

We hear a lot about the importance of scaffolding in education. Providing the support necessary to ensure that children can master skill development is, often times, essential. For example, students who have struggled with reading can begin to experience the pleasures of reading independently with just the right amount of structure. Likewise, students who can't seem to grasp the concept of sets and subsets in mathematics can more easily understand when various manipulatives are available to them to graphically and physically manipulate objects into groups. Finding ways to bridge the gaps in students' understandings of concepts in all domains is a vital aspect of our job as professionals.

Believe it or not, scaffolding is important in children's musical development as well. Children support as they develop their musical ears and their aural/oral musical intelligence. As we know from children's language acquisition, they develop their ability to read and write based upon a strong oral/aural background. Before they can begin to master the symbols of written language, they need to play around with the sounds of spoken language. Using activities and games that have children 1) create rhyming words, or 2) invent new words by adding or deleting letters, or 3) segment words into individual phonemes, we build their awareness of oral/aural language—their linguistic ears—through scaffolding.

A similar process should occur as children develop their musical ears. In order for children to read and write musical notation with confidence and understanding they need years of aural/oral musical experiences that allow them to play with the sounds of music. The purpose of this article is to provide you with several concrete ways to create developmentally appropriate musical activities that will aid in your children's musical development.



Developing Children's Musical Ability and Musical Independence through Scaffolding

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Covert Learning & Play

Think about the skills needed to read a book by the third grade. Before children can read, they need to acquire the language that they will eventually read, aurally—they have to listen. To this end, children need opportunities to listen to others engage in conversations. Children also need to “try out” and practice language by speaking with others. There are examples of children for whom the typical progression of language acquisition does not apply. I’m certain that we have all heard stories of children who don’t choose to babble and play around with the sounds of language the way most children do. It is these quiet children who amaze us when their oral silence is immediately transformed into well thought-out and well articulated ideas. It is as if they have been quietly processing the sounds of language and are simply waiting for the right moment to surprise us with their well kept secret.

Before children can begin to master the written symbols of any language they need to hear and play around with the sounds of spoken language.

Language acquisition takes practice, carefully trying out different sounds and listening to them as a way of better approximating the language they hear. What we may forget, however, is that language acquisition might be seen as a covert operation. Language acquisition happens in the mind. While we may hear aurally children’s linguistic progress, the fact of the matter is that children must acquire those sounds or words or syntax in their minds. We can’t see language acquisition. We can only infer that children have acquired language skills from what we can hear or see.

Another important aspect of language development is the notion that children will play with the sounds of their language. I’m sure you remember you and your friends speaking to one another in “pig Latin” or in “ubadubee,” or some other form of invented speech. Children love to play with the sounds of language and we use this idea of playful speaking when we use assonance, alliteration, or onomatopoeia. These poetic devices are part and parcel of most elementary and early childhood rhymes and chants. Truly, presenting playful and poetic patten prompts pupils’ progress in language development.

These ideas of covert learning and the importance of play in language development are true for musical development as well. While we may hear songs and chants, rhymes and poems, the music of these must be actively processed by our minds in order for us to acquire the syntax and grammar of our musical language. Similar to our activities in spoken language where we

leave out particular words or purposefully alter a word to play with the sounds of language, we must also purposefully play with the sounds of music. As we play with the English language or the Spanish language or the language of music, children's brains begin to actively process the sounds we manipulate. It is through this purposeful and playful manipulation of sounds that we help children build aural connections to language and sow the seeds for success with reading and writing, regardless of the specific language.

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The Sounds in Silence

Have you ever noticed that we often bombard children with a dizzying array of stimulation and information? Think about it. There are lots of colorful things tacked to our walls. There are endless sights and sounds of hand-jives and energetic dances. There are numerous recordings of the latest versions of *Old MacDonald* or the *Hokey Pokey*. From the start of their school day, children must keep ahead of the avalanche of activities or risk being consumed by the day's countless activities. There's so much to do and so many things to provide children, that there's simply no time to think.

