

# Quick and Easy Introductions

**Edwin E. Gordon**

Introductions to Music Learning Theory

Audiation

Preparatory Audiation

Music Learning Theory for Newborn and Young Children

# Quick and Easy Introductions

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GIA Publications, Inc.  
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7404 S Mason Ave

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[www.giamusic.com](http://www.giamusic.com)



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Printed in the United States of America.

G-8418

ISBN: 978-1-57999-973-8

# Table of Contents

<b>Music Learning Theory for Students and Adults</b> .....	5
Music Learning Theory .....	5
Music Learning Sequences.....	7
Skill Learning Sequence: Discrimination Learning .....	7
Skill Learning Sequence: Inference Learning .....	9
Tonal Learning Sequence.....	14
Rhythm Learning Sequence.....	16
Stepwise and Bridging Movement .....	17
Learning Sequence Activities .....	18
Learning Sequence Activities and Classroom Performance Activities .....	21
Reference Handbook and Tonal and Rhythm Register Books.....	22
References.....	23
 <b>Audiation</b> .....	 25
Types of Audiation.....	26
Type 1 .....	26
Type 2 .....	27
Type 3 .....	27
Type 4 .....	28
Type 5 .....	28
Type 6 .....	28
Type 7 .....	29
Type 8 .....	29
Stages of Audiation .....	29
Stage 1.....	30
Stage 2.....	30
Stage 3.....	31



Stage 4.....	31
Stage 5.....	32
Stage 6.....	33
References.....	34

**Music Learning Theory for**

<b>Newborn and Young Children.....</b>	<b>35</b>
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Types and Stages of Preparatory Audiation.....	37
Acculturation .....	37
Imitation .....	38
Assimilation .....	39
Guidance and Instruction.....	39
Guidance.....	39
Music Babble .....	41
Formal Instruction.....	44
References.....	46

**Preparatory Audiation .....47**

Types and Stages of Preparatory Audiation.....	49
Acculturation.....	50
Imitation.....	52
Assimilation.....	55
References.....	56

# Music Learning Theory for Students and Adults

## Music Learning Theory

Music learning theory (MLT) is an explanation and description of appropriate way students and adults learn one or more styles of music. It is not a teaching method. Though not a teaching method, as intended, principles of MLT have been used to develop a variety of sequential music teaching curriculums. Possibilities for applying MLT in creating a sequential teaching method are endless. Teachers bring their musicianship, experience, and preferences to the process as students' needs for whom the curriculum is being developed are considered. One model for sequential teaching method based on MLT is *Jump Right In: The Music Curriculum* for classroom music. Another is *Jump Right In: The Instrumental Series*.

Three supportive terms will be used throughout this guide. *They are music learning theory, music learning sequences, and learning sequence activities.* There is only one music learning theory but four music learning sequences. The four music learning sequences are skill learning sequence, tonal learning sequence, rhythm learning sequence, and pattern learning sequence. Learning sequence activities represent exemplary suggestions of how principles of music learning theory using music learning sequences may be put into practice in accord with a teacher's personal and pedagogical preferences.

Like language, there are five sequential music vocabularies. In language, order of attainment is listening, speaking, thinking,

reading, and writing. In music, parallel vocabularies are listening, singing and rhythm chanting, audiation and improvisation, reading music notation, and writing music notation. Although music is not a grammar language, the process for learning music is astonishingly similar to learning a spoken language. Tonal patterns, rhythm patterns, and harmonic patterns are words of music.

Historically, it is estimated there have been 30,000 languages in the world. Presently, more or less than 6,000 remain. Why were so many languages lost? Most phylogenetic linguists agree a language is no further from extinction than just one skipped generation of newborn and preschool children not having opportunity to listen to that language being spoken. Language is culture and culture is language. If one is lost, so necessarily is the other. The situation is similar with regard to music. Considering the pervasiveness of an abundance of current popular music and fragmentation inherent in post-modern music, it is conceivable identifiable sounds of J. S. Bach's music will be lost within the next few decades.

Listening is the essential music vocabulary and, thus, the initial music vocabulary acquired. Just as newborns instinctively listen to language of their culture being spoken by adults and peers on a one-to-one basis for about a year before they themselves begin to speak coherently, so, too, it makes sense for them to listen to music of their culture being performed by adults and peers on a one-to-one basis for at least a year before beginning to sing and chant rhythmically.

Initial exposure to not only major and harmonic minor tonalities and duple and triple meters in many style of music is essential. Music in Dorian, Phrygian, Lydian, Mixolydian, and Aeolian tonalities, as well as unusual meters, those in fives and sevens, are important parts of the core of broad acculturation. The concern is

one of *sameness* and *difference*. Hearing the same or few tonalities and meters over and over again contributes little to establishing a dynamic listening vocabulary. Difference provides opportunity for understanding relationships and making comparisons.

## **Music Learning Sequences**

*Skill Learning Sequence: Discrimination Learning.* There are five sequential levels of discrimination learning in skill learning sequence. Given context provided by a substantial listening vocabulary, the first level of discrimination learning, aural/oral, may be introduced with expectation of high achievement. Listening is coupled with singing and rhythm chanting. The aural part is listening and the oral part, performance. Whereas tonality and meter establish music *context*, tonal patterns and rhythm patterns establish music *content*. Void of context, patterns at best are necessarily learned by rote and soon forgotten. Although the listening vocabulary includes various tonalities and meters, initial patterns learned are limited to major and harmonic minor and duple and triple. They are performed using neutral syllables, such as “ba da la.” Patterns comprise different degrees of difficulty and are judiciously taught in accord with individual musical differences associated with each student’s level of music aptitudes.

Students audiate tonality and pitches during the breath they take after the short pause between the teacher’s performance and their own performance of a tonal pattern. The pause prevents imitation. No pause is needed between the teacher’s performance of a rhythm pattern and students’ group and solo performance. It interrupts flow of tempo. Nevertheless, audiation takes place and solidifies during the preparatory breath taken by students at the

beginning of the final macrobeat of the teacher's performance of a rhythm pattern. Students are encouraged to take deep breaths and move their bodies in free flowing, continuous motion in space as they perform both tonal patterns and rhythm patterns.

The next sequential level of discrimination learning is verbal association. The same familiar patterns learned using neutral syllables at the aural/oral level now are performed using tonal syllables and rhythm syllables. Although there are various syllable systems that may be used at the verbal association level, it is recommended movable-do with a la based minor be used to perform tonal patterns and macro and micro beat functions be used to perform rhythm patterns. Names of tonalities and meters are indirectly introduced as patterns are performed. Extraordinary students may be guided in responding with simple pattern improvisations.

Next in the sequence of discrimination learning is partial synthesis. Pairs of sets of patterns are performed by a teacher using neutral syllables and students respond by comparing and identifying tonality or meter of each set of series. Students accomplish this by audiating tonal or rhythm syllables. Thus, they distinguish context and content which constitutes preparation for later improvisation.

The fourth sequential level of discrimination learning is symbolic association. It has two sublevels: reading and writing. Performing familiar tonal patterns and rhythm patterns at the three previous levels of skill learning sequence provides necessary readiness for reading music notation. There is a continuous link, almost inseparable, between the first three levels of discrimination learning and reading music notation. The reason is students already know what patterns sound like and, thus, easily associate symbols (notes) with sounds they audiate. The process is from

ear to eye, not eye to ear, as in traditional approaches to teaching music. It seems like reading need not be taught, it just happens. Memorization is unnecessary. Patterns are performed using tonal and rhythm syllables. Once patterns are read, they are notated. Notation skill enhances reading skills.

The fifth and final sequential level of discrimination learning is composite synthesis. It has two sublevels: reading and writing. Whereas partial synthesis involved only listening, now tonality or meter is identified as patterns are read and written.

