

Book: Good Music, Brighter Children
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Chapter Seven

Of the many success stories of schools using arts-based education, one of the most remarkable is that of the Tucson Unified School District in Arizona. It is an inspiring story of how music and the arts can change the lives of students, a school district and a community.

In the 1990s, the Tucson Unified School District was experiencing low achievement and troubled schools. Looking for solutions, they spent a year researching the connections between brain development, music and the arts. They found a striking correlation between arts-based education and sustained learning. As a result of their findings, the district started a program called Opening Minds through the Arts (OMA). The foundational structure of the program is based on brain research of how children learn best. By infusing the arts into academic subjects, studies showed that student achievement would increase exponentially. In 1999, the district partnered with The University of Arizona on a pilot program which included Howard Gardner's multiple intelligences and arts integration. The results were immediate; students were more focused; more excited about learning, and they understood math better. The research was correct.

Based on these results, they applied for and received two federal grants from the U.S. Department of Education. They also received support from angel investor, H. Eugene Jones, who eventually gave more than \$1 million to the program. In 2000, OMA was officially launched in three elementary schools and one middle school. Currently there

are eighteen elementary schools with OMA. In 2014, the goal is to have some form of the program in sixty-one elementary schools and ten middle schools. “My goal is to get the arts into every elementary school in Tucson,” says Dr. Joan Ashcraft, the co-creator of OMA and Director of Fine and Performing Arts.

Formal testing to measure the effects of the program on basic subjects has been ongoing since its inception in 2000. The first three years, the nonprofit research firm WestEd tracked six OMA schools with demographically matched controls. All of the schools had high percentages of low-income students, English language learners and children of transient families. In every case, OMA students significantly outscored their counterparts in reading, math, and writing. Today, test results continue to show notably better test scores for OMA students.

In a “think outside the box” decision, the district worked with Arizona Testing Incorporated (ATI), and arts specialists to devise a test to measure what is learned from music and the visual arts. A pilot test was given and the results showed that students involved in the arts are better at critical thinking and problem-solving—all needed attributes for the twenty-first century. The test questions were not “circle the correct answer,” but rather questions that required critical thinking, problem-solving and short answers. For example, one question focused on Dorothea Lange’s famous photograph, “Migrant Mother.” Students were asked to explain the mood of the image based on the elements of art and compare/contrast it to other similar pieces of art. They were required to view it as a story and create a scenario on what would happen next and what questions they would ask the woman. Their answers needed to be in relationship to the time period and subject matter of the piece. Last, they had to decide how they would change the

photo from black and white to color. What colors would they choose and why? Elements of analyzing, synthesizing and evaluating were necessary to answer the questions. These were not college students majoring in art. These were fourth grade students taking the test. Nor was this a “let’s teach to the test” scenario. This was the first time students had seen the photograph.

To have a test that quantifiably measures the results of arts-based learning is revolutionary! The reason so many schools expunge or nearly eliminate the arts is because they are not tested and therefore not tied to funding. This ground-breaking decision has the potential of paving the way to making arts-based learning visible and concrete not only in Arizona schools, but in school districts nationwide. Today, Tucson Unified School District stands as a leader in a national movement to integrate arts education. They have also created the testing methodology to measure its merit.

OMA in the Classroom

Each fully implemented OMA school has an arts integration specialist and a team of seven artists who work alongside classroom teachers to fuse the arts into core subjects. They employ more than forty artists from the Tucson Symphony Orchestra, the Arizona Opera Company, The University of Arizona Schools of Music and Dance and other arts organizations to teach thirty to forty-five minute classes twice a week. Kindergartners, first and second graders receive Orff instruction, singing and learn percussion instruments. Third graders learn the recorder. Every fourth grader learns the violin, and all fifth graders learn a band or orchestra instrument.

The foundation and design of the program is based on a child's neurological maturation. The following examples briefly illustrate some of the neurological development that occurs at each age and grade level and how OMA supports and strengthens these neural connections.