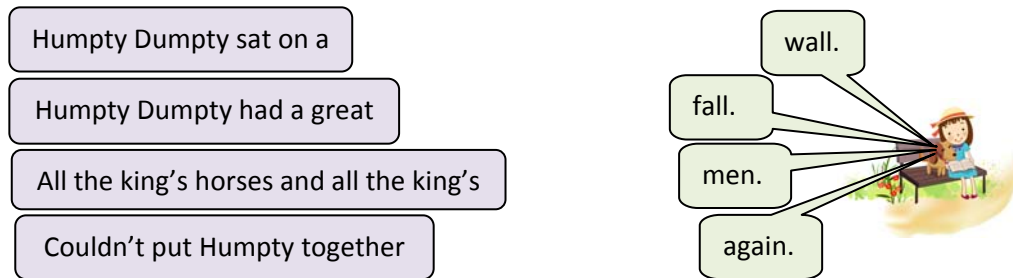
No place that's quiet. No time to think.

In order for children to process the information and stimulation that we provide them, they need time, they need space, and they need silence. Think about these ideas of time, space, and silence. If a cognitive education, the education that we value, is important, then children need plenty of time to process information. In short, they need time to think.

Let's put this idea of "time to think" in the context of music, since our focus is on facilitating musical develop. Since we know that children should have plenty of aural/oral experiences with music before they are expected to read and write musical notation, we need to begin their musical development by providing them developmentally appropriate musical examples to which they can listen. "Well, that's easy enough," you might say "I can play some musical examples over and over and over again." Right?

Think about this in the context of language development. Take for example the familiar nursery rhyme *Humpty Dumpty*. At first you would chant the entire rhyme for children, adding lots of vocal inflection to dramatize the story and to add excitement and interest. However, you wouldn't just keep

saying the rhyme over and over and over again. You would probably want the children to begin to remember certain words or phrases and to eventually say the entire poem by themselves. To this end you might leave out the rhyming words at the ends of the phrases. For example,



By leaving out part of the rhyme and allowing silence to fill the space at the end of each phrase, the children are given time to think and, in time, will most likely respond with the correct word. You see, when you allow silence to enter your pedagogy the children must begin to construct the sounds that are missing. They, in effect, are beginning to do some of the hard cognitive work for themselves. Even though we present this as a playful wordplay game, it still requires that the children think and work. Silence, in short, is a powerful tool for promoting children's thinking.

How does this apply to music? In exactly the same way as it does in oral language activities. Take, for example, a familiar piece of music by Bach or Brahms or Beethoven. If we just play the selection over and over and over again, the children don't really have anything to do except to listen. Since nothing will be left out, there's not much else the children need to do cognitively. What they soon realize is that the music will continue whether they are paying attention or not. Eventually, they will tune the music out and it will become another part of the ambient sounds in the classroom; cognitively, the music will be little more than more white noise in their musical development.

Keep in mind that children must play cognitively with sounds in order to learn a language. In music, we most often add movements to keep children engaged. We introduce either hand motions or body movements that coordinate with the music. While these are good to help children recognize the structural elements of the music, they do not promote children's acquisition of musical syntax and grammar, to use a linguistic analogy. Therefore, what we most often do with music in the classroom is simply repeat and repeat and repeat music over and over and over again. This is

Children must play cognitively with sounds in order to learn a language, any language.

similar to saying a Mother Goose rhyme dozens and dozens of times with a group of five-year-olds and never expecting that they will do anything but listen. But this isn't the case with chants and rhymes. Eventually, we want them to finish a sentence or phrase, or to invent a new word, or recite most of the chant in their heads except for the final word of each line. These activities are playful and require children's cognitive involvement, even at an aural/oral level.

Therefore, if play is important and silence is important, what can we do to promote children's develop of our culture's musical language? Stated differently, how can we acculturate children to the melodic and harmonic language of western music, since this will be, most likely, the musical language that they will be expected to speak—so to speak—in their K-12 public or private school education?

Scaffolding Musical Thinking by Simple Subtraction

So here's the logic of the idea presented in this article: if we gradually remove bits and pieces of a familiar melody, then the children will have to cognitively add the missing measures and notes to enjoy a complete hearing of the music. Stated differently, by systematically subtracting portions of the melody we provide the structure and scaffolding needed to improve children's aural musical development which will in turn improve their overall musical ability, which will in turn improve their success in music in elementary school, middle school, high school, and throughout their adult lives.

Subtracting or removing parts of a familiar melody works well in promoting musical thinking because western harmonic music has a well defined structure. Let me explain. Music is composed to accentuate repetitions, aural expectations, redundancy, and returns. The ear listens for familiarity in music by recognizing melodic patterns, harmonic patterns, and rhythmic patterns. When differences are introduced or parts are subtracted from familiar music, our ears recognize the changes. When the ear expects one thing but hears another, it causes the ear to say in effect "Hey, something's going on here. What happened?" It is these unexpected and playful musical surprises that facilitate children's musical development.