*Skill Learning Sequence: Inference Learning.* In discrimination learning, a teacher teaches students what to learn and how to learn it. In inference learning, a teacher guides students in how to learn. Even though a teacher cannot teach students what to learn in inference learning and does not resort to techniques requiring imitation, the teacher guides students in teaching themselves. Learning is from inside out whereas teaching is from outside in. If students cannot perform unfamiliar patterns in the manner expected at an inference level of learning, the appropriate readiness level of discrimination learning is reviewed using familiar patterns before instruction is undertaken again using unfamiliar patterns at the inference level. The three levels of inference learning in skill learning sequence in sequential order are generalization, creativity/improvisation, and theoretical understanding. Each level has sublevels.

Students *recognize* what is familiar in discrimination learning whereas in inference learning they are expected to *identify* what is unfamiliar on the basis of what is familiar. They make inferences in audiation by comparing similarities and differences among unfamiliar patterns and familiar patterns.



Sound itself is not music. Sound becomes music through audiation when, as with language, sounds are translated in the mind and given meaning. Meaning given to these sounds is different depending on the occasion as well as meaning given them by different persons. Audiation is the process of assimilating and comprehending (not simply rehearing) music momentarily heard or heard sometime in the past. Audiation also takes place when assimilating and comprehending in the mind music that may or may not have been heard but is read, composed, or improvised. Sound is audiated only after it is aurally perceived. In contrast, aural perception takes place when sound is heard the moment it is produced. Aural perception deals with immediate sound events. Audiation deals with delayed musical events.

Audiation occurs when we listen to, recall, perform, interpret, create, improvise, read, and write music. Though it may seem contradictory, persons can listen to music and at the same time audiate that music. It is like automatically thinking about what has been said and predicting what will be said while at the same time listening to or participating in conversation. Listening to music with comprehension and listening to speech with comprehension involve similar processes. Further, readers begin to give meaning to words after they have been read. Similarly, meaning is given to music notation not as but momentarily after it is seen.

With continued use at inference levels of learning, students teach themselves new skills, tonal patterns, and rhythm patterns which become familiar. The number of patterns that become familiar continues to increase so long as a teacher exposes students to additional unfamiliar tonal patterns and rhythm patterns. Meanwhile, students will continue to be engaged in inference

learning even though they may become familiar with some patterns and skills because they engage in inference learning every time they teach themselves new and better ways to use patterns and skills.

Generalization inference learning has three sublevels: aural/oral, verbal, and symbolic. At the generalization-aural/oral level of inference learning, a teacher establishes tonality using neutral syllables and then performs two sets of familiar and unfamiliar tonal patterns, asking students to indicate whether the sets sound same or different. The same technique is used with rhythm patterns. At the generalization-verbal level of inference learning, a teacher establishes tonality or meter using neutral syllables. Students repeat the teacher's performance of one or more familiar and unfamiliar tonal patterns or rhythm patterns solo using tonal syllables or rhythm syllables instead of neutral syllables the teacher used. As part of generalization-verbal inference learning, students are expected to name tonality and meter the teacher (using neutral syllables) established. At the reading sublevel of generalization-symbolic inference learning (typically referred to erroneously as sight reading), students are expected to read without assistance one unfamiliar pattern of a mix of familiar and unfamiliar tonal patterns or familiar and unfamiliar rhythm patterns and to identify tonality or meter they are audiating while reading. The writing sublevel of generalization-symbolic inference learning operates similarly to the reading sublevel.

Creativity/improvisation inference learning has two sublevels: aural/oral and symbolic. In creativity/improvisation-aural/oral inference learning, a teacher establishes tonality or meter using neutral syllables and then performs familiar and unfamiliar tonal patterns or rhythm patterns also using neutral syllables. Students

respond by performing solo, as if in conversation, new or different tonal patterns or rhythm patterns also using neutral syllables. At the reading sublevel of creativity/improvisation-symbolic inference learning, students learn to read chord symbols or figured bass and perform tonal patterns corresponding to these symbols using either neutral syllables or tonal syllables. Students learn to recognize or identify tonality they are audiating as they read symbols. There is no rhythm component for the reading sublevel. At the writing sublevel of creativity/improvisation-symbolic inference learning, students write rather than perform tonal patterns and rhythm patterns.

Harmonic improvisation is an important part of inference learning. To improvise using harmonic patterns as foundation, students first learn basic harmonic patterns at all levels of discrimination learning. They do not initially learn to improvise harmonic patterns. Rather they learn to improvise combinations of tonal patterns and rhythm patterns (melodic patterns) over harmonic patterns. After students become familiar with some harmonic patterns in discrimination learning, they are ready to improvise using familiar and unfamiliar tonal patterns and rhythm patterns in relation to those familiar harmonic patterns. Next, they are ready to generalize familiar harmonic patterns in improvising familiar and unfamiliar tonal patterns and rhythm patterns over harmonic patterns unfamiliar to them.

Theoretical understanding inference learning has three sublevels: aural/oral, verbal, and symbolic. Theoretical understanding-symbolic has two sublevels: reading and writing. Whereas tonal syllables and rhythm syllables serve as techniques at the verbal association level of discrimination learning, pitch letter-names, time-value names, interval names, key signature names,

and measure signature names, for example, serve as techniques at the theoretical understanding level of inference learning. Students use them to theorize about music after they are able to audiate. In theoretical understanding, only specific parts and series of patterns are of concern. Moreover, a teacher does not necessarily perform for students.

Depending on an objective, a teacher may or may not decide to establish tonality or meter for students at the theoretical understanding-aural/oral level of inference learning. However, if either is established, neutral syllables, tonal syllables, or rhythm syllables may be used. Students are expected to perform sets comprising familiar and unfamiliar patterns using neutral syllables and indicate whether each of two pitches, durations, cadences, or intervals sounds same or different. At the theoretical understanding-verbal level of inference learning, students describe or name specific parts of patterns performed by a teacher or other students. They may also examine reasons why these names might apply, why and how parts of patterns do or do not relate to one another, why they are important in the scheme of music, and why patterns are audiated as same or different. At the theoretical understanding-symbolic level of inference learning, students may read or write specific parts of patterns using neutral syllables, tonal syllables, or rhythm syllables.

It is harmful for students to be exposed to notation and music theory without first achieving skill in audiation. Such a reversal in learning sequence encourages students to learn only to name and define symbols and memorize rules and facts. When students are exposed to only discrimination learning, they become entirely dependent on a teacher to teach them reading and writing of notation and to tell them what music they should value. When students

are exposed to inference learning after discrimination learning, they learn to make their own choices about music they value and depend on themselves when they audiate, perform, create, and improvise. In language, grammar is taught only after students can use the language. In music learning theory, music theory rationally is taught only after students can audiate.

**Tonal Learning Sequence.** Skill learning sequence is the logical progression by which students achieve along a continuum of sequential levels of skill. Each level serves as readiness for achievement at the next higher level, the lower level assimilating into the next higher level. The same holds true for levels of tonal learning sequence and rhythm learning sequence.

Unified skill, tonal, and rhythm levels are fundamental to music learning theory. For students to achieve at a given skill level, they are taught a level of tonal or rhythm learning sequence in combination with that skill. For example, to achieve at the aural/oral level of discrimination learning, students hear and perform tonal patterns in major and harmonic minor tonalities or hear and perform rhythm patterns in usual duple and usual triple meters. Students cannot achieve at a given skill level unless the skill level is taught in combination with a tonal level or rhythm level. Obversely, students cannot achieve at a given tonal level or rhythm level unless the level is taught in combination with a skill level.

The word tonality in music learning theory is not used in its ordinary sense. In common practice music theory, tonality is defined either as a name given to a key signature (for example, E<sup>b</sup> for three flats) or as a combination of a name given to a key signature and a tonality (for example, E<sup>b</sup> major). For purposes of

precision, accuracy, and clarity of terminology, tonality best refers to what is usually called a mode, never simply to a name of a key signature. Mode does not pertain only to what is traditionally called modal music, such as Dorian or Mixolydian. Tonality is used in place of mode because many persons assume if music is said to be in a mode, it must be modal. They forget major and minor are also modes. There are at least eight tonalities: major, harmonic minor, Dorian, Phrygian, Lydian, Mixolydian, Aeolian, and Locrian.