Kindergartners come to school with a natural ability for rote memory. They positively respond to and can quickly memorize songs with a strong musical rhythm. The OMA curriculum uses the rhythms found in songs and nursery rhymes as a tool to develop their listening, reading, and memory skills. They meet with various music ensembles such as the Tucson Symphony Orchestra. Listening to classical music played by the orchestra trains the ear to hear and recognize sounds and patterns which strengthens oral language and literacy skills. To support this maturation, Melissa Callahan, the Arts Integrated Specialist (AIS) at Kellond Elementary teaches kindergartners songs based on nursery rhymes such as "Hickory, Dickory Dock," and "Old King Cole," as well as songs that teach them to count by twos, fives and tens. The songs' strong rhyming pattern helps phonemic awareness—the ability to hear and identify individual sounds in words. Along with singing, the children learn kinesthetic movements, and beat out rhythms on Orff instruments. Singing, dancing, moving are all activities that reinforce the letter/sound relationships and speech development.

The arts are also used to make connections to other subjects. For example, at Lineweaver Elementary, AIS, Karen Fields, works with classroom teachers and kindergartners to produce the musical, "The Gingerbread Cowboy." It is a story about a gingerbread boy who meets desert animals and learns all about the flora and fauna of desert life. Students make connections to social studies when learning songs about desert

animals, roadrunners and prickly pears. They learn science when singing piggy-back songs about eleven different plants and creatures; their diet and habitat. They choreograph dances, paint pictures, and recite poems that build their language and reading skills. Fields sees a difference in OMA students. She says, “OMA provides kids with creative learning. It helps them to understand difficult subjects. They focus better and are more engaged in their learning. OMA provides a “roundness” of education for all children.”ⁱ

In first grade, the OMA program emphasizes literacy and language development. They use rhyming, sequencing, patterning, and beginning composition to strengthen that foundation. Students learn the parallels between music and verbal language: a phrase in music is comparable to a sentence. Several sentences linked together form a paragraph which is like a cluster of musical phrases. A movement in music is like a chapter in a book and a book is like an entire composition. Opera contains all these elements and becomes the vehicle for first graders that links writing, language and music. Every first grade class in OMA produces an opera.

At Kellond Elementary, first graders wrote an opera about ancient China. The children chose this theme based on a Chinese folktale their teacher had read to them of a princess who was sent from the moon to earth. Using creative writing, reading, and language arts skills, they wrote the entire script, composed the music, painted the scenery, memorized lines, and helped create costumes. Other subjects were also integrated. They studied the customs and clothing of ancient China (social studies); they studied fairytales and folk tales (reading/language arts); they learned the elements of writing a good story including conflict/resolution and the moral of the story (creative writing). They studied elements of

meter and rhythm in order to write the musical score. Every musical line, melody and libretto was written and composed by first graders.

Callahan has seen what happens to kids when they are actively engaged in their learning, “OMA is one-hundred percent student engagement. There is not a single student sitting on the sidelines bored. They experience learning in an exciting, creative and interactive way, every single day. This type of learning is never forgotten and is so much more effective than marking off questions on a worksheet.”ⁱⁱ

Second grade adds movement to music. Movement is a key part of learning. It increases vocabulary, enhances listening and memory skills, and helps children to think critically as they cooperate and collaborate with others. When the rhythmic tools found in music are combined with the rhythmic movement found in dance, memory is boosted instantly. At Kellond, Callahan uses the rudiments of pantomime to teach these elements. Students learn articulation, projection, and expression along with facial expressions, body language, movement and voice. Writing and reading fluency is also emphasized. Students work in groups of two; are given an open-ended scene and beginning lines and create the setting, the characters, and their relationship to one another. For instance, the scenario begins with someone knocking at the door with the words, “It’s me, open the door.” To develop a pantomime from this, students must engage their thinking, vocabulary, listening and collaboration skills. The tricky part: the audience has to understand the whole scene, so students must meticulously weave the right amount of detail and movement into their lines to make it interesting.

