



The  
Gordon Institute  
for Music Learning

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# ABOUT MUSIC LEARNING THEORY

Music Learning Theory is an explanation of how we learn when we learn music. Based on an extensive body of research and practical field testing by Edwin E. Gordon and others, Music Learning Theory provides the music teacher a sequential and comprehensive method for teaching musicianship through audiation, Gordon's term for thinking music in the mind with understanding. Music teachers of all stripes—elementary general, instrumental, vocal, the private studio—can use learning sequence activities to develop their students' tonal and rhythm audiation. Skills thus learned can then be applied to all manner of classroom activities, enabling students to draw greater meaning from the music they listen to, perform, improvise, and compose. The objective is to help students become independent musicians and musical thinkers.

Complete information about Music Learning theory and audiation can be found in Edwin E. Gordon's *Learning Sequences in Music: Skill, Content, and Patterns* (Chicago: GIA Publications, 1997).

## Contents of this Section

[Audiation](#) - To hear and comprehend music in the mind, audiation is the foundation of musicianship. Music Learning Theory tells music teachers the best way to develop students' tonal and rhythm audiation.

[Music Aptitude](#) - Music learning is enhanced when teachers know students' potential to achieve in music and teach systematically to individual differences.

[Methodology](#) - Students build their audiation skills through singing, rhythmic movement, and tonal and rhythm pattern instruction before being introduced to notation and music theory.

[Learning Sequence Activities](#) - The "parts" part of the Whole/Part/Whole curriculum, learning sequence activities are where students learn to audiate the tonal and rhythm patterns that make up music literature.

[Classroom Activities](#) - Carefully thought out guidelines help the teacher best coordinate learning sequence activities with classroom activities.

[Tonal Content](#) - Tonalties, patterns, and solfege.

[Rhythm Content](#) - Elements, meters, functions, and solfege.

[Specific Applications to Music Instruction](#) - Methods, techniques, and materials for implementing Music Learning Theory principles in various music teaching settings.

[Early Childhood](#) - A child's early experiences with music have a profound impact on future musical development.

[Types and Stages of Audiation](#)

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## **Audiation**

Audiation is the foundation of musicianship. It takes place when we hear and comprehend music for which the sound is no longer or may never have been present. One may audiate when listening to music, performing from notation, playing "by ear," improvising, composing, or notating music (see types of audiation).

Audiation is not the same as aural perception, which occurs simultaneously with the reception of sound through the ears. It is a cognitive process by which the brain gives meaning to musical sounds. Audiation is the musical equivalent of thinking in language. When we listen to someone speak we must retain in memory their vocal sounds long enough to recognize and give meaning to the words the sounds represent. Likewise, when listening to music we are at any given moment organizing in audiation sounds that were recently heard. We also predict, based on our familiarity with the tonal and rhythmic conventions of the music being heard, what will come next. Audiation, then, is a multistage process (see stages of audiation).

Although musicians audiate all aspects of musical sound, including timbre, volume, and style, Music Learning Theory is concerned specifically with the tonal and rhythm dimensions of music. Teaching methods are designed to help students develop their ability to audiate tonal content—including tonality, resting tone, and tonal function—and rhythm content—including meter, macro beats, micro beats, and melodic rhythm.

Through development of audiation students learn to understand music. Understanding is the foundation of music appreciation, the ultimate goal of music teaching.

## **Music Aptitude**

Musical ability is often viewed in all-or-none terms: some are blessed with "talent," others must do without. Recent research, however, reveals that music aptitude, like all human characteristics, is normally distributed in the population. All persons have the potential to achieve in music. Relatively few have high aptitude, a similar number have low aptitude, and the majority of persons fall somewhere in the middle of the "bell curve" with average aptitude.

Music Learning Theory is unique among music teaching methods in accounting directly for students' differing potentials to achieve in music. Students of average aptitude are taught more tonal content and rhythm content than low aptitude students, and high aptitude students learn more content than average aptitude students. By teaching to students' individual differences, teachers lessen the risk of boring students with high potential and frustrating students with lower potential.

## **Measuring Music Aptitude**

Music aptitude can only be measured with a valid music aptitude test. Music teachers' judgments about students' musical "talent" are often based significantly on musical achievement, not the potential to achieve. It is not uncommon, for example, for students of average aptitude to achieve at a high level as a result of a rich musical background and dedicated effort. Only a valid music

aptitude test can distinguish between actual achievement and the potential to achieve further. Because many student with high music aptitude have not had the opportunity to achieve in music, a music aptitude test can reveal musical potential that might otherwise remain unknown to those students and their teachers.

It is NOT the purpose of aptitude testing to identify students for inclusion or exclusion in music activities. All children have the right to a comprehensive musical education. Music aptitude testing helps music teachers meet the unique needs of each student.

It is important to use a music aptitude test that is appropriate for the level of musical development of the students being tested. Teachers can choose from among five music aptitude tests of Edwin E. Gordon for testing children three years old through college age.

## **Developmental And Stabilized Music Aptitude**

Research indicates that music aptitude is developmental during the early years of life. A child's aptitude at birth is innate, but can fluctuate until about age nine according to the richness and diversity of musical experiences the child undergoes. After age nine, one cannot expect to achieve in music beyond the limit of one's stabilized music aptitude. It is essential that children receive lots of high quality informal guidance and formal instruction in music in order to best realize their potential for musical fulfillment throughout life. Informal music experience prior to age five is particularly important.

## **Methodology**

Method is the order in which sequential objectives are introduced in a curriculum to accomplish a comprehensive objective, a goal. A good method tells us what to teach, when to teach it (the best sequencing of instruction), and why to teach it. A good technique tells us how to teach. Music Learning Theory provides teachers a comprehensive and sequential method for teaching essential audiation skills.

## **Sequence**

Music teaching methods are often categorized as either rote first or note first. Music Learning Theory has many characteristics in common with such rote-first methods as Suzuki, Dalcroze, Kodaly, and Orff. Students build a solid foundation of aural and performing skills through singing, rhythmic movement, and tonal and rhythm pattern instruction before being introduced to notation and music theory.

The process of learning music is much the same as that for language. In learning to speak, children first listen. From the time of birth, and even before, they are surrounded by the sounds of language. They absorb these sounds and become attuned to the language of their culture. Soon after, children begin to imitate. They receive much praise and are encouraged to "babble," even when their sounds do not make sense to adult listeners. Then they begin to think in the language. Words and phrases start to have meaning to them. Next, children improvise in the

language. They make up their own phrases and sentences that are organized in a logical manner. They can engage in conversation. Finally, after several years of developing their ability to think and speak, children are taught how to read and write. Only after all these skills are well in place is grammar, the theory of sentence construction, introduced.