The word keyality was coined to assist in explaining music learning theory. In tonal learning sequence, it is necessary to consider and treat tonality and keyality apart from each other as well as apart from a key signature. Although most music is in both a tonality and keyality, it is sense of tonality, not keyality, that provides a primary basis for audiating context in music. Keyality is emphasized in music education, particularly in instrumental music, primarily for the purpose of teaching reading of music notation. That would be acceptable if tonality and keyality could be taught at the same time without impairing achievement in development of audiation.

Key signatures indicate neither tonality nor keyality. They are merely do signatures, and thus, indicate only where do may be found on the staff. Simply locating do on the staff does not necessarily mean music is in major tonality. For example, a key signature of three flats indicates do is on the bottom line or fourth space of the treble staff. Nevertheless, the key signature may stand for any of the following: E<sup>b</sup> keyality and major tonality with the resting tone do, C keyality and harmonic minor or Aeolian tonality with the resting tone la, F keyality and Dorian tonality with the resting tone re, G keyality and Phrygian tonality with the resting tone mi,



A<sup>b</sup> keyality and Lydian tonality with the resting tone fa, B<sup>b</sup> keyality and Mixolydian tonality with the resting tone so, or D keyality and Locrian tonality with the resting tone ti.

**Rhythm Learning Sequence.** Components that define rhythm are macrobeats, microbeats, and rhythm patterns. The three are audiated concurrently to establish rhythm context. Macrobeats are fundamental to feeling microbeats and rhythm patterns because microbeats and rhythm patterns are superimposed on macrobeats in audiation. Microbeats are shorter than macrobeats and are derived from divisions of macrobeats. When macrobeats are divided into two microbeats of equal length, the first of two microbeats coinciding with a macrobeat, the result is usual duple meter. When macrobeats are divided into three microbeats of equal length, the first of three microbeats coinciding with a macrobeat, the result is usual triple meter. When some macrobeats are divided into two microbeats of equal length and other macrobeats are divided into three microbeats of equal length regardless of sequence of groupings, the result is usual combined meter. In usual combined meter, all macrobeats are of equal length, but not all microbeats are of equal length. Music is considered to be in usual meter only when macrobeats are audiated in pairs and are of equal length.

There are four types of unusual meter: unusual paired, unusual unpaired, unusual paired intact, and unusual unpaired intact. Usual meter is determined by how macrobeats are divided in a rhythm pattern. Unusual meter is determined by how macrobeats are grouped in a rhythm pattern. It is number and relative lengths of macrobeats in a grouping that determine which type of unusual meter is being audiated. When macrobeats are audiated in pairs

in a rhythm pattern, meter is called unusual paired. It is paired because there are two macrobeats in a grouping, and it is unusual because lengths of the two macrobeats are not equal. When macrobeats are not audiated in pairs, meter is called unusual unpaired, in this case because there are three macrobeats in a grouping and their lengths are unequal.

In both unusual paired meter and unusual unpaired meter, some macrobeats are the length of two microbeats and others three microbeats. In unusual intact meter, some macrobeats are the length of three microbeats, some two microbeats, and others only one microbeat. A macrobeat the length of only one microbeat is called an intact macrobeat. Intact macrobeats always are found in combination with other longer macrobeats in a rhythm pattern divided into twos and threes or into only twos or only threes. A macrobeat may be paired with any other macrobeat, including another intact macrobeat, or it may not be paired. It is decided subjectively in audiation which macrobeats are paired and unpaired.

### **Stepwise and Bridging Movement**

When levels of skill learning sequence are taught in combination with levels of tonal learning sequence and tonal patterns or with rhythm learning sequence and rhythm patterns, a curriculum based on music learning theory is developed using stepwise movement and bridging movement to create a classroom learning environment in which all students achieve. Classroom instructional method aligned with music learning theory occurs when teachers organize objectives for a class in logical sequence toward accomplishment of a goal or standard. These sequential objectives have logical order when they progress by step from achievement at one level or

sublevel of learning to the next higher level or sublevel of learning, or progress by skip to make a bridge from a discrimination level or sublevel of learning to achievement at an inference level or sublevel of learning. The first type of progression is called stepwise movement and the second, bridging movement. Stepwise movement and bridging movement may also be used occasionally to take students back to lower levels and sublevels of learning either for purposes of review or to teach what was previously purposefully or inadvertently skipped. Although achievement at a discrimination level may be temporarily postponed, it is never indefinitely neglected.

### **Learning Sequence Activities**

When levels or sublevels of skill learning sequence are combined with levels or sublevels of tonal learning sequence or rhythm learning sequence, the result is learning sequence activities. In learning sequence activities, levels or sublevels of tonal learning sequence are not combined with levels or sublevels of rhythm learning sequence. However, when students perform in classroom and performance activities, tonal and rhythm dimensions are naturally combined in music literature.

Forward stepwise movement in skill learning sequence involves, for example, moving students from aural/oral, the first level of discrimination learning in the sequence, to verbal association, the next higher level, or moving from generalization-aural/oral, the first sublevel of inference learning in the sequence, to generalization-verbal, the next higher sublevel. This means after students have learned to perform *familiar tonal patterns or rhythm patterns in familiar or unfamiliar order* using neutral syllables at the aural/oral level of discrimination learning, they learn to perform those same patterns in

familiar or unfamiliar order using tonal syllables or rhythm syllables at the verbal association level of discrimination learning. Or, after students have learned to perform unfamiliar and familiar tonal patterns or rhythm patterns in unfamiliar order using neutral syllables at the generalization-aural/oral sublevel of inference learning, they learn to perform *unfamiliar and familiar tonal patterns or rhythm patterns in unfamiliar order* using tonal syllables or rhythm syllables at the generalization-verbal sublevel of inference learning.

When students are temporarily skipped, for example, from the aural/oral level of discrimination learning to the creativity/improvisation-aural/oral sublevel of inference learning, forward bridging movement occurs. After achievement is completed at the higher level of learning, learning reverts back to either the lower level or sublevel of learning from which the forward bridging movement was initiated or to the next higher level or sublevel above. This means students might be given opportunity to create or improvise using tonal or rhythm patterns without first being taught all discrimination levels of skill learning sequence. Students' inference achievement in creativity/improvisation-aural/oral skill will not be as advanced as it would have been if the creativity/improvisation-aural/oral sublevel of learning had been approached by step. Stepwise movement offers more readiness for achievement than does bridging movement. Thus, in practice, the higher level or sublevel of learning from which forward bridging movement takes place, the greater students' achievement at the level or sublevel of learning at which the bridging is directed.

Forward bridging movement is particularly valuable for two reasons. First, it is a way to strengthen what students have learned at the lower level or sublevel of learning. Second, achievement is

optimal in learning sequence activities when students are introduced to an unfamiliar skill in association with a familiar tonality or meter or to an unfamiliar tonality or meter in association with a familiar skill. Both forward and backward bridging movements easily accommodate these two ways of combining skill learning sequence and tonal or rhythm learning sequence. Bridging movement is not undertaken to teach to students' individual musical differences in learning sequence activities. Students' individual musical needs are met appropriately by matching difficulty levels of tonal patterns and rhythm patterns with student's music aptitudes.

Students' movement through skill learning sequence may be directed backward as well as forward, stepwise or bridging. Backward movement of either type is usually undertaken for purposes of review of a skill or introduction of a new tonality or meter. Any level or sublevel of learning may be approached in backward stepwise or bridging movement. When returning to a higher level or sublevel of learning after backward stepwise or bridging movement has taken place, students may be directed to the level or sublevel of learning from which the backward stepwise or bridging movement was initiated or to any other lower level or sublevel of learning.

Unmistakably, backward bridging movement is not a return from a higher level or sublevel of learning that takes place in forward bridging movement. In backward stepwise or bridging movement, a step or skip is initiated at the higher level or sublevel of learning of the two typically at an inference level or sublevel of learning, as from creativity/improvisation back to aural/oral discrimination learning. In contrast, in forward stepwise or bridging movement, a step or skip is initiated at the lower level or sublevel of learning of the two at a discrimination level or sublevel

of learning, as from aural/oral discrimination learning forward to creativity/improvisation inference learning.

