

# **Learning through Singing: How Music Helps Children with Special Needs**

## **THE RESEARCH**

At his writing workshop, Dr. Michael Heggerty, an expert on literacy, stated that the average class has five academic levels. How does a teacher reach all five levels within a class period? What is developmentally appropriate for students? How does a teacher reach the students who have language issues due to hearing loss, dual languages at home, or other factors? The research shows that music is a tool that is developmentally appropriate, facilitates language fluency, helps brain development and above all else is joyful.

### **What is the current research on music and brain development?**

In the article, "Understanding a Brain-Based Approach to Learning and Teaching," Renate Nummela Caine and Geoffrey Caine list 12 current brain-based principles. These principles discuss how thoughts, emotions, imagination and predispositions operate concurrently. These systems need to develop in a stress-free yet novel environment where the learner can pattern current stimulation into embedded natural spatial memory, their constantly engaged register of experiences in three-dimensional space (O'Keefe and Nadel 1978). Meaningful learning requires "relaxed alertness, immersion and active processing" (Caine and Caine 1989).

Music allows learners to acquire information naturally. It presents information as parts and wholes. The song gives students a chance to reduce the information into parts yet work with it as a whole. In her article entitled, *Effects of Piano, Singing and Rhythm Instruction on the Spatial Reasoning of At-Risk Children*, Frances H. Rauscher explores the relationship between spatial/temporal skills and music with high risk preschoolers. Three studies examined the effects of music. The children who received music training scored higher on the WIAT in reading, spelling, reading comprehension, mathematical reasoning, numerical operations and listening tasks. Her conclusions were: ". . . learning music is an important developmental activity that may help at-risk children compete academically on a more equal basis with their middle-income peers . . . improvement on the spatial-temporal tasks was confined to those children who received music instruction . . . the music instruction [was] found to continue for at least two years after the intervention ended."

In another study by Rauscher entitled, *Music training causes long-term enhancement of preschool children's spatial-temporal reasoning*, music training gave a significant boost to spatial-temporal memory. In this study, 78 preschoolers were divided into two groups with one group receiving music instruction. The researchers tested if music cognition would activate the same neural activities as those in spatial-temporal reasoning. This type of reasoning maintains and transforms mental images without a physical model. It is used in both mathematics and science. She found that: "Music training unlike listening produces long term modifications in underlying neural circuitry (perhaps right prefrontal and left temporal cortical area) in regions not primarily concerned with music. The magnitude of the improvement in spatial-temporal reasoning from music training was greater than one standard deviation equivalent to an increase from the 50th percentile on the WPPSI-R standardized test to above the 85th percentile." Students with low language levels could benefit the most from this increase in memory.

Music benefits children's oral communication. They learn to be attentive listeners, which is a skill that helps their phonological awareness, their phonemic awareness and overall fluency. When teachers use music naturally, they can use this tool to expand vocabulary, promote sight words, identify rhymes and retell stories. According to Wiggins in her article, *Pre-K Music and the Emergent Reader: Promoting Literacy in a Music-Enhanced Environment*, simple songs such as *Down by the Station* when coupled with a book "nurtures auditory and visual discrimination, eye-motor coordination, visual sequential memory, language reception and most importantly promotes comprehension and dialogue."

## **STRATEGIES**

### **Use Music to Teach Routines**

The children at our school, Child's Voice, alternate between their homerooms and the centers. They go from a small environment of two-three students to a larger one of 10 to 23 students about every 30 minutes. When they enter the Learning Center, they need to clean their hands with a sanitizer. Common knowledge dictates that the students need to rub their hands for a period of time to ensure that their hands are clean. Why not sing a song that talks about what they are doing and ensures that they rub their hands a proper amount of time? Remember that the students sing with the teacher at all times. It is a community effort and not a performance by the teacher. Here is the song.

## **Wash Your Hands**

(Tune: "Brother John")

Tops and bottoms  
Tops and bottoms  
In between  
In between  
All around your hands  
All around your hands  
Now they're clean  
Now they're clean

What else should children do in every classroom? They need to learn how to clean up. Before I came up with the song, I would repeatedly (about five times) ask students to wash their hands. Now as we sing, all of us participate in cleaning up. Because of the tune, I have the image of seven little dwarfs from the story *Snow White*. It brings a smile to my face. Here is the song.