Sequence in Music Learning Theory has much in common with that of language learning. Skill learning sequence accounts systematically for the readinensses needed to learn each new musical skill. Students taught according to Music Learning Theory learn to read notation (see symbolic association), but only after they have developed the ability to audiate the note patterns written on the page. Reading becomes a process of recognition rather than decoding.

## **The Whole/Part/Whole Curriculum**

The Whole/Part/Whole approach (sometimes called Synthesis/Analysis/Synthesis) is a common way in education to organize students' experience with content. The first Whole stage (Synthesis) is an introduction, an overview that establishes basic familiarity with what the topic is about. The second stage (Analysis) consists of detailed study of the parts of the topic. On returning to the Whole (the second Synthesis) students have a more sophisticated understanding of how the parts fit together to form a unified whole.

Music teachers often take a Whole/Part/Whole approach to new literature. The first step is to "run through" the piece, to give students a general, if somewhat crude, sense of how it goes. Detailed rehearsal on small sections follows (Analysis). The next run-through (the second Synthesis) is usually with greater technical precision and overall understanding of the music. This final Synthesis step then becomes the first step of another Synthesis/Analysis/Synthesis cycle. From cycle to cycle students' skills go through progressively higher stages of refinement.

Music Learning Theory provides an elegant Whole/Part/Whole approach to developing audiation. Songs and music literature are the "whole" part of the music curriculum. These are taught during classroom activities. Tonal and rhythm patterns are the "part" part, and are taught during learning sequence activities. Although learning sequence activities are the heart of Music Learning Theory, where theory is applied directly to music teaching practice, the main objective is to enhance the teacher's ability to help students understand the music they study in classroom activities.

The eight hierarchical levels of skill learning that comprise skill learning sequence in learning sequence activities are also relevant to classroom activities. Aural/oral, for example, is the most basic level of skill learning sequence in learning sequence activities, but it also plays a major role in classroom activities. Learning a new song, for example, first takes place at the aural/oral level, with no reference to tonal or rhythm solfege (verbal association) or notation (symbolic association).

## **Other Central Principles**

Focus on patterns. Tonal and rhythm patterns, not single notes, are the basic units of meaning in music. They are roughly analogous to words in language. Learning sequence activities help

students give musical meaning to the individual pitches and durations that combine to form tonal and rhythm patterns.

Contrast. We understand what something is by comparing it to what it is not. To learn to audiate major tonality, for example, one must also have experience with other tonalities such as minor, dorian, and mixolydian. Music Learning Theory methods help children learn to discriminate among diverse tonal patterns, rhythm patterns, tonalities, meters, tonal functions, and rhythm functions. This discrimination learning develops in students the foundational tonal and rhythm vocabulary necessary to generalize, improvise, and create in inference learning.

Context. Just as the meaning of a word is affected by the sentence in which it resides, so is context critical to the audiation of musical elements. It is important during both classroom activities and learning sequence activities to establish tonal and rhythm context. For example, during tonal pattern instruction the teacher repeatedly establishes tonality, perhaps by playing tonic-dominant-tonic at the piano. Students are guided to audiate tonal patterns in reference to a tonality, resting tone, and tonal function (chord). In rhythm instruction, meter is continually reinforced and students are encouraged to move rhythmically while audiating rhythm patterns.

Rhythmic Movement. Rhythm is not processed intellectually; it must be felt in the body through movement. Music Learning Theory methods are designed to help students develop an inner awareness of meter, macrobeats, microbeats, and melodic rhythm (see rhythm content) in order to perform with accurate rhythm, steady tempo, and rhythmic "flow."

## **Learning Sequence Activities**

Learning sequence activities are the "part" part of the Whole/Part/Whole curriculum. Teachers should spend from five to ten minutes per class period in tonal and rhythm pattern instruction. The purpose is to help students bring greater understanding to classroom activities by focusing intensively on the tonal and rhythm patterns that make up music literature. For a music curriculum to be realistic and complete, the classroom activities and the performance activities must be coordinated with the learning sequence activities (see coordinating learning sequence activities and classroom activities).

There are three music learning sequences included in Music Learning Theory. They are skill learning sequence, tonal content learning sequence, and rhythm content learning sequence. At any given time during learning sequence activities, a level of skill learning sequence is being combined with a level of either tonal content learning sequence or rhythm content learning sequence. For example, tonal pattern instruction begins at the lowest level of skill learning sequence (aural/oral) using the most basic level of tonal content (tonic and dominant patterns in major tonality). Likewise, rhythm pattern instruction commences at the aural/oral level of skill learning sequence with macrobeat and microbeat patterns in duple meter.

There are two main categories of levels of skill learning sequence: discrimination learning and inference learning. Discrimination learning is rote learning. It takes place when students are conscious of, though they may not fully understand, what they are being taught. For example, they may be taught that two familiar tonal patterns are the same or different. A student is conscious of what he is learning because he is being taught by someone else. Inference learning



is conceptual learning. It takes place when a student is unconscious of what he is learning because he is teaching himself.

Discrimination learning is of initial primary concern to a teacher because students cannot learn to make inferences unless they have learned how to make and have made discriminations. Without the readiness that the ability to discriminate provides, they would find that everything sounds the same.

## **Discrimination Learning**

In order for children to understand music, they must build a vocabulary of tonal and rhythm patterns, comparable to a vocabulary of words in language. Most discrimination learning consists of students echoing tonal or rhythm patterns sung or chanted by the teacher. The format is call and response, and students may perform as a group or in solo.

### **Aural/Oral**

Aural/oral is the most basic level of skill learning sequence, the foundation upon which all higher level skills are built. Listening is the aural part, while performing, usually singing, is the oral part. Optimum musical development occurs when the two are combined in a continuous loop so that they interact with and reinforce each other. At this level in learning sequence activities, students perform tonal and rhythm patterns with neutral syllables. The suggested syllables are "bum" for tonal patterns and "bah" for rhythm patterns.

### **Verbal Association**

At this level, students associate vocabulary names and proper names with the patterns, functions, tonalities, and meters they learned at the aural/oral level. The tonal and rhythm patterns taught at the aural/oral level are learned with appropriate tonal solfege syllables or rhythm solfege syllables. Verbal association facilitates discrimination between patterns. Without it, students would be unable to keep track of more than about ten patterns of each type. Assigning a unique "name" for each pattern through solfege serves much the same purpose in music as naming objects and concepts in language. We think with words, and the more words we have in our language vocabulary the better is the quality of our thinking. So, too, in audiation, and verbal association facilitates the development of a large vocabulary of tonal and rhythm patterns.