Backward stepwise or bridging movement to the aural/oral level of discrimination learning is necessary when a new tonality is introduced in tonal learning sequence or a new meter is introduced in rhythm learning sequence. Backward movement may also be necessary for students who, for example, are expected to be accomplished at the generalization-symbolic sublevel of inference learning but for whatever the reason or reasons are not ready to read specific pattern functions or tonalities or meters. Tonal functions, for example, are tonic and dominant. Rhythm functions, for example, are macrobeats and microbeats. Because students may not yet be capable of generalizing from notation, their learning is directed backward through stepwise or bridging movement to the symbolic association-reading or composite synthesis-reading sublevels of discrimination learning. A need for backward stepwise and bridging movement does not necessarily result from negligence in instruction. Instead, it may have more to do with students' impoverished early childhood music backgrounds. As students engage more and more in inference learning, need for backward stepwise and bridging movement becomes less and less.

**Learning Sequence Activities and Classroom Performance Activities.** Because learning sequence activities require students' undivided attention and a teacher's concentrated effort, usually only the first ten minutes of a class period are assigned to these activities. All remaining time is used for classroom and performance activities. In unusual circumstances (with combined grades in one classroom, with performing groups including students of



different ages or with different amounts of exposure to learning sequence activities, or perhaps with select older students), more than ten minutes might be allotted. Excitement diminishes when too much time is given to learning sequence activities. Conversely, when all class time is given to classroom and performance activities, students have little opportunity to learn to audiate contextual meaning in music. In learning sequence activities, it is recommended tonal learning sequence be taught in association with skill learning sequence over the course of one week, and rhythm learning sequence taught in association with skill learning sequence over the course of an adjacent week.

A skill and function are introduced in learning sequence activities before they are used in association with tonality or meter in classroom and performance activities. Tonality or meter is introduced in classroom and performance activities before it is used in association with a skill (for example, verbal association) and function (for example, tonic or macro/microbeat) in learning sequence activities.

**Reference Handbook and Tonal and Rhythm Register Books.** Both general and specific techniques for teaching tonal patterns and rhythm patterns in learning sequence activities are described in detail in Reference Handbook for Using Learning Sequence Activities, a component of Jump Right In: The Music Curriculum. There are 42 units of tonal patterns in Tonal Register Book One and Two and 42 units of rhythm patterns in Rhythm Register Book One and Two. Suggestions for teaching patterns and keeping records of students' achievement are included in each Register Book.

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# Audiation

It would be difficult to describe all ways and combinations of ways musicians audiate. Essentially, however, whether elementary or advanced, vocal or instrumental, solo or ensemble, audiation is a matter of concentrating on one set of musical sounds while at the same time attending to or performing one or more other sets of musical sounds. All capable musicians anticipate and predict in audiation what they expect to hear, perform, improvise, and create before they actually engage in listening, performing, improvising, and composing. Audiation as opposed to imitation, the preliminary step in developing audiation potential, are often confused. Imitation is a product whereas audiation is a process. It seems impossible to imitate and audiate at the same time. Like imitation, memory (not memorization) and recognition are part of audiation processes. Alone, however, they are not audiation. We can recognize music even when it is performed with some incorrect pitches and durations and still not be able to audiate it.

Most students and probably many musicians memorize music without audiating contextually. Memorizing music on an instrument is primarily related to fingerings and other technical matters, not to audiation. How many persons do you know who can play a melody on an instrument but are unable to sing what they played; to play a variation of the original melody; to play a melody in a different keyality, tonality, meter; to play a melody with alternate fingerings; or to demonstrate with body movement phrases of a

melody? If they cannot do these things they are not audiating what they have performed. It is as if they were reciting words they had memorized without meaning or using a keyboard in an unknown language. Audiation of music notation is called notational audiation. Just as aural perception is different from audiation, decoding notation is different from notational audiation.

### **Types of Audiation**

- Type 1 listening to familiar or unfamiliar music
- Type 2 reading familiar or unfamiliar music
- Type 3 writing familiar or unfamiliar music from dictation
- Type 4 recalling and performing familiar music from memory
- Type 5 recalling and writing familiar music from memory
- Type 6 creating or improvising unfamiliar music while performing or in silence
- Type 7 reading and creating or improvising unfamiliar music
- Type 8 writing and creating or improvising unfamiliar music

**Type 1.** The most common type of audiation takes place when listening to familiar or unfamiliar music. As we listen, we hear familiar and unfamiliar tonal patterns and rhythm patterns. By sequencing, recalling, anticipating, and predicting patterns through audiation, we give meaning to what we hear. The procedure is the same when we listen to speech. We attend to individual words and combine them into phrases and sentences in our minds to give grammatical meaning to what we have heard. For example,

before we utter a sentence we must anticipate tense of a predicate if it precedes a subject. While sequencing, recalling, anticipating, and predicting words as we are listening to them being spoken, we give conscious attention to those words only essential to meaning. Others are absorbed by our unconscious minds because knowing essentials makes inessentials obvious. In music, we give special attention to essential pitches of tonal patterns and essential durations of rhythm patterns while merely absorbing in our minds unconscious pitches and durations not essential to the meaning of the music.

**Type 2.** A second type of audiation, notational audiation, takes place when reading notation of familiar or unfamiliar patterns in both familiar and unfamiliar music. We may read a score silently, perform what we read, conduct from a score, or read as we listen to music. To read in all cases is to audiate from notation what is to be performed before sound is physically heard. When we read and audiate notation of familiar or unfamiliar music, we organize and audiate essential pitches and durations and essential tonal patterns and rhythm patterns from series of symbols we see without aid of aural perception. As we are audiating, we place nonessential pitches and durations into complete patterns, thus making sense of notes on the page.

**Type 3.** A third type of audiation takes place when writing from dictation familiar or unfamiliar patterns in familiar or unfamiliar music. Although writing music from dictation is the reverse of reading music from score, it, too, is considered notational audiation. When writing from dictation, we audiate what we have aurally perceived and then represent what we have audiated with symbols in notation. As we are audiating essential pitches and durations



and essential tonal patterns and rhythm patterns when writing, we automatically place inessential pitches and durations where they belong to complete patterns we are hearing.

**Type 4.** A fourth type of audiation takes place when we recall familiar patterns in familiar music and perform them vocally or on an instrument, conduct what we silently hear, or simply listen in silence. Each pattern in music we are audiating in recall guides us in organizing and sequentially recalling in audiation remaining patterns. As we are audiating, we place nonessential pitches and durations into complete patterns, and this process continues throughout music. When we can recall familiar music in audiation, it is not because we have memorized. Memorization does not serve audiation. It assists only to entrench physical movements. When persons whose audiation is not fully developed are singing or performing instrumentally, they are dependent on muscular activity, such as fingerings, vocal fold movements, and foot tapping to guide their performance.

**Type 5.** A fifth type of audiation, which also involves notational audiation, takes place as we write familiar patterns in familiar music we organize and recall through audiation.

**Type 6.** A sixth type of audiation takes place when creating or improvising unfamiliar music using both familiar and unfamiliar patterns in silence or during actual performance. Each pattern we are creating or improvising in audiation guides us in sequentially organizing in audiation additional patterns. And, once again, when audiating essential pitches and durations and essential tonal and rhythm patterns as we are creating (composing using our own invented patterns) or improvising (using previously agreed upon patterns as in jazz improvisation), we are automatically placing

nonessential pitches and durations into complete patterns. The process continues throughout music.

**Type 7.** A seventh type of audiation, which also includes notational audiation, takes place as we are reading both familiar and unfamiliar patterns and at the same time creating or improvising unfamiliar music in silence or during actual performance. For example, as we are creating music, we may be reading indeterminate notation in contemporary score or choosing arbitrary boxes of pitches or rhythms to use as music material. Improvisation may involve performing a new melody to fit figured bass (as in Baroque music) or chord symbols (as in “fake” books) we are reading in score. Although mental processes are the same when creating music and improvising without notation, Type 7 involves notational audiation.