## **Clean Up Song**

(Tune: "Heigh Ho" from Disney's *Snow*

*White and the Seven Dwarfs*)

Hey, hey! Hey, hey!  
Put everything away.  
In the right place, where it  
Should stay.  
Hey, hey! Hey, hey!

The beauty about these two songs is that it eliminates nagging, helps give the students language for what they are doing, gives them practice articulating without any pressure since it is being sung by everyone and is easily learned.

## **Use Music to Teach Information.**

Writing is very difficult for students with minimal language. They work harder putting their thoughts into words. Sometimes this activity is slowed down by the mechanics of writing such as where do you start? Many students have directionality difficulties. I wrote a song that we sing before every writing class. We add movement to it, so it can become quite an aerobic workout before we sit down to write. Why is this beneficial? By adding body movements we have now incorporated two of Gardner's eight intelligences: musical and bodily/kinesthetic. On wintry Chicago days, we sing the song with gusto and big movements five times in a row. The children are then ready to sit down and focus.

The students with serious directionality issues will sing this song quietly while they are writing. It helps them focus on the left to right concept.

### **The Writing Song**

(Tune: "London Bridge")

Top to bottom      Left to right  
Left to right      Left to right  
Top to bottom      Left to right  
That is how we write

Our students learn words such as "blends", "digraphs" and "homophones" during phonics lessons. It is hard to remember what everything means. Are blends the same as digraphs? Why are homophones so much fun to learn? Here are songs that teach the key components of these concepts. The tunes make the songs more fun to sing!

### **Blends**

(Tune: "Addams Family")

Blends are friends (snap, snap)  
Blends are friends (snap, snap)  
Put two letters together  
You hear both of them (snap, snap)  
Dr for dress Sn for snake  
Pl for plant St for star

### **Digraphs**

(Tune: "Addams Family")

Digraphs are weird (snap, snap)  
Digraphs are fun (snap, snap)  
Put two letters together  
Their sound makes one (snap, snap)  
Th for thumb Ch for cheese  
Sh for sheep Wh for whale

### **Homophones**

(Tune: Bingo)

Homophones are weird words  
That sound the same  
But are different  
Ate Eight  
Night Knight

Pear Pair  
Homophones are cool!

### **Use Music to Teach Comprehension**

In my classroom the day ends with a story. We read a story for two weeks. If it is a classic story, we read many versions. We then compare and contrast key elements of the story. If the story is a current one, we read parts of it for one week and then on the second week read it entirely again. Every Monday we look at all the story songs and sing all of them. (The songs are clipped together by a ring for easy flipping.) Each story gets a song and by the end of the semester we are singing about ten songs. The beauty of this activity is that it helps the students remember the story, gives the students words to express what happens in these stories and is a tool to help the students comprehend key elements of the stories.

Let's take the classic story, The Gingerbread Man. Most children are familiar with the story. One key component is that the Gingerbread Man loves to run and is feeling "cocky" that he can outrun everyone. When the children learn this song, they become the Gingerbread Man. They can use their sassy voices to sing. At the end of the story they can sing the same lyrics in a pathetic manner since they have been eaten by the fox! Here is the song:

#### **The Gingerbread Man**

(Tune: "A,B,C" song)

Catch me, catch me if you can.  
I'm the little gingerbread man.  
I can jump and I can run.  
Faster, faster. It's fun, fun, fun.  
Catch me, catch me if you can.  
I'm the little gingerbread man.

The beauty of this system, writing songs for the stories that they have studied, is that you reinforce the story line, its vocabulary and crucial elements all within a 30 second time frame. You can sing these songs whenever you have a break. When you need to discuss a story's similarities and differences, the children can recall the story just by breaking into song. The stories become part of their long term memory. (Every song is sent home for the students to put into their home binder that they can use at their discretion.)