Two types of verbal association are used. The main type is the rhythm and tonal solfege syllables assigned to individual pitches or durations in tonal and rhythm patterns (for example, the tonal syllables do-mi-so for the notes C-E-G in C major). The other type, Verbal Association/Proper Names, refers to the names given tonalities, meters, and functions. Students learn to identify various tonalities (major, minor, dorian, mixolydian, and so on), tonal functions (tonic, dominant, subdominant, and so on), meters (duple, triple, unusual, and so on), and rhythm functions (macrobeats, microbeats, divisions, and so on). Note that music theory is NOT taught at this level of skill learning sequence. Students are taught the names and makeup of musical concepts (for example, that tonic patterns in major are comprised of some arrangement of do-mi-so), but not the "why" behind those concepts (for example, that a tonic chord in major includes a major third and a perfect fifth).

## **Partial Synthesis**

At the aural/oral and verbal association levels, students learn tonal and rhythm patterns individually. Although the teacher always establishes tonal or rhythm context, syntactical relationships among patterns are not emphasized. At partial synthesis, students learn to give syntax to a series of tonal or rhythm patterns. The teacher performs a series of familiar tonal or rhythm patterns without solfege and without first establishing tonality, and students are able to identify the tonality or meter of the series. The purpose is to assist them in recognizing for themselves familiar tonalities and meters. As a result of acquiring partial synthesis skill, a student is able to listen to music in a sophisticated, musically intelligent manner.

## **Symbolic Association**

At this level, students learn to read and write music notation by associating the sound and solfege of the patterns they learned at the aural/oral and verbal association levels with the notation for those patterns. The process is one of recognition, not decoding. As the teacher points to a pattern, the students are simply told "What you are audiating looks like that." Students are not taught the letter names and time values of individual notes, nor the definitions of key signature and other symbols. These are taught at the theoretical understanding level of inference learning. When symbolic association is properly taught, students are able to bring meaning to the notation, rather than trying to take meaning from the notation. The notes on the page "sing" to them. Singers perform independently from notation, without having to hear their parts played for them at the piano, and instrumentalists don't need their instruments to "tell them how the notes go."

## **Composite Synthesis**

At the partial synthesis level, students are able to give syntax to a series of familiar tonal or rhythm patterns. At composite synthesis, students read and write a series of tonal and rhythm patterns with the ability to identify the tonality or meter of the series.

# **Inference Learning**

Students are not taught by rote at this level; they make their own discoveries. As a result of their experience with familiar patterns at various levels of discrimination learning, students are able to identify, create with, and improvise unfamiliar patterns in inference learning. Whereas in discrimination learning a teacher teaches a student both what to learn and how to learn it, in inference learning a teacher teaches a student only how to learn. The student teaches himself what he learns.

## **Generalization**

Generalization has three sublevels: aural/oral, verbal, and symbolic. The sublevels are analogous to the corresponding levels of discrimination learning, except, that the student is able to audiate unfamiliar patterns by comparing them to the familiar patterns he learned by rote. At generalization-aural/oral, for example, the student indicates whether two tonal or rhythm patterns are the same or different. At generalization-verbal the student, upon hearing a tonal or

rhythm pattern performed without solfege, is able sing or chant the pattern with appropriate solfege. At the generalization-symbolic level, students read unfamiliar patterns (commonly called sight-reading) and write unfamiliar patterns from dictation.

### **Creativity/Improvisation**

In order to create or improvise, the student must have something to create or improvise with. The tonal and rhythm patterns learned in discrimination learning comprise the content the student uses to form his own unique musical ideas in creativity and improvisation.

Creativity is easier than improvisation because there are more restrictions on a performer when he improvises than when he creates. In improvising to a song, for example, the student is limited to a particular tonality and meter, and he must follow tonal functions according to the form (chord progression) of the song. When engaging in creativity, the student is in effect creating his own "song," and selects his own restrictions of tonality, meter, tonal and rhythm functions, and form.

As in discrimination learning, learning sequence activities at the creativity/improvisation level consist of tonal and rhythm pattern echoes between teacher and students. In creativity, the student responds to the teacher's pattern with a different pattern of ANY function. For example, if the teacher sings a tonic pattern in major, the student may respond with a different tonic pattern, a dominant pattern, a subdominant pattern, or a pattern of some other tonal function (see tonal content). In improvisation, the student must respond with a different pattern of a specific function stipulated by the teacher. For example, the teacher may chant a macrobeat/microbeat pattern in duple meter and ask the student to respond with a different macrobeat/microbeat pattern (see rhythm content).

See improvisation for methods and materials specifically developed for teaching improvisation in classroom activities.

### **Theoretical Understanding**

Music theory explains why music is audiated, performed, read, written, created, and improvised as it is. It is to music what grammar and linguistics are to language. Taught in proper sequence, theoretical understanding can strengthen what was learned at the lower levels of music learning. In language learning, grammar and the parts of speech are not taught until children have developed considerable skill in thinking, speaking, improvising (conversing), reading, and writing in their native tongue. The same should be true in music teaching.

Unfortunately, music theory is often taught to students who do not audiate. Such a sequence can only hinder audiatational development. For most efficient learning, ideally students should not be introduced to theoretical understanding until they have achieved all previous levels of discrimination and inference learning to the extent that their music aptitudes will allow.

At the theoretical understanding level, students learn information commonly taught in traditional methods as a readiness for music reading, such as the names of lines and spaces, time value names (eighth note, quarter note, half note, and so on), sharps and flats, measure ("time ") signatures, and key signature definitions. They also learn intervals, chord spellings, and other information traditionally taught as music theory.

# Teaching Procedures for Learning Sequence Activities

Teaching procedures for Learning Sequence Activities have evolved over thousands of hours of practical field experience in diverse music teaching settings. The best way to learn how to teach Learning Sequence Activities is to take a workshop from a qualified clinician. See the workshops section of this web site for information about upcoming summer workshops and convention sessions.

## Characteristics

Basic characteristics of teaching procedures for Learning Sequence Activities are described here. For more detail, see *Learning Sequences in Music: Skill, Content, and Patterns*, chapter nine; Reference Handbook from *Jump Right In: The Music Curriculum, Jump Right in : The Instrumental Series*, pp. 143-157; and *Readings in Music Learning Theory*, pp. 105-140.