**Type 8.** An eighth type of audiation takes place as we are writing both familiar and unfamiliar patterns and at the same time creating or improvising unfamiliar music. It includes notational audiation.

### **Stages of Audiation**

- Stage 1    momentary retention
- Stage 2    imitating and audiating tonal patterns and rhythm patterns and recognizing and identifying a tonal center and macrobeats
- Stage 3    establishing objective or subjective tonality and meter
- Stage 4    retaining in audiation tonal patterns and rhythm patterns that have been organized

Stage 5 recalling tonal patterns and rhythm patterns organized and audiated in other music

Stage 6 anticipating and predicting tonal patterns and rhythm patterns

**Stage 1.** In Stage 1, we retain in our minds short series of pitches and durations we heard just moments earlier in music. Although this does not strictly incorporate audiation, only momentary imitation, such mental retention is readiness for audiating essential pitches and essential durations and essential tonal patterns and essential rhythm patterns we will hear.

Because there is no conscious present, only an immediate past, we are not aware of what we hear at the exact moment we hear it. Instead, we unconsciously retain series of pitches and durations just perceived in terms of immediate impressions without giving them music meaning. We retain series as an “aftersound” for only a few seconds, about the same length of time we unconsciously retain with closed eyes an afterimage of what we have just seen. Unless in Stage 2 we give conscious meaning to the aftersound within a few seconds, as with a visual afterimage, what we have retained in Stage 1 is lost.

**Stage 2.** When listening to series of pitches and durations in music, we silently recognize and identify through audiation one or more tonal centers and macrobeats in music by imitating (that is, silently running through in our minds what we have just heard without giving it musical meaning) all pitches and durations in series we heard moments earlier. Then essential pitches and durations and essential tonal patterns and rhythm patterns are audiated on the basis of one or more tonal centers and macrobeats we have unconsciously recognized and identified. By recognizing what is

familiar and identifying what is unfamiliar, the process becomes a continuous interaction between recognition and identification of one or more tonal centers and macrobeats and also organization of music essentials. The more we feel sure of tonal centers and macrobeats in music, the better we organize them into patterns that make musical sense.

**Stage 3.** As we engage in Stages 1 and 2 of audiation, we establish through audiation objective or subjective tonality and objective or subjective meter. When tonality and meter are objective, which is usually the case in Occidental music, general agreement about tonality and meter can be expected. There is not consensus for subjective tonality and subjective meter.

The process in Stage 3 becomes a continuous interaction between establishing tonality and meter within context of essential pitches and durations and essential tonal patterns and rhythm patterns. The better able we are to organize the four essentials in music, the better we can recognize and identify tonality and meter in music. Because the process is so rapid it seems as if we are engaging in the first three stages of audiation simultaneously.

Interaction among the first three stages of audiation typically results in assessing and possibly restructuring essential pitches and durations and essential tonal patterns and rhythm patterns we have organized earlier and are retaining in audiation. We may also clarify and make better decisions about tonality and meter we think we have recognized or identified. Such actions will undoubtedly affect decisions about forthcoming patterns, tonalities, and meters we hear as we continue to listen.

**Stage 4.** As we actively engage in the first three stages of audiation, we are simultaneously retaining essential pitches and

durations and essential tonal patterns and rhythm patterns already organized. Thus, when engaging in the first four stages of audiation in a cyclical process as stages are interacting with one another, we are continuing to assess and restructure essentials we organized earlier and are retaining in audiation. We are also continuing to clarify and make better decisions about tonality and meter we have recognized or identified. It is in Stage 4 of audiation, in addition to tonality, keyality, meter, and tempo, we bring fulfillment to our recognition and identification of sequence, repetition, form, style, timbre, dynamics, and other relevant factors that enable us to enjoy and give meaning to music. As more stages of audiation are introduced, our tonal and rhythm aptitudes largely determine what we audiate and continue to learn from engaging in audiation processes.

**Stage 5.** The more music we have heard and the larger our established vocabularies of essential pitches and durations in essential tonal patterns and rhythm patterns in various tonalities and meters, the better we engage in Stage 5 of audiation. This is because Stage 5 involves recalling essential tonal patterns and rhythm patterns we have organized and audiated in other music and comparing their similarities to and differences from essential patterns in music we are presently audiating. We may have heard the other pieces of music a day, week, month, or years ago. As with the first four stages, we are engaging in the first five stages of audiation in a cyclical process as stages interact with one another. We continue to assess, restructure, and clarify essential patterns we have organized earlier and are retaining in audiation as we make better decisions about tonality and meter we have recognized or identified.

If we have heard very little music or an abundance of the same type and style of music and, thus, have developed limited vocabularies

of essential tonal patterns and rhythm patterns, we profit little from Stage 5, if indeed we are able to engage in audiation beyond Stage 4. As with language, the more words we have in our vocabulary, the better we may think and communicate. In music, the more essential tonal patterns and essential rhythm patterns we have in our tonal and rhythm pattern vocabularies, the better we may audiate and respond to music. When music we are hearing is familiar, audiation becomes relatively simple but when music we are hearing is unfamiliar, audiation becomes relatively complex.

**Stage 6.** As we are engaging in the first five stages of audiation, we are anticipating and predicting essential tonal patterns and rhythm patterns we will be hearing next in music. *Anticipation* and *prediction* are used with precise meanings. Anticipation means foretelling what will be heard in *familiar music* whereas prediction means foretelling what might be heard in *unfamiliar music*. Prediction is based on knowledge gained from familiar music. With possible exception of Stage 5, more essential tonal patterns and more essential rhythm patterns are audiated at Stage 6 of audiation than any other stage. Our anticipations and predictions are based on essential tonal patterns and essential rhythm patterns we are currently audiating as well as those from other music in various tonalities and meters heard before.

The more accurately we anticipate and make predictions, the better we understand music we are hearing. If an abundance of anticipations and predictions are not borne out in music, we encounter difficulty in understanding, but if only a few of anticipations and predictions are inaccurate, we continue the cyclical process of audiation and make necessary simple alterations in further anticipations and predictions. Should predictions be grossly inaccurate or should

we not be able to anticipate and make predictions at all, audiation reverts to and probably remains at Stage 1, and music will have at best only little meaning for us.

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# Music Learning Theory for Newborn and Young Children

It is estimated there have been 30,000 languages spoken in the world. Nearly 300 were native to peoples of North American and South American continents. Presently, more or less than 6,000 remain. Why did so many language disappear? Linguists agree a language is no further from extinction than just one skipped generation of adults not acculturating newborn and preschool children in listening to that language.

Is it possible music of the past is becoming extinct? Regrettably, most children have not been acculturated properly in listening to music. They lack readiness to be taught music when they enter elementary school. They are ill-equipped to learn what most music teachers are attempting to teach. Without the same kind of listening acculturation in music young children receive in English by parents and caregivers during the five or so years before they enter school, there seems to be little hope they will learn to understand and enjoy music.

Just as preschool children develop listening and speaking language vocabularies long before they enter school, so similarly they ought to develop music listening and singing vocabularies. Without preliminary language vocabularies, children are limited in their ability to learn to understand, speak, read, write, and improvise language, and without these comparable music vocabularies they are equally disadvantaged in learning to understand, perform, read,



write, and improvise music. Be it linguistic grammar or emotion, improvisation is fundamental for and essential to satisfying human need for communicating with one another. The purpose of music learning theory for newborn and preschool children is not to prepare children to be professional musicians or for parents and teachers to identify or foster music geniuses. It is to explain how young children may be guided to understand music, similar to the way they are naturally and continually guided in understanding their spoken language.