Western harmonic music, the music we listen to on the radio, has a well defined structure.

Here's a familiar melody that will serve as an example of how you might go about playing with music. Suppose you sing *Twinkle, Twinkle* without any words. After you sang the entire song several times, you decide to not sing some of the notes. In this example I will use the words so that I don't have to provide you with musical notation.

Example 1:

Twinkle, twinkle little star, how I *****
Up above the *****
Like a diamond *****
Twinkle, twinkle *****

In the preceding example I sang the first part of each musical phrase leaving the children to finish each phrase inside their musical mind. The great thing about *Twinkle, Twinkle* and nearly every other classroom song is that they have predictable structures. There is an antecedent and a consequent to each musical phrase. In *Twinkle, Twinkle* the first antecedent is "Twinkle, twinkle little star" and its corresponding consequent is "how I wonder what you are." In fact, each pair of rhyming words make up an antecedent and a consequent. Most songs you sing on the radio and songs you know from classical music have this same two part structure. So all you really need to do, once the children are familiar with the musical example, is to sing only the first part of every musical phrase and then allow the silence of the missing musical notes of the second part of the phrase to stimulate each child's musical thinking. Simple enough, right?

Well, maybe not so fast. The problem many of us face is that we don't see ourselves as singers and may balk at the thought of singing by ourselves in front of our children. While there is nothing that can replace authentic musical interaction between two people, I have created a fairly good substitute for classroom use. The music in *Listen, Move, Think* was specifically composed to highlight a two part melodic structure and a standard formal musical structure. To assist you in recognizing these two features of the music I provide you with some visuals below.

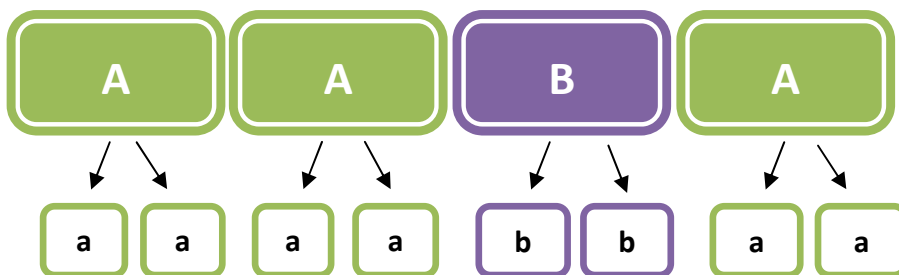
Formal Structure of the Music for LMT

As you may have gathered from listening to the musical selections, the formal structure, or the building blocks of the music, is almost always the same. After a short introduction you hear a melody, we'll call this A. Next, you will hear the melody repeated; here's another A. Then you will hear a contrasting section; we'll call this B. Finally, you will hear a final repetition of the first melody, A, and then a very short ending or coda. Listen to Tune 06 and you will easily hear this musical structure. You can access a short movie that explains this aurally and visual at the follow URL:

<http://faculty.sfasu.edu/turnermark1/acece/movies/form-lmt.swf>

Most of the music to which we enjoy listening is predictable. Like math, music is highly structured and our ears easily attend to this structure. One of the features of a well constructed melody is that it has, typically, two parts. It has a first part, an antecedent and a second part, a consequent. If you look closely at most elementary poetry that is build on rhymed couplets, you will note this same type of structure. The first phrase logically leads you to the second phrase. We can use this structural feature to begin systematically supporting children's musical development, even if we are not professionally trained musicians.

Look at the graphic below. You can see that the overall structure of the music to Listen, Move, Think is in an AABA pattern. The music of all "A" sections will be similar; however, the music of the "B" section will provide musical contrast. As you can see in the graphic, each larger section of music is divided into two parts: an antecedent and a consequent.



Over time the ear begins to expect the consequent, much like we expect to hear or say "You're welcome" in response to someone who said "Thank you." Another way to look at this is from an operant conditioning way of thinking. The consequent always follows the stimulus of the antecedent—you remember, that old stimulus/response way of approaching education. Therefore, if we want children to experience cognitive dissonance in the music to which they listen, we must first firmly establish a tune's melodic

structure AND THEN, begin to alter it. This will take time—time represented in terms of weeks and months, not just days and hours. Here is a short movie that explains this idea of antecedent and consequent:

<http://faculty.sfasu.edu/turnermark1/acece/movies/ant-consequent-lmt.swf>

So let's say that you have played a musical example for children over the course of one or two months and they know the piece very well. The next step is to play a version of the music that is slightly different. On the www.artsascontext.com web site you will note that there are certain selections of music that have more than one link. For example, Tune 06 has four related links. The first link represents the original melody as I composed it. After that you will note that there are three other versions of the tune. Beginning with 06a, each version removes a small section of the melody—not much, but enough to get your children's attention. Version 06b removes more of the melody and version 06c removes even more. Here is a short movie that explains this idea of slowly removing the aural scaffolding in musical listening.