Separation of Tonal and Rhythm Content. Gordon's research indicates that children have difficulty conserving the tonal and rhythmic characteristics of music. Upon hearing the same tonal pattern performed twice with different rhythms, for example, they will often insist that the second pattern was a different tonal pattern. For this reason, tonal and rhythm content are kept separate in learning sequence activities. Tonal patterns are performed without rhythm and rhythm patterns are performed without pitch.

Teaching to Students' Individual Differences. Exhaustive research by Gordon and others has established the audiation difficulty levels of hundreds of tonal and rhythm patterns. During learning sequence activities all students are taught patterns that are easy to audiate. Students of average aptitude also learn patterns of medium difficulty, while high aptitude students learn easy, medium, and difficult patterns. The Tonal and Rhythm Register Books of *Jump Right In: The Music Curriculum* provide a convenient and efficient means for recording individual student performance on tonal and rhythm patterns. (Note that in *Jump Right in : The Instrumental Series* the same patterns are provided for all students. The instrumental teacher may, of course, choose to teach to individual differences by using the easy, medium, and difficult patterns found in the Tonal and Rhythm Register Books of *Jump Right In: The Music Curriculum*.)

Importance of Individual Performance. Finding the time to listen to students perform alone is a perpetual problem for music teachers, but Music Learning Theory tells us that individual performance is essential for the development of audiation. Too often, students who never perform by themselves learn only to *imitate* music rather than audiate it. A good example of imitation is the member of a vocal ensemble who is able to sing his part reasonably well if he is standing next to a strong singer, yet cannot perform his part in solo. In learning sequence activities it is essential for each student to perform patterns in solo and to hear other students do the same.

# Teaching Modes

There are three modes of teaching in tonal and rhythm pattern instruction. In the teaching and evaluation modes, individual students respond to the teacher's patterns. A class pattern is one in which all students respond.

## Teaching Mode

In the teaching mode, the teacher performs a tonal or rhythm pattern and gestures to a single student to respond, then performs the pattern with the student.

## Evaluation Mode

Sometime after a student has echoed a particular tonal or rhythm pattern in the teaching mode, the teacher repeats that pattern for the same student in the evaluation mode. The teacher's actions in evaluation mode are the same as in the teaching mode, except that the teacher does not perform the pattern with the student. The student's ability to perform the pattern correctly in solo indicates that the pattern is now familiar to him. It has become a part of his tonal or rhythm pattern vocabulary.

## Class Patterns

A class pattern is one which is echoed by the entire class. Perhaps every third or fourth pattern should normally be a class pattern. Although class patterns do little to develop individual audiation, they are very useful for maintaining, reinforcing, and re-establishing tonality and meter.

# Pattern Delivery

Learning sequence activities should occupy from five to ten minutes of each class period. Concentration levels for both teacher and students are high, and more than ten minutes of tonal and rhythm pattern instruction can become tedious. When taught for an appropriate length of time by a capable and dynamic teacher, however, students find learning sequence activities highly motivating.

Each teacher should develop procedures for tonal and rhythm pattern delivery that suit his teaching style and the unique characteristics of his teaching situation. Described here are basic aspects of pattern delivery as commonly practiced by teachers of Music Learning Theory. The level of skill learning sequence is verbal association.

## Tonal Patterns

The teacher first establishes tonality. In major, for example, the teacher might establish tonality vocally, perhaps by singing *so-la-so-fa-mi-re-ti-do* (without rhythm), or by playing tonic-dominant-tonic at a keyboard. The teacher asks students to "Please repeat after me." The teacher gestures to himself, then sings the tonal pattern with appropriate tonal solfege. The individual notes of the pattern should be sung with slight separation. On the last note

of the pattern, the teacher's hands are in a "ready" position similar to that used by conductors to begin a musical ensemble. The last note of the pattern is followed by a pause of perhaps one second. Then the teacher executes a preparatory gesture for the entire class, again similar to that used by conductors to start an ensemble. During the preparatory gesture, the teacher models the breath he wants students to take. It is during this preparatory breath that all students audiate the pattern. If the pattern is a class pattern, the preparatory gesture culminates in a way that causes all students to echo the pattern. If the pattern is to be an individual pattern, the teacher indicates so halfway through the preparatory gesture by shifting his attention in the direction of a single student. After the tonal pattern is sung, the teacher again gestures to himself and sings, without pause, the next pattern.

## **Rhythm Patterns**

The teacher first establishes meter by chanting a four-beat macrobeat/microbeat pattern in the appropriate meter. In duple meter, for example, the solfege for establishing meter would be *du, du-de, du, du-de*. Students move their heels to macrobeats and pat their palms lightly on their thighs to microbeats. Teacher gestures are similar to those used in tonal pattern instruction, but the timing differs. In rhythm pattern instruction it is essential to establish a rhythmic "groove" in the appropriate meter. Rhythm patterns are typically four macrobeats in length. The teacher gestures to himself, then chants the pattern. His arms go to the "ready" position on beat three of the pattern, then the preparatory gesture is executed on beat four. The student echo of the pattern (group or individual) begins on the macrobeat immediately following the last macrobeat of the teacher's performance of the pattern. Likewise, the teacher begins the next pattern immediately following the student(s)' echo.

## **Tonal Content**

When teaching tonal content during learning sequence activities, the teacher is at any given time combining a level of skill learning sequence with a level of tonal content. Levels of tonal content are hierarchical in much the same way as levels of skill learning sequence. Each level of tonal content serves as a readiness for achieving the next higher level of tonal content.

Tonal learning is facilitated by development of a sense of tonality and a vocabulary of tonal patterns. The tonal patterns used in learning sequence activities are organized according to tonality classification (major, minor, dorian, and so on) and tonal pattern function (tonic, dominant, subdominant, and so on). Tonalities and tonal functions are sequenced primarily according to familiarity. Major tonality, for example, is introduced first in both learning sequence activities and classroom activities because it is the most common tonality in western culture and, therefore, the most familiar. Likewise, tonic and dominant functions are introduced first because they are the most basic tonal functions in major tonality.

## **Tonalities**

The term tonality traditionally refers to major and minor tonal systems, and the term modality refers to the other tonal systems that have evolved from the church modes (dorian, phrygian, lydian, mixolydian, aeolian, and locrian). In Music Learning Theory, all these systems are

referred to as tonalities to provide a common term for all tonal systems sharing the characteristic of being audiated in relation to a resting tone. A resting tone is a tonal solfege syllable associated with a particular tonality. Do is the resting tone in major tonality, re in dorian tonality, mi in phrygian tonality, and so on. The term keyality refers to the pitch name (A or Bb, for example) that functions as the pitch center, or tonic, in a piece of music. Music in what is traditionally called the "key of Bb major," for example, is in the tonality of major and the keyality of Bb.