Specific musical responses are not expected or demanded of young children. Like speech development, a child's music development is not immediate. Just as a child's informal guidance in music is not neglected, so a child's transition from informal music guidance to formal music instruction is best not delayed. Those who have taught children and understand child development know potential to learn is never greater than at the moment of birth. After that, it tends to decrease. The most important period for learning is from birth (if not before) until eighteen months, a time during which children learn through exploration and from unstructured and structured guidance by parents and other caretakers.

Between ages of three and five, a child begins to receive structured as well as unstructured music guidance, either at home or in preschool. What children learn during the first five years of life forms the foundation for all subsequent educational development, which traditionally begins when they enter kindergarten or first grade and receive formal instruction. The younger children are when parents and teachers begin unstructured and structured informal music guidance to develop a foundation for learning, the more children will profit from formal music instruction. The older

a child is when a music foundation is formed, the less able the child will be to profit from formal music instruction later on.

Adults cannot correct for loss of opportunity during the time foundation for learning music is being established, because children can be offered only compensatory, not remedial, instruction when they are older. Remedial instruction is not possible because what children did not develop early in life cannot be developed later in life to the extent it could have been developed earlier. What is lost cannot be recaptured. Given two children born with similar capabilities and motivation, one who is guided in acquiring foundation for learning music at a later age will never learn as much as the other who is given similar guidance at an earlier age.

### **Types and Stages of Preparatory Audiation**

**Acculturation.** There are three types and seven stages of preparatory audiation. The first type, acculturation, has three stages. Newborns react simply with absorption, then random responses, and finally purposeful responses. Children become acculturated to music in much the same way they become acculturated to language, by listening to sounds. They unconsciously formulate theories about ways sounds are put together and organize them into patterns to create significant interactions. In acculturation, young children are exposed to music of their culture, and so they are able to base their music babble sounds and movements on music sounds they hear in their environment. The more varied music children hear, that is, the richer the music environment is in tonalities, meters, and harmonies, and the more they are encouraged to relate to what they hear through structured and unstructured informal guidance, readiness to learn music increases.

As analogy, consider how young children learn language. As newborns, they hear language being spoken all around them, even before they can minimally understand what is being said or read to them. They absorb what they hear. Soon they are vocalizing sounds in imitation of speech, and typically this includes sounds found in a number of languages. By nine months, children acquire readiness to articulate necessary sounds with the tongue to speak the language of their culture. When spoken to on a one-to-one basis, newborns are given informal guidance in forming words. Soon young children naturally break the code of the language of their culture and begin to imitate real words. By using words to communicate with others, they soon learn to improvise phrases and sentences. Later they learn to read and write words and sentences heard and spoken. The whole process of sequential development of language vocabularies begins at birth and continues until after children enter kindergarten or first grade. Unless such a process, which develops through both structured and unstructured informal guidance, occurs early in life, children will not have necessary readiness to profit from formal language instruction.

**Imitation.** With regard to music, the imitation type of preparatory audiation has two stages: shedding egocentricity and breaking the code. The initial one is the first of two transition stages within the seven stages of preparatory audiation. In this stage, children make their initial transition from preparatory audiation and music babble to audiation. In the second stage of the imitation type of preparatory audiation, children begin to imitate with some precision tonal patterns and rhythm patterns another child or adult is singing or chanting.

**Assimilation.** The assimilation type of preparatory audiation has two stages: introspection and coordination. The first is the second of two transition stages within preparatory audiation. In this stage, children realize what they are performing is different from what another person is performing. During the latter transition stage, children become aware of the way they are breathing and moving their bodies in coordination with singing tonal patterns and chanting rhythm patterns.

Neurologists, pediatricians, biologists, and psychologists have come to believe critical periods for establishing neurological connections and synapses take place prenatally and during early childhood. The cortex consists of cells interconnected by axons and dendrites, which are stimulated by syntactic activity. Nature provides the child with an excess of cells (neurons) to make these connections. Although the brain keeps growing and reaches approximately 90 percent of its adult size by age five, unless cells form complex neural networks and negative blocking is evaded during this vital period, unused cells are pruned and cannot be restored. Peak times for a child's learning are diminished.

## **Guidance and Instruction**

**Guidance.** There is a difference between guidance and instruction in music. Guidance by definition is informal, whereas instruction is formal. Informal guidance can be structured or unstructured. When guidance is unstructured, a parent or teacher exposes a child to culture naturally, without specific planning. When guidance is structured, a parent or teacher specifically plans lessons. A distinguishing characteristic of both structured and unstructured informal guidance is neither imposes information or skills

on children. Rather, children are exposed to their culture and encouraged to absorb it. Formal instruction, however, requires in addition to a parent or teacher specifically planning what will be taught, lessons are organized into allotted time periods and children are expected to offer obvious cooperation and give specific types of responses that indicate in some way they are learning what a parent or teacher intended.

Home is the most important school young children will ever know, and children's parents are the most important teachers they will ever have. Parents need not be amateur or professional musicians to guide and instruct their young children in developing an understanding of music. Likewise, they need not be professional writers, speakers, or mathematicians to teach their young children to communicate or use numbers effectively. Music is not a special aptitude bestowed on a select few; every human has at least some potential to understand music. Parents who can sing with relatively good intonation and can move their bodies with flexible and free flowing, continuous movement and enjoy doing so, even though they do not play a music instrument, meet basic requirements for guiding and instructing their young children in listening to music. Unless parents rise to that responsibility, their children will develop at most only a limited understanding of music. They will grow up to assume that life and art are poles apart because they will never have been given opportunity to discover art is life and life is art.

Preschool children are best not approached as if they are young adults or even kindergarten children, nor is assessment of development of their musical capabilities based on comparisons with what adults can or cannot do. Young children learn as much, and possibly more, by themselves and from one another as they learn

from adults. Nonetheless, if adults devote necessary time to music development of young children, and do not underestimate children's ability, young children will become comfortable with a multitude of varying types of music at an early age and, thus, develop positive attitudes toward music that persist throughout life. When they become adults, they will constitute more appreciative audiences, and, as preposterous as it may seem, they may even read a music score as easily as they read a newspaper, magazine, or book. If music should become a profession rather than an avocation for a child, it might be considered an unexpected benefit.

**Music Babble.** There are at least two stages to music babble. One is tonal and the other, rhythm. Though there are probably more, they have not been objectively identified. A child may emerge from tonal babble and rhythm babble at the same time or from one before the other. The sooner children emerge from music babble, the more musical they may be expected to be throughout life.

During the tonal babble stage, children attempt to sing with a speaking voice, and relationships among sounds they make will have little or nothing in common with context established by their culture. That is primarily so because they have not yet learned to distinguish between speaking voice and singing voice qualities. The two voices are nested together at birth. Children hear the speaking voice much more than the singing voice, and, thus, they are not guilelessly encouraged or motivated to experiment with their singing voice to learn what it *feels* like, not necessarily what it *sounds* like, compared to the more familiar speaking voice. Even when encouraged to sing, they may believe there is no difference between speaking voice and singing voice qualities. Many times children at home and church attempting to use a singing voice are

hushed and told to stop making noise. Such negative reinforcement of use of the singing voice is a detriment to children learning to differentiate between the two voices.

When children are in the rhythm babble stage, they make different sounds and erratic movements. These sounds and movements are not in a consistent tempo. They are close together and lack contextual continuity in terms of meters natural to their culture. Though an adult typically cannot make sense of children's tonal babble or rhythm babble, it is possible children may understand their own babble and that of other children.

Not only are typical newborns sung to less than spoken to, they hear live music performed less than language spoken. When they do hear live music, it usually happens more as a matter of chance than intent. As a result, most children do not have opportunity to absorb necessary varied sounds of music in the same way they do those of language, and so ability to move through music babble is hindered. In turn, young children are then unable to leave tonal and rhythm babble stages to develop basic tonal and rhythm listening vocabularies. Without listening vocabularies to serve as readiness for further music development, ability to acquire speaking vocabularies in music becomes severely limited. Singing and rhythm chanting, the speaking vocabularies of music, relate to ability to relax and breathe freely; move the body with flexible and flowing, continuous movement; sing tonal patterns; and chant rhythm patterns. Without development of listening, singing, and chanting vocabularies, children find it difficult to understand and relate to music of their culture. Unless children experience a rich and varied exposure to music before they are eighteen months of age, they will become primarily preoccupied with language

acquisition, and music will take a place of little or no importance in their later lives.

