I strum a chord quietly on my guitar and begin to sing softly. All of the children in this group of preschoolers immediately lie down, as if on cue. This song about a lion sleeping in the jungle is one of their favorites. Each child becomes a lion because the song is also a game. The children remain lying down until the song reaches the chorus of nonsense words sung to a lively rock-and-roll rhythm. Immediately every child is up and dancing until the fast beat stops and the soft music returns. Then the children melt back down to their sleeping positions.

As an early childhood music educator, I’m always delighted to see children enjoying social, musical play in the classroom. Although most preschool children show musical interest, traditionally defined musical abilities (for example, singing on pitch or performing predetermined rhythms) vary widely from one child to the next. The opening scenario illustrates a musical ability that I see among most preschool-age children: they recognize, understand, and respond to music’s structure. (See “What Is Structure?”) This sensitivity to musical structure can be a strong determinant in nurturing their enjoyment of and enthusiasm for music-making behavior (Morehouse 2012).

What Is Structure?

In music, structure, or form, refers to the organization of sound and rhythm. This sequence of auditory patterns gives definition to a piece of music. The lion song in the opening vignette is a good example of simple structure in music, given the vivid contrast between the song’s two sections, which have different tempos—first slow, then fast. In this activity, the structure becomes visible through children’s corresponding movements.

Music-making behavior describes what most children do when they make musical sounds and rhythms. It activates their ability to follow the structure of a piece of music (usually a song). This behavior is especially evident under two interdependent conditions. First, young children are keen to engage in music-making behavior when an adult guides the music activity. The level of musical proficiency of the adult, whether singing or playing an
instrument, is not important to children. When a teacher is interested in and enthusiastic about leading a song, children readily follow.

The second condition is children’s use of percussion instruments, like drums, maracas, and tambourines, to accompany their singing. Over the years, I have observed that for children, playing instruments reinforces a physical connection with the music’s structure, analogous to the way playing with blocks or dolls facilitates play. I have seen such music-making behaviors with a variety of songs. When following an adult music leader (an adult who models music making), children as young as 2 years have shown their ability to use instruments and follow a song’s structure with interest and enthusiasm (Morehouse 2012).

Once we recognize this inclination and ability in young children, what are the implications for early childhood education? Can teachers use this ability in practical ways in the classroom?

**Piaget’s omission**

Jean Piaget provided new insights into early childhood development. Using the scientific rigor he learned as a biologist, he made meticulous observations of young children over many years. From these, he grew to respect the natural abilities of even the youngest children. Like Piaget, I was drawn to the careful observation of children. I found that music activities revealed distinct behavior patterns in young children. I wanted to explore relationships between my observations and those made by Piaget, and to make connections between young children's music-making behavior and their cognitive and social-emotional development. As I looked further into Piaget’s work, I learned that he did not address music in the lives of young children or investigate the importance of music-making behavior in children’s development. Supported by the research I conducted to complete my dissertation, I identified young children’s engagement in making music as a discrete behavior, perhaps related to their predisposition toward play (Morehouse 2012).

**Children’s innate recognition of musical structure**

Many of the children I work with are not yet walking or talking. Yet they willingly participate in making music. For example, when I sit on a chair and play a drum, children under 1 year of age are likely to crawl over to me, pull themselves up, and help me play the drum. During a 20-minute music session with a group of infants, I might...
observe an infant intermittently joining in as I sing and play rhythms, stopping to watch her peers do the same, crawling or toddling away from the instrument to find a toy, and then resuming her efforts to help me make music.

Toddlers, who often sing exuberantly, tend to hit many notes off-pitch. They mispronounce words and do not understand many of the words they sing. Does this mean they are too young to experience the aesthetic characteristics of music? I believe the answer is found in the unmistakable joy toddlers project when singing and playing instruments, instinctively following the musical structure. Their energy does not interfere with their ability to recognize musical patterns.

Those of us who enjoy sharing music with young children understand children's music-making experiences better when we gauge their musical aptitude by their ability to follow the structure of songs rather than their ability to accurately reproduce words and melodies. In the spirit of both Piaget and Vygotsky, we can honor and respect the music infants and toddlers make, albeit under the guidance of an adult music leader (a musical zone of proximal development).

Young children are not solely music learners. After all, the music they make is real. Spontaneously and naturally, young children produce sounds and rhythms that conform to a song's structure. For them, neither melodic nor rhythmic inaccuracies detract from the authenticity of music-making experiences. Three- to 5-year-olds enthusiastically collaborate with me in performing songs or in simply jamming (spontaneously making up music).