Third graders learn to play and write music on recorders and keyboards. These activities enhance listening skills, the processing of visual information, and coordinating

movement in the brain. According to Piaget, they are learning concrete reasoning skills used in phonics, music notation, and math that link auditory centers to the left and right sides of the brain. The students are also involved with creative movement which boosts reading and writing skills. Through reading and writing poetry, choral reading, and singing simple folk songs in languages such as Japanese, Swahili and German, they encode new sounds in the brain.

Karen Fields at Lineweaver uses recorders and the visual arts to teach the science of sound. Using soprano, alto, tenor and bass recorders, she teaches students the differences between high and low sounds, pitch and vibration. During one lesson, students think of a particular sound made by wind or shattering glass. They think of adjectives that describe that sound—howling, whistling, sharp, and gritty. They create movements that kinesthetically describe these sounds. They think of shapes that would represent the sounds. Combining these elements, students construct paintings reflecting the artwork of modern artist, Kandinsky. They title their work, “Can You See the Sound?”

In fourth grade, students develop fine motor skills by learning the violin with their teachers. Lessons are based on more abstract reasoning. Music is integrated into reading, writing, history and science.

Julie Patrick is the OMA Exploratory Residency Coordinator. While teaching at Cragin Elementary, she used rhythms found in music and poetry to teach students abstract concepts of fractions. Working in groups, students chose a published poem and learned about iambic pentameter and how rhythms relate to fractions. They chose words and phrases that complimented the subject of their poem. One class wrote phrases about a train going down a track. Students brainstormed and added words describing the sounds a

train would make such as “whoosh, whoosh, toot, toot, chugga chugga, and choo, choo.” Combining elements of fractions—musical “straight-eights”—they created poetic phrases with a rhythm of eight beats. They could create two-beat phrases repeated four times or four-beat phrases repeated two times or any other combination that equaled eight. When the groups came together to combine their parts they used “round-singing.” Each group started at a different time, continually repeating their musical phrase until every group had joined in. In music, this form of repetition is called, *ostinato*. Students stood together in bee-bop fashion, used imaginative sounds, body percussion and even running motions to create the rhythm of their *ostinato*. The result was amazing. Without realizing it, they were learning about fractions. Patrick states, “Fractions are a difficult concept for many students, but when you take kids out of a traditional lesson, then the concept becomes more abstract. Students now look at fractions and think about them in a different, creative way. In OMA, we take the concrete and put it in the abstract. From this lesson, not only did they learn fractions, but also poetry, rhythms, music and cooperation.”ⁱⁱⁱ Abstract teaching solidifies understanding.

Fifth grade puts everything together. As in first grade, they are learning opera, but now it is on a more sophisticated scale. They connect with community arts partners. They attend professional performances. An opera team works with the class to develop writing, reading and language arts skills. Through the use of song, they discuss voice and structure and how these relate to various elements of writing. Opera becomes the vehicle to link writing and music. Students apply what they have learned and write an original opera and compose all the songs and the libretto. In one school, students collaborated and

selected a theme from American History for their opera. They chose to write their opera about the Boston Tea Party from the point of view of the fish swimming in the harbor.

The OMA program has triggered a dramatic turnaround for the Tucson Unified School District. “OMA has been integral to the success of Fine Arts within this large district” says Ashcraft. “It has boosted our student’s understanding of core content; it has raised test scores; it has kept our kids in school; it has reduced discipline issues and it has helped children who are shy to become more confident. In short, OMA has made learning visible.”^{iv}

The OMA program is a success story. It is engaged learning at its best.

ⁱ Karen Fields, interview with author, April 1, 2013

ⁱⁱ Melissa Callahan, interview with author, April 1, 2013.

ⁱⁱⁱ Julie Patrick, interview with author, April 1, 2013

^{iv} Dr. Joan Ashcraft, interview with author, March 22, 2013.