Imagine introducing a brand new story. How do you help them remember the sequence of the story? How do you recreate the atmosphere of the

story? By using the tune, Brother John, the teacher can sing a line and have the students repeat. Our curriculum is based on the formula of modeling and imitation. The teacher models the appropriate language (syntax) and the student repeats. In this song, the entire story is described. The song that the boy sings in the original story is used at the appropriate moment. The children sing the entire story and enjoy the defeat of the giant, Abiyoyo.

## **Abiyoyo**

(Tune: "Brother John")

A long time ago  
A long time ago  
A boy and his dad  
A boy and his dad  
Played the ukulele  
Played the ukulele  
And did magic  
And did magic

Nobody liked them.

Nobody liked them.  
The ukulele was loud.  
The ukulele was loud.  
Magic make things disappear.  
Magic make things disappear.  
"Get out" said the people.  
"Get out" said the people.

One day the sky was red.  
One day the sky was red.  
And the ground shook.  
And the ground shook.  
Abiyoyo came to town.  
Abiyoyo came to town.  
"Run for your life."  
"Run for your life."

The boy had an idea.

The boy had an idea.  
To make the giant fall down.  
To make the giant fall down.  
He would sing his song.  
He would sing his song.

And Abiyoyo would dance.  
And Abiyoyo would dance.

(All sing eight measures of "Abiyoyo" going faster and faster. See the book for the tune. The one child playing Abiyoyo would dance faster until he/she fell down.)

Abiyoyo fell down.

Abiyoyo fell down.

His father said "Zoop."

His father said "Zoop."

Abiyoyo disappeared.

Abiyoyo disappeared.

Hooray for the boy!

Hooray for the boy!

This song provides knowledge. It answers the questions: What do you remember about\_\_\_\_? Why did\_\_\_\_? What is (are) \_\_\_\_? When did\_\_\_\_? It helps with the students' comprehension. It can lead to answering these questions: How would you compare\_\_\_\_? How would you contrast\_\_\_\_? What did you observe\_\_\_\_? What would happen if \_\_\_\_?

### **Use Music for Fluency and Fun**

Children with language delays work harder for every word spoken. It is a "Catch 22" situation when the harder it is to talk, the less likely it is that they will want to talk. Through song a teacher can get these students to practice their fluency both in articulation and language. The song, Michael Finnegan, is a great example of this. The silliness of the rhymes-Finnegan and "chinagan" and the change in tempo (you can sing it very slowly or extremely rapidly) make it a fun-filled way to practice speech and language.

Another song to try is "Skip to My Lou," which has been adapted and illustrated by Nadine Bernard Westcott. Make a several page chart of this song with its illustrations. The students and I sing this with appropriate movements every other March. When we get to the part of the song where the sheep are in the bathtub and we sing "Hulla-baloo," the squealing and giggling from our movements coupled with the great illustrations make this a hilarious fun event rather than a drill and kill language/speech time.

Songs can be a handy tool for teachers trying to help their students who are delayed in language. It is developmentally appropriate and so joyful that your students will not realize how much they are learning through song. It makes learning a great adventure. Singing connects your students especially the struggling ones to the joy of learning.

"Sing, Sing a song, Sing out loud, Sing out strong, Sing of good things, not bad, Sing of happy, not sad, Sing, Sing a song, Make it simple, To last your whole life long, Don't worry that it's not good enough, For anyone else to hear, Sing, Sing a song."  
(Joe Raposo)

## **REFERENCES**

Caine, R. N., & Caine, G. (October 1990). Understanding a brain-based approach to learning and teaching. *Educational Leadership*, 66-70.

Rauscher, F. H. (2003). Effects of piano, singing and rhythm instruction on the spatial reasoning of at-risk children. *Proceedings of the European Society for the Cognitive Sciences of Music*, Hannover, Germany: Hannover University Press.

Rauscher, F. H., Shaw, G. L., Levine, L. J., Wright, E. L., Dennis, W. R., Newcomb, R. L. (1997). Music training causes long-term enhancement of preschool children's spatial-temporal reasoning. *Neurological Research*, 19, 2-8. DOI: 0161-641297/010002-07

Wiggins, D. G. (August 2007). Pre-K music and the emergent reader: Promoting literacy in a music-enhanced environment. *Early Childhood*, 35 (1), 55-61. DOI:10.1007/s10643-007-0167-6