## Tonal Patterns

Most tonal patterns are arpeggiated, rather than diatonic. Arpeggiated tonal patterns are much better for developing audiation skills because students tend to imitate consecutive pitches a half step or whole step apart.

## Tonal Solfege

Of the many tonal solfege systems available, the one best suited for developing audiation is the "moveable do with a la based minor" system. Among its merits:

- Audiation of various tonalities is facilitated by associating a unique tonal syllable with each tonality (see above).
- The internal logic of interval relationships is always maintained. The interval do - mi, for example, is always a major third regardless of context.
- Eight solfege syllables suffice for all basic tonalities: major, harmonic minor, dorian, phrygian, lydian, mixolydian, aeolian, and locrian. The only chromatic syllable required for diatonic contexts in those eight tonalities is si, the leading tone in harmonic minor.

For a more thorough discussion of tonal solfege systems, see *Learning Sequences in Music: Skill Content and Patterns*, chapter ten.

## Rhythm Content

When teaching rhythm content during learning sequence activities, the teacher is at any given time combining a level of skill learning sequence with a level of rhythm content. Levels of rhythm content are hierarchical in much the same way as levels of skill learning sequence. Each level of rhythm content serves as a readiness for achieving the next higher level of rhythm content.

Rhythm learning is facilitated by development of a sense of meter and a vocabulary of rhythm patterns. The rhythm patterns used in learning sequence activities are organized according to meter classification (usual duple, usual triple, unusual, and so on) and rhythm pattern function (macrobeats, microbeats, divisions, and so on). Meters and rhythm functions are sequenced primarily according to familiarity. Usual duple meter, for example, is introduced first in both learning sequence activities and classroom activities because it is the most common meter in

western culture and, therefore, the most familiar. Likewise, macrobeat and microbeat functions are introduced first because they are the most basic rhythm functions in usual duple meter.

## Elements Of Rhythm

Rhythm has three elements. They are macrobeats, microbeats, and melodic rhythm. All three of those elements must be audiated at the same time in order to establish rhythm syntax.

Macrobeats are those beats that one arbitrarily feels to be the longest. In most cases, macrobeats are paired: one macrobeat naturally "goes with" a succeeding macrobeat of equal or unequal duration. In dancing to music, persons normally step naturally to each pair of macrobeats with one foot followed by the other.

Example 1: Macrobeats



Microbeats are shorter than macrobeats and are derived from the equal temporal division of macrobeats. In most cases, macrobeats are divided into either two or three microbeats of equal duration.

Example 2: Microbeats



Melodic rhythm is the ongoing series of rhythm patterns in a piece of music. The rhythm patterns may coincide with the rhythm of the melody or the text of a piece of music.

Example 3: Melodic Rhythm



It is essential to identify and define rhythm elements on the basis of audiation, not notation. Rhythm audiation is somewhat subjective. In a given piece of music persons may disagree about



which beats are the macrobeats. This is as it should be, because persons differ in their rhythmic abilities. In general, the higher one's rhythmic aptitude and achievement the longer the macrobeats one audiates. In music notated with the measure signature of 4/4, for example, it is common for some persons to audiate quarter notes as macrobeats while others audiate half notes as macrobeats. Some might even consider whole notes to be the macrobeats. (Note that, the subjectivity of rhythm notwithstanding, teachers must make arbitrary decisions about macrobeats and microbeats for the sake of teaching clarity and efficiency, especially in discrimination learning.)

## Meters

Meters are defined according to the ways in which macrobeats are divided and paired. Notational examples of each meter are provided.

In usual meter macrobeats are of equal temporal length and are paired. In the examples below, the same rhythm patterns are written in different measure signatures. The notation for the rhythm patterns is said to be enrhythmic. In usual duple meter, all macrobeats are evenly divided into two microbeats.

Example 4a: Usual Duple Meter



In usual triple meter, all macrobeats are evenly divided into three microbeats.

Example 4b: Usual Triple Meter



Usual combined meter results when both duple and triple divisions of temporally equal macrobeats are employed.

Example 4c: Usual Combined Meter



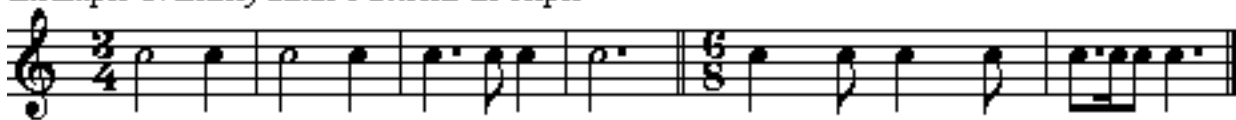
In unusual meter macrobeats are of unequal temporal length.

### Example 5: Unusual Meter



As with rhythm elements, it is also important to define meters on the basis of audiation, not notation. A common mistake is to assume that because one piece of music is notated in the measure signature of 3/4 and another is in 6/8 they are in different meters. In fact, however, both pieces would normally be examples of simple triple meter. In 6/8, paired macrobeats are written within the same measure, whereas in 3/4, paired macrobeats are written in adjacent measures. Each measure of 6/8 is audiated the same as two measures of 3/4.

### Example 6: Enrhythmic Patterns in Triple



## Rhythm Functions

In Music Learning Theory, rhythm functions are systematically categorized and sequenced. Whereas traditional music teaching practices often sequence rhythm instruction according to the logic of notation, in Music Learning Theory sequence of rhythm functions is determined by audiatational difficulty. Traditional instrumental instruction, for example, often begins with whole notes, the assumption being that longer notes are easier to "understand" and perform. Research, however, indicates that whole notes are difficult to audiate, and therefore inappropriate for beginning instruction in rhythm.

Rhythm instruction according to Music Learning Theory commences with macrobeat/microbeat patterns in usual duple meter and usual triple meter.

### Example 7: Macrobeat/microbeat Patterns



Next come division patterns, elongation patterns, rest patterns, and tie patterns. The examples below are in usual duple meter.

### Example 8: Other Rhythm Functions



## Rhythm Solfege

Of the many rhythm solfege systems available, the one best suited for developing audiation is the beat function system developed by Edwin E. Gordon and others. Among its merits:

- It is based on how rhythm is audiated. Other systems are based largely on how rhythm is notated. Because the same pattern may be notated in more than one way, it is confusing to hear and perform it with different verbal associations.
- It is very comprehensive, accounting unambiguously for virtually any rhythm. Duple, triple, unusual, combined—any pattern in any meter has its own unique syllables, which facilitates the ability to distinguish between different patterns, functions, and meters.

