, 2020). According to the Music Educators National Conference (MENC), there are many personal benefits to participating in music education including confidence, self-esteem, and a sense of accomplishment (Music Educators National Conference, 2002). It shapes and molds character with self-assurance and stability; and has the added bonus of public performance which helps to conquer the fear of getting up in front of people. Furthermore, learning a musical instrument fosters good habits such as focus, mental discipline, staying with a task

until its completion and it allows for the expression of emotions (Music Educators National Conference, 2014a). Music instruction comprises the application of educational methods in teaching music. Specifically, the inclusion of music education encompasses many areas of instruction, including music history, music theory, and proficiency in a musical instrument, singing skills, and general music skills. Intensive music instruction can be reviewed as an object that sharpens the mental alertness of students and facilitate positive impact in their academic success.

Music advocates are convinced that instruction in music can help children learn in school. Moreover, music advocates believe that music has increased value for academic achievement for all students. In order to bring about a statewide and national implementation of music education in the general curriculum, legislatures and other school policy makers must also be convinced of its value (Akin, 2019). Educational research demonstrates the positive effect of music curriculum in developing academic achievement skills (Akin, 2019). Thus, music advocates, building on actual practices of contemporary music projects, are hopeful that music education can become available to more students, more schools, more districts, and more communities, even in the current climate of high stakes testing and accountability (Rabkin & Redmond, 2004). Consequently, the purpose of this study is to provide both music and non-music educators additional information regarding the impact of music education on academic achievement or success.

## **Conceptual Review**

### **Concept of Music**

According to Bakan (2011) Music is humanly organized sound. It is an intentionally organized art form whose medium is sound and silence, with core elements of pitch (melody and harmony), rhythm (meter, tempo, and articulation), dynamics, and the qualities of timbre and texture. Music means different things to different individuals or can be valued base on personal perception or believe. Also an age means of passing a message across to the people in the society. Beyond a standard definition of music, there are behavioral and cultural aspects to consider. As Titon notes in his seminal text *Worlds of Music* (2008), we “make” music in two different ways: we make music physically; i.e., we bow the strings of a violin, we sing, we press down the keys of a piano, we blow air into a flute. We also make music with our minds, mentally constructing the ideas that we have about music and what we believe about music; i.e., when it should be performed or what music is “good” and what music is “bad.” For example, the genre of classical music is perceived to have a higher social status than popular music; a rock band’s lead singer is more valued than the drummer; early blues and rock was considered “evil” and negatively influential; we label some songs as children’s songs and deem them inappropriate to sing after a certain age; etc.

Music, above all, works in sound and time. It is a sonic event—a communication just like speech, which requires us to listen, process, and respond. To that end, it is a part of a continuum of how we hear all sounds including noise, speech, and silence. Where are the boundaries between noise and music? Between noise and speech? How does some music,

such as rap, challenge our original notions of speech and music by integrating speech as part of the music? How do some compositions such as John Cage's 4'33" challenge our ideas of artistic intention, music, and silence? (Milne library 2017).

Music instruction as well as the benefits received from music education instructions are evaluated by not only potential and current music education students but also their parents, teachers, administrators, and other stakeholders (Hargreaves, Marshall, & North, 2003). This evaluation of value is true for many other elective or voluntary courses that are in public schools today. For students specifically, there are many aspects of a program evaluated before a student decides to invest their time into that elective or not. When a student sees that there is a substantial benefit to a program, such as music education, both socially and academically, they are more inclined to participate in that program. As students evaluate and participate in programs, like music education, other stakeholders begin to see value in the programs as well. When it pertains to student success and overall wellness, music education has created a standard that generates the environment conducive to student success not just in music but in other classes as well.

Music educators must adapt and again show that music education is necessary for a well-rounded and all-inclusive education regardless of the means of assessment and evaluation.

### **Concept of Intensive Music Instruction**

Music has been integral to human development and advancement with the power to convey powerful emotions. It is not surprising that music is played all across the globe and that it has been found advantageous in the field of medicine. Music has been shown to help surgeons perform operations faster and to help in neurologic recovery following traumatic brain insults. (Siu, et al 2010 & Thaut, et al 2009). Music therapy is also unique in that it is very safe and the cost of implementation is low. Most hospitals have an easy listening TV channel that couples peaceful music and imagery.