I suggest that for young children up to second grade, participation in music-making activities is a game in which there are rules for creating structure. One reason children love to play the game of music is that they can recognize and follow the structure of music, just as they follow the rules of other developmentally appropriate games. This is especially true for songs. Think of it this way: the rules of a game are what define that game. Likewise, the structure of a song is what defines that song.

Our first reaction to two different songs, say, “Twinkle, Twinkle Little Star” and “If You’re Happy and You Know It,” might be that each has a distinctive melody. However, it is also true that each has a distinctive structure—and children know this. Children never put two claps in the middle of “Twinkle, Twinkle,” but
they know exactly where to put them in “If You’re Happy.” The rules of one song are different from the rules of the other song.

**Implications of Piaget’s theories**

Piaget believed children’s experiences could not be measured or compared against adults’ experiences but had to be understood in terms of the children. Although Piaget did not express this view in relation to young children’s music-making behavior, it applies. Based on my observations, it is clear that a child’s music-making experiences differ from those of an adult. Although a child’s musical proficiency is far from mature, his ability to successfully follow a song’s structure accounts for his strong interest and enthusiasm in making music. While older children and adults strive for perfection in their execution of the words, melody, and rhythm, young children do not. Yet, by following a song’s form, young children maintain a level of musical cohesion that is meaningful to them. Piaget’s constructivist principles aptly apply: as children make music, they construct meaning.

There is evidence that everyone, including children, has an unconscious understanding of musical structure, which is possibly due to a correlation between music and language (Bigand 1993). Oral language is a communication system dependent on our ability to organize, or structure, sounds in specific ways. The idea of structure is ubiquitous, given the number of words we have to express it: organization, grouping, pattern, form, design, framework, syntax, classification, and category. Our perception of musical structure requires cognitive functions that automatically organize sounds into coherent units, an ability we possess from infancy (Berge-son & Trehub 2006).

Piaget applied the term *schema* to describe the basic structure underlying children’s actions. Spector and Maurer (2009) describe Piaget’s schemas as repetitive patterns of impact on the environment, such as when a child repeatedly hits a toy suspended by a string. Interestingly, music-making behavior entails making repetitive *auditory* patterns—arguably as meaningful to the child as hitting the toy. Piaget maintains that intelligence begins with children’s development of the operative mode of thought, which occurs as a result of children’s tendency to internalize—that is, learn—the forms and structures that they act on in the environment (Piaget 1970). From this, we can appreciate a perspective that relates Piagetian theories to young children’s music-making behavior: a song is an auditory structure consisting of repetitive patterns that children encounter in their social environment.

For many years, I believed the concept of musical structure was relevant only to serious music students and music professionals. The children I teach have proven me wrong. Musical form is not something children discuss, but it is certainly something they seem to understand and value during periods of teacher-guided, hands-on music making. I believe that future research will confirm correlations between children’s perception of games’ structures and musical structures, thereby offering significant new guideposts for early childhood music education.

**Curricular implications and opportunities**

High among curricular priorities are children’s development of language, literacy, and communication skills. Repetitive word patterns, a characteristic of virtually all song performances, help young children develop oral language skills. This is especially pertinent to dual language learners. Moreover, oral language development is critical for later reading success (Magruder et al. 2013).

Music activities also contribute to the development of young children’s mathematical skills related to patterning (Geist, Geist, & Kuznik 2012). This occurs when teachers emphasize the patterns in a song’s structure by having children perform rhythmic patterns alternately with contrasting instrumental sounds—for example, first with a drum, then with maracas, and so on. In this way, children become aware of a musical pattern’s definition by physically creating that pattern. Their attunement can be observed as they start and stop their sounds while maintaining musical coherence. (This is most effective when led by a teacher in the role of music leader.)
Children enjoy identifying and manipulating patterned sequences they hear in music. Rhyming couplets in a song’s lyrics offer a good example of a patterned sequence:

This old man, he played one, he played knick-knack on my thumb …
This old man, he played two, he played knick-knack on my shoe …

A child with a pair of rhythm sticks may tap out the rhythms of such language phrases to the best of his ability. (Sometimes a child who is not vocalizing follows a language pattern with his instrument. Thus, the instrument is like a meter that shows he is mentally following the linguistic content of the song.) Accuracy is not important at this stage. The repetition of spoken or sung word phrases, accompanied by a percussion instrument, offers powerful developmental experiences through both auditory and kinesthetic perceptions: children hear, feel, and verbally articulate the patterns.