Although typical children hear music through media, and may even hear live music on occasion, adults need to sing to them on a one-to-one basis as a means of teaching them to use their singing and chanting voices in the same way speaking to them provides a one-to-one model in use of their speaking voice. Just as all children learn to use their speaking voice, so all children can learn to use their singing and rhythm chanting voices. Whether they learn to perform musically (and to speak intelligently) depends on the quality and quantity of structured and unstructured informal music guidance and formal instruction they receive.

That most young children are not given adequate opportunity to acquire listening and performing vocabularies in music is a commentary on the priorities of our society. Optimally, children's singing and rhythm chanting vocabularies are developed and interact with development of their tonal and rhythm listening vocabularies, and their tonal and rhythm listening vocabularies are developed and interact with their singing and chanting vocabularies. It is a continuous developmental cycle. Tonal and rhythm listening vocabularies and singing and rhythm chanting performing vocabularies continue to be interdependent as children become older. The development of one set of vocabularies without the other is an unacceptable option. For example, if young children are not encouraged to move flexibly and continuously in a free flowing, continuous manner, they probably will not learn to chant rhythm patterns with flexibility and phrasing, and they may never develop a rhythm chanting vocabulary. Children naturally begin to respond to rhythm with flexible and continuous, free flowing movement at



a very early age. Unfortunately, many of them do not persist in that endeavor, not because of their own wishes but because parents are anxious to have them unnecessarily walk and talk before their time. That engenders rigidity.

If children who have not received structured and unstructured informal guidance in music before they enter school are given formal music instruction in kindergarten or first grade, that exacerbates difficulties because of the way music is taught in many schools. For example, in order for teachers to teach language skills in school successfully, children need to have acquired ability and skill to engage in speaking individually before they enter school, yet most children have never had a chance to perform music individually before they begin formal music instruction, and once they do begin formal music instruction they are seldom offered or allowed opportunity to perform individually in class. Moreover, consider irrationality of teaching third and fourth grade students, adults notwithstanding, to learn to perform on a music instrument when they have no music listening or singing and rhythm chanting vocabularies. They become note-reading technicians in search of audiation.

**Formal Instruction.** Most formal instruction involves teaching groups of children to sing by asking them to repeat in ensemble sounds a teacher or others make. Yet imagine the outcome in language learning if children were asked to speak only in groups, repeating what a teacher said. They would learn only to imitate what others around them are saying and so would probably not give meaning to what they themselves are saying. They never might create a sentence of their own to express thoughts. It is no wonder then when music is taught the way it is customarily taught in school, many school children are deprived of a chance to

develop an understanding of music. Most are simply dismissed as being untalented by their teachers and parents.

When children enter kindergarten or first grade, they receive instruction in language for a substantial portion of the school day. Thus, a teacher may be held accountable for each child's language development in accordance with an established curriculum. Following standard practice, records are kept and measurement procedures precede evaluation. In contrast, children typically receive instruction in music once, and in rare cases twice, a week for a period of 20 to 45 minutes. Because classes are large and there is inadequate time devoted to formal music instruction or, more correctly, to necessary compensatory informal music guidance even though children are no longer of preschool age, and because there is no generally accepted sequential curriculum in music, music skills children might be expected to have acquired by second grade are never realized due to impoverished instruction. Entertaining children and at best offering them perfunctory explanations of music theory and notation seem to be mainstays of most formal music programs in school. If children are having fun, it is assumed by many administrators and parents a music program is successful. Children can experience even more pleasure and ultimate satisfaction when engaging in activities that promote music understanding. Fun is temporary but understanding of music is ever lasting.

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# Preparatory Audiation

There are two music learning theories. One is for newborns and young children in the preparatory audiation stage and the other for students and adults in the audiation stage. This introduction is about preparatory audiation. Preparatory audiation includes three types: acculturation, imitation, and assimilation. Acculturation has three stages; imitation, two stages; and assimilation, two stages. Audiation has been introduced in a companion paper.

Audiation, which develops as children who have emerged from music babble receive formal instruction in music, is different from preparatory audiation, which develops as children who have not emerged from music babble receive structured and unstructured informal guidance in music. Types and stages of preparatory audiation serve as preparation for types and stages of audiation. Children's ability to engage in a given type and stage of preparatory audiation is more indicative of their music age than chronological age. Music age and chronological age not necessarily related. Some children are capable of engaging in audiation or preparatory audiation activities regardless of developmental or stabilized music aptitude age.

Types of preparatory audiation and stages within each type ideally progress sequentially from first to last. At any time, children may be capable of engaging in activities associated with a

higher type and stage of tonal preparatory audiation than rhythm preparatory audiation, and vice versa. Just how long or how short a time a child best engages in a given type and stage of preparatory audiation varies and is directly affected by musical, emotional, and physical development. A child is not rushed through types and stages of preparatory audiation. During the critical and sensitive early years, young children are not forced to learn, formally or informally. Instead, they are allowed and encouraged to explore and absorb to their full potential.

Music understanding associated with preparatory audiation develops most efficiently and effectively in young children when songs and chants in many tonalities and meters are performed for them without text on a one-to-one basis using the human voice. Although a fertile variety of sounds may at first puzzle young children, their music development is a result of attention to diversity of music a parent and teacher sings and chants. Recorded music need not be avoided, but it is no more beneficial to a child than listening to only recorded speaking to learn a language.

Children with high levels of developmental music aptitudes ought not be encouraged to move more quickly through the sequence of types and stages of preparatory audiation than those with lower levels of developmental music aptitudes. Regardless of developmental aptitudes, all children are allowed to remain long enough in each type and stage of preparatory audiation to derive as much benefit from a parent's or teacher's structured and unstructured informal guidance as their developmental music aptitudes will permit. Thus, within a given period of time, it is more valuable for children to engage abundantly in one type or stage of preparatory audiation than only a bit in every type and stage of preparatory

audiation. Deciding if and when to encourage a young child to move from one type or stage of preparatory audiation to another is undertaken with sensitivity by a knowledgeable adult. Children’s individual musical differences are best attended to within group structured and unstructured guidance.

It is not unusual for a young child to have music readiness but not emotional readiness, or the latter but not the former, to progress from one type or stage of preparatory audiation to another. Sometimes young children are reluctant to allow themselves to progress in preparatory audiation because it is more comfortable for them to engage in familiar activities than to move on to unfamiliar ones. The importance of having an understanding adult

### **Types and Stages of Preparatory Audiation**

Types	Stages
<p>1. <b>ACCULTURATION:</b> Birth to age 2–4: participates with little consciousness of environment.</p>	<p>1. <b>ABSORPTION:</b> hears and aurally collects sounds of music in the environment. 2. <b>RANDOM RESPONSE:</b> moves and babbles in response to, but without relation to, sounds of music in the environment. 3. <b>PURPOSEFUL RESPONSE:</b> tries to relate movement and babble to sounds of music in the environment.</p>
<p>2. <b>IMITATION:</b> Ages 2–4 to 3–5: participates with conscious thought focused primarily on environment.</p>	<p>1. <b>SHEDDING EGOCENTRICITY:</b> recognizes movement and babble do not match sounds of music in the environment. 2. <b>BREAKING THE CODE:</b> imitates with some precision sounds of music in the environment, specifically tonal patterns and rhythm patterns.</p>
<p>3. <b>ASSIMILATION:</b> Ages 3–5 to 4–6: participates with conscious thought focused on self.</p>	<p>1. <b>INTROSPECTION:</b> recognizes lack of coordination between singing, chanting, breathing, and movement. 2. <b>COORDINATION:</b> coordinates singing and chanting with breathing and movement.</p>

oversee progress of a child through types and stages of preparatory audiation cannot be overstated. An adult is responsive to challenges of sustaining children's attention to move them forward from one type to another and from one stage to another of preparatory audiation without using force or coercion. Of particular concern to parents and teachers is children who demonstrate an extreme in tonal developmental aptitude or rhythm developmental aptitude. Typically, young children choose to develop musical strength at expense of musical weakness. Thus, it is important enhancement of the lower of the two developmental music aptitudes is given as much, if not more, attention than the higher.