The intensive care unit is a unique patient care experience. It is an extremely busy and loud place with frequent alarms and flashing lights where sleep often eludes patients. Therefore, the first question was whether music therapy improves a patient's sleep quality in the ICU over standard care without the addition of music. Su developed a randomized controlled trial in which patients were randomized to non-commercial music for 45 minutes at nocturnal sleep time or usual care with no music. The music consisted of sedating piano pieces composed by the authors of the study. Polysomnography was recorded for the first two hours of sleep. Results showed that stage N2 sleep was shorter by 5.2 minutes and stage N3 sleep was longer by 6.5 minutes in the first two hours. Patients in the music group had significantly lower heart rates and reported improved sleep quality over the control group.<sup>6</sup>

The second question was whether music is actually beneficial or is it simply the reduction in background ICU noise that offers benefits. In the largest music focused clinical trial to date, Chlan found that there are multiple benefits to music therapy.

## Roles of Music Instruction in Academic Success

Music is an essential ingredient that boost an individual inspirational IQ towards academic success. It carries a powerful emotional effect on individual academic success. Also, the positive impact of music on populace has increased the level captivation of listeners globally. The power of intensive music instruction was the major reason why some sectors like education, economy and transport adopt the placement of TV channels and other listening gargets in their various offices. This helps to relieve the listeners of boredom. According to (Schellenberg 2004) state that being involved in learning music can improve one's intellectual development or sagacity. Moreover, musical aptitude is related to general intelligence (Lynn et al. 1989). Thus, it can be argued that learning music can probably improve musical aptitude as well as non-musical abilities (Schellenberg 2004). This assumption is in line with the concept of "musical aptitude in development," since musical potential is affected by the quality of environmental aspects. According to Gordon (2000), this occurs at an early age and continues until the child is 9 years old. Additionally, musical aptitude is also related to better academic achievement (Young 1971, Johnson 2000). Music lessons produce a small increase in IQ (Schellenberg 2004) and have slight positive associations with measures of intelligence (Schellenberg 2006). Schellenberg (2006) reported that music lessons were also positively associated with academic performance, even after the individual differences in general intelligence were established. Many researchers in field of neuromusicology shows that music is powerful tool for improving special-temporal reasoning. That is cognitive ability to observe in detail pictures and to recognize, compare and establish relations between patterns and details of some subject. Temporal element hires child ability to think in advance. This fact we can explain with action of playing some instrument, where a child needs to play one note, than few of them, and then line of few accords, and in that point, a child needs to think in advance, so that he could be able to be in ahead of music, to decide what to play next. Besides those activities, a child is using most of its senses

While playing some instrument, an eye for reading of notes, hand to play those notes, and foots to synchronize and press the pedal. All these activities require a level of concentration, ability to memorize, motor coordination and recognition of symbols. Because of all those activities, those children have higher level of executive functions, a category of interlingua tasks, which includes playing, strategizing and attention to detail and require simultaneous analyses of both cognitive and emotional aspects. Both sides of cerebral cortex, plus frontal and occipital lobe participating achieving those activities. According to (Davenport,2010). Music has provided many students with an exposure to a variety of learning experiences that can manifest a positive and lasting influence on youth development. However, during the last several decades of education in the United States, there has been a dramatic shift toward an emphasis on standardized test scores in core subject areas such as reading, mathematics, and science. This emphasis on core subjects and standardized tests, as the primary measure of academic success, has had the effect of marginalizing non-core subjects such as physical education, art, chorus, and instrumental music (Armstrong, 2006).

### **Benefits of Intensive Music in Academic Success**

Music education prepares students to learn. Music education readies students for learning by helping them to develop their basic mental skills and capacities. Intensive music instruction impacts learning in the following ways:

***Enhances fine motor skills:*** Motor function is the ability to use small, acute muscle movements to write, use a computer, and perform other physical activities essential for classroom learning. The parts of the brain associated with sensory and motor function are developed through music instruction, and musically trained children have better motor function than non-musically trained children (Forgeard, 2008; Hyde, 2009; Schlaug et al., 2005)

***Prepares the brain for achievement:*** Complex math processes are more accessible to students who have studied music because the same parts of the brain used in processing math are strengthened through practice in music. For example, students who take music in middle school score significantly higher on algebra assessments in ninth grade than their non-music counterparts, as their brains are already accustomed to performing the processes used in complex math (H elmrich, 2010).

***Fosters superior working memory:*** Working memory is the ability to mentally hold, control and manipulate information in order to complete higher-order tasks, such as reasoning and problem solving. Musicians are found to have superior working memory compared to non-musicians. Musicians are better able to sustain mental control during memory and recall tasks, most likely as a result of their long-term musical training (Berti et al., 2006; Pallesen et al., 2010).