Other benefits of music making

Other important benefits of having music activities in the curriculum include children’s social-emotional development. I have observed that when presented as a group activity, music making fosters strong social-emotional bonds among participants. Many children look over and smile at their peers or move closer to a friend. I see preschoolers voluntarily relinquish instruments to others. Children often laugh together and hug each other after performing a song.

In addition, music-making activities provide opportunities for psychomotor development and kinesthetic learning: even when sitting down for their music making, children rhythmically move their hands, arms, legs and/or torsos, dancing from a sitting position.

In the game of music, the music leader guides, rather than instructs, young children by following and emphasizing the musical form with a percussion instrument. For example, when a teacher taps a beat on a drum during one part of a song and does not drum during another part, she emphasizes the structure of the song in a way similar to the children’s movements in the opening vignette.

Many classroom teachers may be self-conscious about their musical abilities. However, from conducting countless teacher-training workshops, I am convinced that virtually all teachers have enough musical literacy—that is, ability to recognize and follow musical structures—to facilitate the game of music in their classrooms.

The activities suggested here (see “Playing the Game of Music,” p. 88) are designed for all teachers working with young children approximately 2 years to 7 years old. In practicing the games with children, teachers are likely to gain confidence as music leaders as they see the developmental benefits for children.

Application in the classroom

Approaching music as a game does not diminish the aesthetic value or any benefit of music. It does place music experiences in a developmentally appropriate zone of understanding for young children. This means they learn about music by performing it, with no inappropriate adult expectations for proficiency. This approach respects the level of musical competence of both children and adults, especially when neither has formal music training.

Based on my experiences, I conclude that (1) young children perceive music-making activities as games; (2) young children recognize the structure (the rules)
of the game of music; and (3) when early childhood educators adopt this approach, they support a teaching strategy emphasizing the structural elements of songs. When teachers provide opportunities for young children to engage in the game of music focusing on structure and language, they connect to and reinforce curricular goals, especially in language, literacy, and math.

Many of Piaget's insights about early development are applicable to young children's music-making behavior. For example, young children's predisposition to follow musical structure makes their music-making experiences valuable. Also, given that Piaget espouses the importance of young children's progression from imitation of events to internalization of them (Ginsburg & Opper [1969] 1988), the act of making music—which is essentially a collaborative event that creates an auditory structure recognizable and meaningful to virtually all children—is a developmentally significant experience for young children.

References


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Playing the Game of Music

You can apply the procedures for the following three games to other songs with similar structures.

Materials
Offer a variety of percussion (rhythm) instruments, such as drums, maracas, rhythm sticks, tambourines, and cymbals. A variety of just three or four different instruments with contrasting sounds works well. If possible, have duplicates of the instruments. Then, when playing a game with a small group (up to eight children), you can invite all the children to use instruments at the same time. However, when duplicate instruments are not available, children learn to take turns. This works well in both large and small groups.

Demonstrate the use of two or three percussion instruments. Show children simple, safe ways to hold and use them and how to get the best sounds. For example, model shaking the maracas without hitting them against each other; hold a tambourine in one hand and hit it against the other hand, like clapping. Display the instruments on a table or rug, so that children can easily choose from among the available instruments.

Always use an instrument yourself. Guide the children by performing the rhythm during all or part of the song. (If you are concerned about your ability to keep a beat, instead perform to the rhythm of the words as you sing them.)

When the group starts and stops musical sounds together (at the beginning and end of the sections of a song), young children collectively engage in authentic music making. To guide children when playing your instrument, keeping a simple, continuing beat is a basic, effective method. However, as suggested above, sometimes you might prefer to articulate the rhythm of the repeating word phrases. (Just allow your hand movements on the instrument to follow your voice.)

Before beginning a song, invite the children with instruments to practice an important rule of the game: “Sounds are waiting.” Say, “Right now, all the sounds [instruments] are waiting. When I say go, the sounds of our instruments will help the song, all at the same time.” When it’s time to play, chant in a rhythmical voice, “1-2-ready-go!” Later, chant, “1-2-AND-STOP!” Verbal cues foster musical cohesion.