<http://faculty.sfasu.edu/turnermark1/acece/movies/ant-consequent-lmt-2.swf>

Below is a graphic that demonstrates this idea of slowly removing a tune's aural scaffolding so that the children must do more of the cognitive work in order for the tune to exist in its original form. For example, this first graphic shows that all of the consequents have been removed. Therefore, the children must complete each melody inside their minds since the recording does not provide it.



In this next example more of the melody has been removed. Here the children are given only a portion of the antecedent. The rest of the melody will have to be constructed or replayed or recreated (however you want to envision it) in the mind. As you can see, this version requires more cognitive effort than simply listening to the complete tune.



And finally, in this last version of the tune the children are expected to recreate or construct the entire melody in their minds.



Scaffolding, Support, and Musical Development

Well, all of this is wonderful but what should I do with my students?

1. First of all, play all of the original melodies (they are noted as Tune 05 or Tune 06, etc) until your children have memorized them. When I work with children, they often begin singing along with the recordings after three or four hearings. At some point, see if they can sing through the melody without the aid of the recording. Many times they will perform the rhythm of the melody without really singing the notes. This is to be expected and is just fine.
2. Next, once the children “own” the melodies then you can begin to change things up by playing just the first variation (for example, Tune 5a). Challenge them to complete each melody either silently in their heads or out loud. From my experience it is better not to push children to sing if they choose not to. What is important for their musical development occurs in their mind and not in their vocal cords. Continue with the first variation until the children are comfortable with it.
3. Continue introducing new variations in the order they are presented on the www.artsascontext.com web site. This will ensure that the musical/aural scaffolding is removed systematically and will result in optimal musical development.
 - a. While no two professionals or classes are ever identical, what follows is “an” example of how you might sequence the music provided.
 - i. Original Tune — Play the original tune regularly for your children each day for a month. This will allow sufficient time for the children to commit the music to memory. Again, to maximize the pedagogical impact of the variations the children must intuitively “know” the structure of the tunes. This will happen without having to be taught as long as there is sufficient time for repeated listening. It will be helpful if you allow them to move expressively to the music. See *Listen, Move, Think: Communicating through the Languages of Music and Creative Movement*.

- ii. Variations — Play the first variation for a week or so, followed by the next variation and then the next, etc.
 - iii. Once all the variations have been exhausted begin to mix up their order for the children. This will keep the children which variation will be played next, thereby increasing their aural and cognitive involvement. For example, you might burn a CD of Tune 06 in the following order:
 1. Tune 06
 2. Tune 06b
 3. Tune 06a
 4. Tune 06
 5. Tune 06c
 6. Tune 06b, etc.
4. If you use the LMT musical tunes as part of your daily curriculum you can substitute a variation for the original version when your children are ready.

Final Thoughts

The essential message of this article is that we can develop our children's aural musical skills in the same way that we develop their aural language skills—through systematic and playful scaffolding. The variations of each tune on the www.artsascontext.com site provide you with developmentally appropriate musical examples.

The ideas presented in the article are essentially playful—affording children opportunities to encounter the unexpected, to be surprised, and, therefore, to be delighted and inspired. One of the most important features of a well-oiled classroom is that it possesses a sense of playfulness. When children approach their world with playfulness and wonder and surprise, things just seem to be more enjoyable. This kind of classroom doesn't happen automatically. It takes a playful mindset from the classroom professional as well. A joyous classroom is the result of the realization that things go both ways, that playfulness is a two-way street. Therefore, each of us must begin to embody a playful mind and a joyful spirit.

Employing music that is joyful and playful in its very nature is a good start. Learning how to read and write can be drudgery or it can be delightful. The ideas presented in this article will improve your children's musical ability and their potential success in formal music lessons. However, the more important point to make is that learning can be unexpected, surprising, and joyful. Manipulating the elements of any language, whether it is English or Spanish

or music, can pique children's interest in the more mundane aspects processing information cognitively.