***Cultivates better thinking skills:*** Thinking skills such as abstract reasoning are integral to students' ability to apply knowledge and visualize solutions. Studies have shown that young children who take keyboard lessons have greater abstract reasoning abilities than their peers, and these abilities improve over time with sustained training in music (Rauscher, 2000). Music is a magical gift we must nourish and cultivate in our children, especially now as scientific evidence proves that an education in the arts makes better math and science students, enhances spatial intelligence in newborns, and let's not forget that the arts are a compelling solution to teen violence, certainly not the cause of it!" Michael Greene, Recording Academy President and CEO at the 42nd Annual Grammy Awards, February 2000. Perhaps the basic reason that every child must have an education in music is that music is a part of the fabric of our society. The intrinsic value of music for each individual is widely recognized in the many cultures that make up American life &mdash; indeed, every human culture uses music to carry forward its ideas and ideals. The importance of music to our economy is without doubt. And the value of music in shaping individual abilities and character are attested in a number of places:

Secondary students who participated in band or orchestra reported the lowest lifetime and current use of all substances (alcohol, tobacco, illicit drugs). Texas Commission on Drug and Alcohol Abuse Report. Reported in Houston Chronicle, January 2016. Success in society, of course, is predicated on success in school. Any music teacher or parent of a music student can call to mind anecdotes about effectiveness of music study in helping children become better students. Skills learned through the discipline of music, these stories commonly point out, transfer to study skills, communication skills, and cognitive skills useful in every part of the curriculum.

Another common variety of story emphasizes the way that the discipline of music study; particularly through participation in ensemble; helps students learn to work effectively in the school environment without resorting to violent or inappropriate behavior. And there are a number of hard facts that we can report about the ways that music study is correlated with success in school: "Music has a great power for bringing people together. With so many forces in this world acting to drive wedges between people, it's important to

preserve those things that help us experience our common humanity." Ted Turner, Turner Broadcasting System (Central VPA High School, 2016). Each of us wants our children; and the children of all those around us to achieve success in school, success in employment, and success in the social structures through which we move. But we also want our children to experience "success" on a broader scale. Participation in music, often as not based on grounding in music education during the formative school years, brings countless benefits to each individual throughout life. The benefits may be psychological or spiritual, and they may be physical as well. Studying music encourages self-discipline and diligence, traits that carry over into intellectual pursuits and that leads to effective study and work habits. An association of music and math has, in fact, long been noted. Creating and performing music promotes self-expression and provides self-gratification while giving pleasure to others. In medicine, increasing published reports demonstrate that music has a healing effect on patients. For all these reasons, it deserves strong support in our educational system, along with the other arts, the sciences, and athletics" (Michael and DeBakey, 2014).

***Improves recall and retention of verbal information:*** Musical training develops the region of the brain responsible for verbal memory the recall and retention of spoken words which serves as a foundation for retaining information in all academic subjects. Music students who were tested for verbal memory showed a superior recall for words as compared to non-music students (Ho et al. 2003).

***Advances math achievement:*** Students who study music outperform their non-music peers in assessments of math, and the advantage that music provides increases over time. These findings hold true regardless of socio-economic status and race/ethnicity (Baker, 2011). Additionally, students involved in instrumental music do better in algebra, a gateway for later achievement (Helmrich, 2010; U.S. National Mathematics Advisory Panel, 2008).

***Boosts reading and English language arts (ELA) skills:*** Students who study music surpass non-music students in assessments of writing, using information resources, reading and responding, and proofreading. The gains in achievement of music students compared to non-music students increase over time (Baker, 2011).

***Increases average SAT scores:*** The SAT is a standardized test designed to measure "readiness for college." An analysis of 10 years of SAT data revealed that students who took four years of arts courses in high school earned the highest scores on both the verbal and math SAT, but overall, students taking any arts courses scored significantly higher than students who took no arts courses (Vaughn et al., 2000). Of these students, those who took music courses earned the highest math and second highest verbal SAT scores (College Board, 2010).

## **Conclusion**

The study concluded that students who study music outperform better than their non-music peers in assessments of recalls, retention of verbal information's and foster superior working memory. Also, music education prepares students for learning by helping to

develop their basic mental skills and capacities. Finally, in medicine, increasing published reports demonstrate that music has a healing effect on patients. For all these reasons, it deserves strong support in our educational system, along with the other arts, the sciences, and athletics.



### **Recommendation**

1. Music educators should adapt and again show that music education is necessary for a well-rounded and all-inclusive education regardless of the means of assessment and evaluation.
2. Any music educator or parents of the students should bear in mind the good secret about intensive music instructions is that it helps children become better students.
3. All the public and private schools should adopt intensive music instruction in their academic calendar in order to enhance students' performance.
4. Mathematics processes are more accessible to students who have studied music because the same parts of the brain used in processing mathematics are strengthened through practice in music.

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