Notated examples of the solfege for rhythm patterns in usual duple, usual triple, usual combined, and unusual meters are shown below:

### Example 9: Rhythm Solfege

Usual Duple Meter

Usual Triple Meter

Usual Combined Meter

Unusual Meter

Detailed description: The image shows four staves of musical notation in treble clef. Each staff is labeled with a meter name. The first staff is 2/4 time, showing a sequence of notes with solfege syllables: 'Du Du Du', 'Du De Du De', 'Du De', 'DuTaDe Ta Du Ta', 'Du De De', 'DuTaDe DuTa Ta Du'. The second staff is 6/8 time, showing: 'Du Du Du', 'DuDa Di DuDa Di', 'Du Di Du Da', 'DuTaDaTaDi Ta Du Ta Di', 'DuTaDa Di Du'. The third staff is 2/4 time, showing: 'Du De Du Da Di', 'Du Da Di Du De'. The fourth staff is 5/8 and 7/8 time, showing: 'Du Du', 'Du Be Du Ba Bi', 'DuTaBe', 'Du Ba Ta Bi Ta', 'Du Du Du', 'Du Be Du Ba Bi Du'. The 5/8 and 7/8 time signatures are indicated by a vertical line between the two parts of the staff.

For a more thorough discussion of rhythm solfege systems, see *Learning Sequences in Music: Skill, Content, and Patterns*, chapter ten.

## Classroom Activities

Music Learning Theory is sometimes viewed as a uniquely different approach to all aspects of music teaching. This characterization is inaccurate. The purpose of Music Learning Theory is to provide *all* music teachers with knowledge and tools to develop their students' tonal and rhythm

audiation within the context of traditional music teaching practice. Music Learning Theory should be seen as a powerful way to enhance the many things good music teachers already do well.

Although learning sequence activities are where Music Learning Theory is directly applied, they take only five to ten minutes of each music class period. The remainder of the class is spent doing classroom activities. Band, orchestra, chorus, jazz, elementary general music, multicultural music, Orff, Kodaly, Suzuki: any approach to music can be enhanced by the skills and terminology children learn in learning sequence activities.

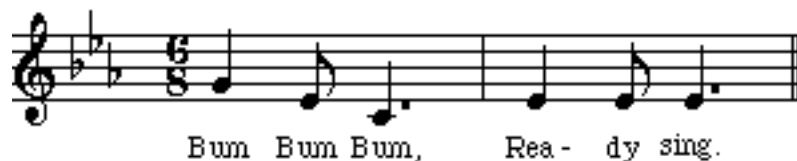
## Teaching A Rote Song

Rote songs are an essential component of each student's aural/oral foundation. All music teachers, whether they use learning sequence activities or not, should teach their students rote songs. Instrumental students are especially apt to experience years of music instruction without ever learning to play by ear. They should, of course, first learn to sing each song before playing it. Following are some recommendations for effective rote song instruction:

Establish tonality and meter. The "tune-up" is an excellent way to start a song. Shown below is a tune-up for a major song in duple starting on mi (such as "Go Tell Aunt Rhody"). In this simple four beat pattern you establish seven crucial aspects of the song: tonality, meter, keyality, resting tone, starting note, tempo, and style. Some teachers like to precede the tune-up by establishing tonality at the keyboard (tonic-dominant-tonic, for example, in major).



A tune-up for a minor song in triple meter would go like this:



Repetition. A class may need to hear a song four to six times before most students are able to sing it accurately. Keep them actively involved in the listening process by adding a new task to each repetition. This sequence works well:

- Step 1 - Just listen to the teacher sing the song (unaccompanied).
- Step 2 - Move heels to macrobeats while listening.
- Step 3 - Move hands (patsch lightly on thighs) to microbeats while listening.
- Step 4 - Move to both macrobeats and microbeats while listening.
- Step 5 - Audiate the resting tone while listening. Sing the resting tone after teacher finishes singing the song.

Step 6 - Audiate the song.

Step 7 - Sing the song without accompaniment.

Step 8 - Sing the song with accompaniment.

Delete or add steps as appropriate. You might precede each of the listening steps with a standard tune-up finishing with "Lis-ten, please" or "Au-di-ate" instead of "Rea-dy, sing." If the group has difficulty singing a part of the song, don't go back to the beginning. Isolate the troublesome segment and repeat as necessary, then repeat the entire song.

Sing for students, not with them. Students first need to hear you sing the song in order to learn it. When it's their turn to sing don't provide them with an aural model (your voice or the piano) to imitate. Just listen, or play a keyboard accompaniment without melody. When the melody is always sounded for them, students may learn only to hone their skills of rapid pitch-tracking. They don't necessarily learn to internalize the song through audiation.

Teach the song first, then teach the words. Words are a valid part of songs, but it is best to teach them after students have learned the musical aspects of the song. If you teach the text first, much or most of students' attention will be on the words, not audiation. Children in our culture get plenty of practice learning language, but rather little learning music through their ears. Maximize their opportunity to learn to audiate the song by postponing teaching the words. Then, when you do teach the text, teach it in segments, chanting (without pitch) to the melodic rhythm of the song.

Teach bass lines. Conscientious music teachers want their students to grasp the "big picture" in music, to understand how their part relates to others in the overall musical texture. But how does one approach this important objective. What should one tell them to listen to? And how should they listen? Start simply, by teaching bass lines, also known as root melodies, to familiar tunes. Every tune has one, and knowing the bass part is the foundation for understanding the harmony of a tune. Teach students to sing the bass line just as you would any other rote song. Then, if you are teaching instrumental music, teach them to play it. Create an instant duet by splitting the class in two, with half singing or playing the melody, the other half the bass line. Or, have students sing or play the bass line while they audiate the melody, and vice versa (sing or play the melody while audiating the bass line). Gradually, students will learn to bring greater harmonic understanding to all the music they sing, hear, and play.

## **Coordinating Learning Sequence Activities And Classroom Activities**

A few basic principles guide the teacher in effectively coordinating learning sequence activities with classroom activities. Both skill learning sequence and content learning sequence must be addressed.

