

and musical memory and listening. The Kodaly system is best known for using hand signals and solfege to learn pitch and interval skills.

Shinichi Suzuki

The Suzuki method was developed to teach young children to play string instruments and later piano. The method uses rote imitation as well as movement and pitch imitation games to teach musical skills. Experiences are provided in a strict sequence and reinforced through parent participation.

Chapter 5

MUSICAL RESPONSE IN EARLY CHILDHOOD

WHAT DEVELOPS MUSICALLY AND WHEN

Models of musical development attempt to answer the questions of why music develops. However, understanding what happens and when it happens can be equally important in studying the music of young children. A wealth of research on specific musical responses exists. A great number of specifics on musical responses are yet to be uncovered. Much of what we know of early childhood music is based on overt responses that can be heard or seen by an outside observer. New technology, such as brain scans, is allowing researchers to study how music is being processed in the brain when there is no observable response. Below is a synthesis of musical behaviors that have been researched in relation to chronological age. The information is similar to the compilation of developmental milestones presented earlier. Looking at the list might make it seem as if children develop more rapidly in one period as opposed to another. Some of the inequity can be explained by greater attention by researchers to certain ages.

The information below outlines typical musical responses for a particular chronological age. In later chapters, we will explore how these markers fit into a developmental framework applicable to all types of children. Most of the findings determine what a child does naturally in response to music. The outline does not take into account what a child would do if provided with music learning at the same chronological age.

0–3 Months

- Infants are able to discriminate differences in frequencies in the first few days of life.
- Infants prefer infant-directed singing over adult-directed singing.
- Infants attend more and show greater discrimination to music that is sedative in nature, such as lullabies.

- Infants under 2 months may process absolute pitch better due to the primitive nature of brain development. Most infants lose this processing with age.
- Infants prefer consonant over dissonant intervals.
- Infants find it difficult to attend to music after being exposed to periods of dissonance.
- Sensitivity to consonance and dissonance develops earlier than acquisition of culturally based scale structures.

3–6 Months

- Infant begins “cooing” and makes purposeful vocal sounds,
- Music calms infants who are at the stage of developing the first smile.
- High-pitched voices and instruments have a calming effect on infants.

6–9 Months

- Infants prefer higher pitches.
- Pitch range in natural environment is G3 to C6.
- Most prevalent pitch is middle C and up a 5th to G.
- The majority of melodic contours are descending.
- Most intervals are descending.
- Infants are able to match pitches or use a related pitch about half the time. Infants use a relative, not absolute, pitch code for storing melodies in long-term memory.
- Infants process absolute pitch in short term memory.
- Infants use spontaneous sleep and game songs.
- Infants are able to recognize a change in a single tone in a melody, especially when the note is out of the range of the initial melody. Infants detect changes in diatonic melodies more than nondiatonic ones.
- Infants recognize relationships of notes that are within the triad.
- Infants appear to group patterns of notes on the basis of similar frequency of overtone structure.

- Infants are able to recognize complex combinations of sounds. Infants use a relative, not absolute, pitch code for storing melodies in long-term memory.
- Infants are primarily pitch processors by 6 months.
- Infants are able to use simple rhythms, usually in a 1:2 relationship.
- Between 4 and 6 months, infants respond to music with repetitive movements. Movements are rhythmic in nature but not synchronized with the music.
- Infants recognize differences in rhythm even when tempo varies.
- Infants combine different frequency components into a single tone by 7 months. Not demonstrated earlier.
- Infants focus their attention more toward themselves during lullaby-style singing and more toward the external world during play song style singing. (Results suggest that singing may be used to regulate infants' states and to communicate emotional information.) Play-song style: more brilliant, more clipped, more rhythmic, more consonants, and more smiling. Lullaby style: more airy, smooth, and soothing.

9–12 Months

- Infants perceive a melody as familiar if contour and range is preserved. They perceive it as different if contour and range are different. Absolute pitch (frequency) and size of interval did not change perception.
- Major 2nd most prevalent interval.
- Pitch matching 55% of the time.
- Briefly uses pulse and meter.

12–18 Months

1-2

- Rocking, marching, and rolling to music.
- Shows intent attention to music.
- Uses pitch experimentation, usually by glissando.
- Begins to match movements to music.

- Begins to make vocal sounds in response to music.
- Singing is mostly descending intervals and in micro-intervals. The range is about an octave beginning on F1.

18–24 Months

1.5-2

- Imitates words of songs before pitch or rhythm.
- Produces discrete pitches.
- Uses interval production: 2nds, minor 3rds, major 3rds, 4ths, and 5ths.
- Uses spontaneous song fragments.
- Practices vocalizations through repetition.
- Spontaneous songs use little tonality or rhythmic regularity.
- Displays increasingly attentive listening to music.
- Dances spontaneously to music.

24–36 Months

2-3

- Most children engage in singing both standard songs and spontaneous songs.
- About a fifth of children of this age can sing whole songs.
- Most prevalent pitch used was D above middle C and up a 5th to A.
- Children use unison and descending/ascending pitches equally.
- Children commonly use meter and pulse when singing.
- Most children are able to match pitches.
- Most were able to imitate familiar melodies.
- Children often use multiple repetitions of learned phrases or variations.

36–48 Months

3-4

- About half of 3-year-olds can imitate words, rhythm, and pitch of an entire song.
- Contour of entire song may be intact.
- Accuracy of pitch within contour still not established.

- In echoed patterns: Stepwise motion and 3rds sung more correctly than 6ths. The easiest to sing was the descending minor 3rd.
- Vocal range for self-selected, learned song and pitch patterns was approximately perfect 5th to minor 6th

48–60 Months

4-5

- A musical home environment increased singing and discrimination accuracy.
- Stepwise descending patterns and minor chords were easier to sing.
- Low-pitch examples were easier to identify than high-pitch examples.
- Ability to maintain pitch center and pitch accuracy in both a learned song and self-chosen song increased with age from 3 years to 5 years.
- Vocal range for self-selected, learned song and pitch patterns were approximately:
 - 4-year-olds: minor 6th to minor 7th
 - 5-year-olds: major 6th to major 7th
- The rhythmic accuracy of singing learned songs was the same for songs with words as without words.
- Tonal accuracy was better for songs without words than with words.
- Language development did not seem to impact the performance of songs with or without words.
- Spontaneous movement to music decreased with age.
- Five-year-old children could recognize a learned song played on an instrument much better than 4-year-olds.
- They are able to maintain a steady beat.
- They can sing an entire song in the same key.
- They can maintain pitch as well as the contour of a melody.

The critical period for acquisition of absolute pitch is at around 6 years of age.