Music makes it memorable

In the era of STEM and STEAM programming, music and the arts are being highlighted in a stronger way in early care and youth programming. Research has strongly indicated that children who participate in musical instruction benefit academically.

“Music has power, and we need to remember to keep everyone plugged in!”
– Petr Janata (PhD, Neuroscientist Guggenheim Fellow, UC Davis, Center for Mind and Brain, Music Has Power™ Award Winner)

Many of today’s early care teachers remember “Schoolhouse Rock!” songs that taught important terms and concepts to elementary school-age children, such as “Conjunction Junction” (grammar skills) or “I’m Just a Bill” (law-making process in the U.S.). Others remember the 50 states of the United States by singing “Fifty Nifty United States” and some may even remember how to spell “friend” by singing Mr. Rogers’ song “You Are Special.”

How does it work?

Music makes things memorable. But why and how, and do early care practitioners have to be Julliard-trained to integrate music into the programming day? When caregivers understand some of the basics of brain development and cognitive processing they are better equipped to use music as a powerful ingredient in children’s daily play and learning experiences.

Although music is powerful, teachers should not oversell its impact. This happened to an extent with research in the early 1990s around Mozart and classical music. Research results were taken to an extreme, and some parents were led to believe that if their infants listened to classical music from birth, the infants’ IQs were raised.

“Ani Patel, an associate professor of psychology at Tufts University and the author of Music, Language, and the Brain, says that while listening to music can be relaxing and contemplative, the idea that simply plugging in your iPod is going to make you more intelligent doesn’t quite hold up to scientific scrutiny.” (Hicks 2014)

What does neuroscience tell us?

The study of music neuroscience is relatively new, taking off in the early 2000s. What educators do know is that linking music and singing to academic information helps a child to recall the material later, allowing the child to access it and put it to use. One neuroscience professor and mother of two said, “I noticed early on that if [my son] used an additional skill such as singing spelling words or doing jumping jacks while saying his spelling words, he seemed to retain the information more easily. By utilizing more functional parts of the brain, [my son] has more neuronal input to solidify this information.” (Personal correspondence with Cecelia Fox, faculty, Moravian College) The brain depends on neurons. When people take in new information through their ears or eyes or skin, those neurons talk to each other by firing off electrical pulses. This impulse activity is called brain waves. By adding music or movement to a cognitive memory task, the child gives the brain some additional things to “think” about and pay attention to, waking up multiple parts of the brain, rather than the brain being distracted by mental “static” that is typically present. If children use their senses regularly as they learn, those pathways in the brain will become well developed, preparing them for a variety of complex tasks like problem-solving. (Turner 2014)
Patel explains that each person’s brain has plasticity; it changes throughout life. The pathways adjust as new information is learned or memorized. And music helps the brain to change in ways that improve overall thinking and emotional development. Neuroscientists document that the brain changes as it experiences something repeatedly, as several areas of the brain are exercised at one time, as emotions are involved with a task and as great focus is required. “So this idea,” Patel says, “that music sometimes places higher demands on the brain, on some of the same shared networks that we use for other abilities, allows the music to actually enhance those networks, and those abilities benefit.” (Hicks 2014)

This brain science has implications for early care.

If teachers want children to remember things, it helps to set the ideas to music. This already happens regularly for caregiving routines like hand washing, large group gatherings, and greeting routines. Where else might music help children to remember and have success? Take some staff time this week to think about and list the frustration points in a child care day where staff repeatedly tell children to remember something or redo something. Can any of these things be set to music, or sung as a reminder to make it more attention-getting? What positive messages do staff members want each child to believe about himself or herself, and can these be shared in song?

Many commercial musical products exist to accomplish or support these tasks. In fact, the website and blog “Sing About Science and Math” (http://singaboutscience.org) covers educational programming from preschool to college. Practitioners can take advantage of pre-made music and lyrics, but they can also tap into their own creativity, composing greetings, reminders, and information ballads. As they set the tone, children will follow their lead and also begin to compose personal musical reminders, establishing lifelong memory strategies and pathways that will serve them well in school and beyond.

Test the research!

Caregivers can invite children to test this research; to see if it is really true, they can work together to do their own study. Check out the basic instructions for doing a test to see if singing helps a person remember information at “Does Singing Help Us Retain Information?” (Smith 2015).


“Songs for Teaching,” (http://www.songsforteaching.com) also includes many other subjects such as life skills songs and fine arts songs.

References


extension.psu.edu/youth/betterkidcare

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