Coordinate general types of content, not specific patterns. It is not necessary to coordinate the specific tonal patterns and rhythm patterns found in the literature used in classroom activities at any given time with the patterns taught in learning sequence activities. Such a practice would be far too complex. Coordination is instead accomplished according to general categories of content. The tonalities, meters, tonal functions, and rhythm functions found in the music

literature being used in classroom activities at any given time are the same ones being used in learning sequence activities. For example, if a class is studying a song in classroom activities that contains tonic and subtonic patterns in dorian tonality, tonic and subtonic tonal patterns in dorian are the patterns that the teacher would teach in learning sequence activities. The same principle would apply to the specific meters and rhythm functions of the rhythm patterns used during learning sequence activities.

### **Rules of content and skill introduction**

Two rules dictate the process of introducing new content (both tonal and rhythm) and levels of skill learning sequence:

New skills are always introduced in learning sequence activities. Students first experience verbal association in pattern instruction. Likewise, they would read (symbolic association) and improvise with tonal and rhythm patterns in learning sequence activities before attempting those skills with music literature in classroom activities.

New content is always introduced in classroom activities. The first time students experience a new tonality, for example, is in classroom activities. Say they have learned some songs in major. Perhaps they have also started tonal pattern instruction (learning sequence activities) with tonic and dominant patterns in major. Then they are introduced to minor by learning a minor song. There is no reference to the tonal solfege for minor at this time. They simply learn the song by rote. Soon after this, perhaps within two to four class periods, is an appropriate time to start teaching tonic and dominant tonal patterns in minor at the aural/oral level in learning sequence activities. The same principle holds true for rhythm content. If students have learned some songs that contain macrobeat and microbeat patterns in duple meter, their first experience with triple meter would be in a song taught by rote in classroom activities.

## **Using Tonal Patterns And Rhythm Patterns During Classroom Activities**

Learning sequence activities provide students with skills and knowledge that enable them to bring greater understanding to the music they study in classroom activities. By isolating the tonal and rhythm patterns that constitute a musical work, teachers help students comprehend how musical parts fit together to form musical wholes.

The number of possible ways to refer to tonal and rhythm patterns while teaching music literature is virtually limitless. Many examples are provided in chapter nine of Learning Sequences in Music: Skill, Content, and Patterns. Some representative examples from various levels of tonal skill learning sequence follow.

Aural/Oral. Sing, using a neutral syllable, one or more tonal patterns included in the rote song that students are learning. Then ask students to audiate and to sing, using a neutral syllable, each tonal pattern in ensemble and/or solo at various times as they are learning the song.

Verbal Association. Sing, using tonal syllables, one or more tonal patterns included in the rote song that students are learning. Then ask students to audiate and to sing, using tonal syllables, each tonal pattern in ensemble and/or solo at various times as they are learning the song.

Symbolic Association-reading. Isolate an individual tonal pattern in a rote song. Sing the tonal pattern without rhythm, using tonal syllables. Then ask students to audiate and to read the tonal pattern without rhythm, using tonal syllables.

Generalization-verbal. Sing one or a series of unfamiliar tonal patterns using the text or a neutral syllable, that are part of an unfamiliar song. Ask students to audiate and to sing, without rhythm, the one or series of unfamiliar tonal patterns, using tonal syllables.

Note that when addressing tonal patterns or rhythm patterns during classroom activities, the teacher should present them in the same way as during learning sequence activities: tonal patterns without rhythm and rhythm patterns without pitch.

## Specific Applications To Music Instruction

### General Music

The application of music learning theory in a general music or vocal music setting occurs within a whole-part-whole structure for the overall curriculum and the individual class period. An overview of the curriculum structure is presented below.

WHOLE	PART		WHOLE
Experience the Whole	Study the Parts		Understand and Comprehend the Whole
CLASSROOM ACTIVITIES	LEARNING SEQUENCE ACTIVITIES		ALL MUSIC
	Type of Learning		
Sing Chant Move Dance Create Improvise Perform Play Read Write	DISCRIMINATION  Aural/Oral Verbal Association Partial Synthesis Symbolic Association Composite Synthesis	INFERENCE  Generalization-Aural/Oral Generalization-Verbal Creativity/Improvisation Generalization-Symbolic Theoretical Understanding	Sing Chant Move Dance Create Improvise Perform Play Read Write

Students are introduced to a given skill level in learning sequence activities and then are taught to use that skill level in classroom activities. Students are introduced to content in classroom activities, building listening and interaction vocabularies in new content.

During classroom activities teachers should focus on exposing children to new and unusual tonalities and meters using familiar classroom techniques such as singing, chanting, moving, and dancing. At the same time they should be teaching children to understand and comprehend familiar tonalities and meters (major and minor, duple and triple) in learning sequence activities. Children are ready to study the specific parts of familiar tonalities and meters because they have heard music in those tonalities and meters in the culture and they have learned to sing, chant, and move to music in those tonalities and meters.

Learning Sequence Activities should be taught during the first ten minutes of every general music class period. Tonal and rhythm Learning Sequence Activities should be presented on alternate weeks. Even though children are learning in major and minor tonalities and duple and triple meters in Learning Sequence Activities, they should be experiencing music in other tonalities and meters in classroom activities.

Movement is an important part of music education. Children should experience continuous fluid movement with flow and weight before they are taught to focus on beat movement and before they experience movement focused on space and time.

A typical 30-45 minute general music class period should include 10 minutes of Learning Sequence Activities and a variety of other activities that feature singing, movement, creativity and improvisation, and play. Children should sing, chant, and move during every general music class period.

There is no need to coordinate the tonal or rhythm content of Learning Sequence Activities and Classroom Activities within a single class period. It is the skill level itself that transfers, not the specific content.

For example, in Learning Sequence Activities, a child may be learning to identify and sing tonic and dominant patterns in major or minor tonality. In Classroom Activities songs in other tonalities should be taught. If the children have not yet learned to identify resting tone and harmonic function in Learning Sequence Activities, the teacher may still focus attention in resting tone and tonic function by having the children sing those important functions using a neutral syllable.

If the children in the class have reached the verbal association level in Learning Sequence Activities, it would be appropriate for the teacher to label the resting tone of the song and to sing the tonic function with solfege syllables. The teacher should briefly explain that the song they are moving to or learning to sing also has a tonic function and a resting tone. For example, if the children are learning to sing a song in Dorian tonality, the teacher should identify the resting tone as RE and should sing the tonic pattern using the syllables LA FA RE. There is no need to explain the theory of Dorian tonality and its relation to major or minor tonality. The idea that there is a resting tone and a tonic function (and other important harmonic functions) is what is important.

Jump Right In: The General Music Series is the new series that guides teachers in implementing Music Learning Theory principles and methods in the elementary general music classroom. The entire series will encompass kindergarten through eighth grade. Books and recordings for first, second, and third grades should be available by summer, 1998.