Game 1: Short songs [ages 2–5]
This game is a good introduction to singing with instruments. When featuring short songs, such as “Twinkle, Twinkle Little Star” or “Itsy Bitsy Spider,” say, “This time, only drums will help our song.” Or ask a child to choose an instrument. The children who play instruments for this round of singing use only the designated instrument to accompany the whole group. (Children feel proud to be part of the “drum section” or the “maraca section” when they play the same instrument as others.) Afterward, repeat the song or sing a different short song, so that other children have turns using the instruments.

Your primary job is guiding children in starting and stopping together, giving the children using the instruments opportunities to practice the most basic musical skill, organizing sound. You need not monitor the rhythms that the children with instruments perform. It is okay for some children to play a steady beat while others play the rhythm of the words. And it is common for children to alternate between rhythms. Starting and stopping together maintains musical cohesion. You will be delighted to see how your skill as music leader and the children’s skills as music-makers blossom as you continue to play the game of music.

Thinking about sounds is musical thinking. In a variation of Game 1, ask, “Who can think of two different sounds [that is, two different instruments] we can mix together to help our song?” If a child suggests, for example, drums and maracas, acknowledge the choice, telling the others, “This time, if you have a turn to play an instrument, you may choose either a drum or a pair of maracas, as Ramón suggests.”

Game 2: Songs with a repeating, sequential structure [ages 3–5]
The musical structure of songs such as “The Wheels on the Bus” and “This Old Man” involves repeating short verses while the words tell the story. Say to the children, “When This Old Man plays one on my thumb, the claves [klah-vase], or rhythm sticks, are going to help our song.” As the whole group sings the first verse, designated children (and you) accompany them by playing either a steady beat or word rhythms with the claves:

This old man, he played one,
He played knick-knack on my thumb,
With a knick-knack, paddywhack,
Give the dog a bone,
This old man came rolling home!

The same children might perform an additional verse or two. Then ask, “What sound [instrument] can help when this old man plays three on my knee?” If a child suggests maracas, acknowledge the choice: “Tamara would like the maracas to help our song this time.” Then Tamara (alone or with others) uses the maracas and sings during the next verse or two.

Continue in this manner, with children taking turns playing instruments during different verses. Children may suggest using the same or different instruments. (Letting individuals select random instruments is always okay, too.) Likewise, you might play the same instrument as the children or announce your preference—for example, “I think I’d like to play the triangle this time.” As in Game 1, you or a child can suggest two sounds to mix together.

Note that although songs in Game 2 have multiple verses, sometimes it is fun and supportive of language development to repeat the same verse, allowing the performers to play an encore with the same instruments. Use an instrument to model when to start and stop. Young children who have never done this together often perform like seasoned musicians; they show genuine enjoyment of and appreciation for performing music together.
**Game 3: Songs with two sections [ages 4–7]**

This game is appropriate for children in preschool through second grade. Many songs have two sections, chorus and verse. “Skip to My Lou,” a traditional American children’s folk song, is an example.

The main rule of Game 3 is that children with instruments perform the beat (or the rhythm of the words) only during the chorus. You guide the children by playing rhythm during the chorus. Thus, children with instruments learn to attend to both the musical and the linguistic elements. They decide, “Now my instrument is waiting” or “Now we are playing our instruments together with the singing.”

Invite children to choose instruments. Demonstrate by singing the chorus and playing a percussion instrument, saying, “Your instruments will help my instrument when we sing and play like this” (sing the familiar melody to the best of your ability, knowing that it is the pattern [structure] of the phrases that is important):

*Skip, skip, skip to my Lou, / Skip, skip, skip to my Lou,  
Skip, skip, skip to my Lou, / Skip to my Lou my darling!*

After demonstrating, perform the chorus again, inviting all the children to sing the chorus and those with instruments to play. When the chorus ends, all sounds stop. Then say, “Okay, now all the instruments will wait. My instrument is waiting, and so is yours. We’ll use only our voices as we sing like this…” Lead the group in singing the first verse with no accompaniment from the instruments:

*I lost my partner, what’ll I do? / I lost my partner, what’ll I do?  
I lost my partner, what’ll I do? / Skip to my Lou, my darling.*

Children continue performing the song by alternating between voices only (for the verses) and voices and instruments together (for the chorus).

Verse 2: I’ll find another as pretty as you, …

Verse 3: *Fly in the buttermilk, shoo, Fly, shoo,* …

With any song that has a verse/chorus structure, it’s good to end the performance with the chorus because, as the full sound of voices and instruments suddenly stops, everyone experiences great satisfaction from having played a good game of music.