**Acculturation.** Young children become acculturated to music in much the same way they become acculturated to language, by listening to sounds, unconsciously formulating theories about ways those sounds are put together, and organizing them into patterns to create meaningful communication. In language, for example, children first learn to hear and to discriminate between the sudden shifts in "ba" and "da" and only then begin to speculate about the different ways sounds are used. The more varied the language children hear, the better they learn to communicate when they are older. It is an acquired listening vocabulary that serves as basis for development of a babbling vocabulary and later for a speaking vocabulary. A speaking vocabulary, in turn, serves as basis for development of reading and writing vocabularies. So it is with music.

The sooner young children engage in music acculturation, particularly before their language development becomes so compelling that music may seem to be of secondary importance, the better. It is late for children to begin to engage in music acculturation when they are three years old, and it is almost too late for children with

exceptionally low developmental music aptitude when they are as old as five. The quality of acculturation a child receives is as important as the chronological age at which the child enters and leaves acculturation and is ready to engage in the next higher type of preparatory audiation.

In acculturation, young children are exposed to music of their culture so they may base music babble sounds and movements on music sounds they hear in the environment. The more varied the music children hear, that is, the richer the musical environment is in tonalities, harmonies, and meters, and the more they are encouraged to interact with what they hear through structured and unstructured informal guidance in music, the more advantageous. Probably young children benefit most in every type of preparatory audiation from an adult singing and chanting *to* and *for* them, not *with* them. Observant adults understand young children's attention is not always continuous or obvious. At times it may seem children are not attending to music when they are receiving structured or unstructured informal guidance. That, however, usually is not the case. Young children are aware of most of what they hear, whether they give direct evidence of their awareness. In any case, an adult expects only *a* response, not *the* response, from a young child who is engaging in acculturation. Adults foster intention rather than attention because it is the activity, not the act, that is important. It is through structured and unstructured informal guidance in music young children are adequately prepared to deal in time with imitation and assimilation in preparatory audiation and then, later, to develop readiness to audiate what they hear in a more mature fashion.

During the first three stages of acculturation, young children respond to the environment by only listening. During the second



stage, children make babble sounds and movements that are not particularly related to the environment. During the third stage, children make music babble sounds and movements in response to the environment. Ideally, the first stage of music acculturation takes place from birth to about eighteen months. Experienced parents and teachers are patient and expect nothing immediate of a young child who is phasing through music acculturation. Just as young children require time to absorb language spoken in their surroundings before learning to speak, so young children require time to absorb their musical environment before learning to sing, chant, and move in a musical manner.

**Imitation.** The transition from acculturation to imitation in preparatory audiation is significant in the music development of young children. The younger they are when they make that transition, the better they will learn to imitate, yet if they do so too early without the benefit of first having sufficient exposure to music through activities associated with acculturation, their ability to engage in music imitation will be limited. On the other hand, regardless of when children make the transition into music imitation, their continued development in music acculturation will begin to slow. That is unfortunate, because no one ever outgrows need for music acculturation. Development of preparatory audiation and audiation skill ultimately depends on extent to which music acculturation is continually developed. For example, adults are always engaging in some type of music acculturation and, thus, become more comfortable with facets of music, such as contemporary compositional devices that initially seem strange or unfamiliar.

The process of acculturation does not require conscious thought or purposeful activity on the part of children, but children do imitate

with some purpose. Whether they imitate correctly or incorrectly, or even with logical consistency, imitation is of enormous benefit to children, because unless they engage in music imitation, they will lack appropriate readiness to engage in assimilation.

The first stage of the imitation type of preparatory audiation is the first of two transition stages within the seven stages of preparatory audiation. In this stage, children make their initial transition from preparatory audiation and music babble to audiation. They become aware of sameness and difference between what they are singing or chanting and what another child or adult is performing. In a sense, they are emerging from music egocentricity by discovering they can compare their singing or chanting with what another person is or is not performing, and this is crucial to further development in preparatory audiation. Thus, children in their own way become aware they have been communicating with themselves (subjective preparatory audiation) as they begin to learn to communicate with others (objective preparatory audiation). Without that breakthrough, children will probably not possess necessary understanding to proceed to the fifth stage of preparatory audiation, which is the second stage of the imitation type of audiation.

In the second stage of the imitation type of preparatory audiation, children imitate with some precision tonal patterns and rhythm patterns another child or adult is singing or chanting. Imitation allows children to begin “breaking the code” of the music culture surrounding them. Thus, when they move into the assimilation stage they are able to recognize and discriminate among tonal patterns and among rhythm patterns as they attempt to imitate them. Some parents and teachers may be hesitant to

introduce a wide variety of tonalities and meters at this early stage. Nevertheless, it is important children be exposed to a large number of major and minor tonal patterns and usual duple and usual triple rhythm patterns.

Young children at this stage may be hearing only a pitch center or a resting tone of the tonality of the tonal patterns they are learning to imitate. Likewise, as they are learning to imitate rhythm patterns, they may be aware of only macrobeats or microbeats of the meter of rhythm patterns. When children appear to be engaging concurrently in some combination of elemental audiation and preparatory audiation, it is sure they are searching for syntax to assist them in an attempt to imitate tonal patterns or rhythm patterns.

Children hear and perform different songs and tonal patterns in a variety of keyalities and tonalities in the imitation stage. Also, they initially hear and perform the same song and tonal patterns in the same keyality and tonality. And, although children hear and perform different chants and different rhythm patterns in a variety of tempos and meters, they initially hear and perform the same chant and rhythm patterns at the same tempo and in the same meter. It is not until children are able to recognize and identify a resting tone and macrobeats of a song or chant it may be prudent to introduce the same song in a different keyality (with tonality remaining the same) and the same song or chant in a different tempo (with meter remaining the same). To ensure children first hear consistent performances in various keyalities, tonalities, tempos, and meters, teachers might make a recording of their performances for children to listen to at various times. Without such reinforcement, young children will probably experience difficulty in recognizing the same song when it is performed in a different

keyality or tonality and the same chant when it is performed at a different tempo or meter.

**Assimilation.** The first stage of the assimilation type of preparatory audiation is the second of two transition stages within preparatory audiation. During the first stage, which occurs in the imitation type of preparatory audiation, children outgrow their musical egocentricity as they become aware of their own performance in relation to that of other persons. During the second stage in the assimilation type of preparatory audiation, children become aware of how they are breathing and moving their bodies in coordination with singing of tonal patterns and chanting of rhythm patterns. Without this realization, they cannot adequately proceed to the second stage of assimilation, which is the seventh and final stage of preparatory audiation. In that case they will not be prepared to engage satisfactorily in audiation activities as they emerge from music babble and later receive formal instruction.

This second of the two stages of assimilation is crucial because it is now children actually learn how, on a conscious level, to coordinate with some precision their singing and chanting of tonal patterns and rhythm patterns with their breathing and weight and continuous free flow of their body movements. Thus, they become acutely aware of anacrusis, metacrusis, and crusis as they perform tonal patterns and rhythm patterns in familiar tonalities, keyalities, meters, and tempos, which is what allows them to move out of preparatory audiation into audiation.

When children are able to learn to perform more accurately, using the voice or a music instrument, in ensemble as well as solo, they are able to learn to adjust pitch and rhythm to make accommodations in ensemble performance by giving objective music

meaning to what others are audiating and performing. In time these children become capable of truly enjoying music. As they learn to give meaning to music through audiation they are prepared to learn to understand and take pleasure from music as musicians, though not necessarily as professional musicians, throughout their lives. When older, they become part of an audience that will expect worthy music be performed under finest of conditions.

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# Quick and Easy Introductions

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978-1-57999-973-5