## Instrumental Music

The goal of instruction in instrumental music is to learn to play an instrument as an extension of the inner audiation instrument. When students are able to "sing" through their instrument, they play with better intonation, phrasing, expression, and rhythmic "flow."

Prior to beginning instruction on the instrument, students build a strong audiation foundation through singing, chanting, and rhythmic movement. Each song they learn to play on their instrument is first learned through singing. Learning sequence activities proceed much as in a general music classroom, but with the added step of playing tonal and rhythm patterns on the instruments. Executive skill development also commences prior to the first experiences playing the instrument. Students articulate basic rhythmic figures in separated and connected styles using the voice, the breath, the mouthpiece, and finally the assembled instrument. And, while fingering an "imaginary" instrument, they sing the tonal patterns, melodic patterns, and songs they will later learn on their real instrument.

An audiation-based approach to instrumental instruction differs significantly from traditional methods:

Rote before note. Singing and playing by ear are essential for developing the ability to connect audiation to the physical manipulation of the instrument. Instrumentalists should spend at least a semester playing by rote before learning to read notation. Tonal and rhythm patterns—sung, chanted, and played—are the content of learning sequence activities. Songs are the primary content of classroom activities. Songs are musical stories, essential components of the aural/oral foundation upon which higher levels of audiation skill are built. In early language learning, a large repertoire of familiar stories is a readiness for formal instruction in reading. The same is true in music, and the number of songs a student knows is an important measure of musical achievement. At all stages of instrumental instruction, students should be encouraged to learn to sing and play as many rote songs as possible.

Patterns, not individual notes. Most beginning instrumental methods start by having students play one note at a time. Because a single note has no musical meaning, this process does little to develop audiation and the connection between the inner audiation instrument and the physical instrument. Further, many methods begin with whole notes, which are difficult to audiate. In *Jump Right In: The Instrumental Series* students first learn to perform basic tonal and rhythm patterns. The first rhythm patterns they learn are at the most basic level of rhythm content, namely, macrobeat and microbeat patterns in duple meter. (These patterns are first notated as quarter notes and eighth notes in the measure signature of  $2/4$ . Later, students read the same patterns, with the same rhythm solfege, as half notes and quarter notes in  $2/2$ , or "cut" time.) They soon encounter these same basic patterns in the songs they learn to sing, play, and read.

Solfege, not letter names. Students learn the letter names of musical notes at the theoretical understanding level of inference learning. That level should be preceded by extensive experience audiating tonal and rhythm solfege while singing and playing by rote or from notation. Instrumental students learn to associate tonal syllables with specific fingerings in different keys. They also play songs and tonal patterns in different keys, establishing an early foundation for development of transposition skills.

Jump Right In: The Instrumental Series is a complete method for teaching the audiation and executive skills necessary for instrumental musicianship. In addition to a teachers manual and a variety of student books, the series includes compact disc recordings of 300 tunes students can use to develop their rote song repertoire.

## Improvisation

Musical improvisation is a uniquely fulfilling form of musical expression and an essential component of comprehensive music learning. To improvise is to demonstrate understanding of music in much the same way as the ability to rephrase a paragraph in one's own words is a measure of language comprehension. Musicians who improvise bring greater understanding through audiation to the music they listen to, perform, read, and write.

To teach improvisation effectively, proper sequence is crucial. Learning is most efficient when it proceeds one step at a time, but beginning improvisors are often introduced simultaneously to several new processes. They are taught a new skill (improvisation) at the same time they encounter an unfamiliar style and literature (jazz). And instrumentalists' difficulties are sometimes compounded when they try to improvise without having first mastered the essential readiness of playing familiar tunes by ear.

Following are some guidelines that will help the teacher teach improvisation in accordance with Music Learning Theory principles:

Sing first. To improvise meaningfully, the instrumentalist must learn to play the instrument as an extension of the inner audiation instrument. Singing is the key.

Learn lots of tunes by ear. Learning a large repertoire of tunes is at the heart of improvisation. The objective is for the student to learn so many melodies and bass lines that he begins to hear harmonic progressions ("the changes") and generate his own melodic lines.

Learn tunes thoroughly. A key to improvisational success is the ability to audiate the tune while improvising. To do this, the tune must be learned well. Beginning improvisors should spend enough time listening to, singing, then (if instrumentalists) playing each tune so that audiating and performing it become second nature.

Learn bass lines. A capable improvisor audiates in at least three separate "tracks" simultaneously. As he creates his improvisation, he also has an ongoing awareness of both the melody and the bass line of the tune to which he is improvising. Knowing the bass line, otherwise known as root melody, is the foundation for understanding the harmony of a tune. Students should learn to sing the bass line just as they would any other rote song.

Use familiar tunes of appropriate difficulty. Beginning improvisors are often asked to improvise to jazz or blues tunes that are harmonically complex and stylistically unfamiliar. A better practice is to start very simply, especially with regard to tonal content. Beginners of all ages, including many with extensive traditional music training, find the task of improvising to a simple major tune comprised of only tonic and dominant tonal functions very challenging. As

skill grows, tunes with new tonalities and new tonal functions can be added to the student's tune repertoire.

Focus on the ears. Beginning improvisors are sometimes shown a set of written notes and then are told to use those notes somehow to create their own unique musical ideas. Lacking the ability to audiate the melody, bass line, and form of the tune, however, the student can do little more than explore aimlessly what he sees on the page or chalkboard. Likewise, students are often told the theory of intervals, chord spellings, and tonal functions, but such intellectual understanding in the absence of aural ability is of little value. A better approach is to put notation and theory aside for a while and encourage the student to rely entirely on audiation.

Try to make up your own melodies. After learning many tunes, initiate the idea of improvisation by creating responses to familiar songs and musical phrases performed by another individual.

Improvise with tonal and rhythm patterns. To improvise intelligently, one must have something to improvise with. Learning sequence activities help the student develop the tonal and rhythmic vocabulary necessary for successful improvisation in classroom activities. Remember, improvisation is a level of skill learning sequence, and new skills should always be introduced in learning sequence activities (see rules of content and skill introduction). By improvising tonal patterns and rhythm patterns in learning sequence activities, students build a foundation for combining tonal and rhythm elements successfully when improvising to a tune.

Having built foundational skills with familiar rote tunes, interested students are ready to learn the specific styles, literature, harmony, and vocabulary of jazz improvisation.

Creativity in Improvisation, by Christopher Azzara, is an improvisation method that is based on the learning principles described here. It comes with a professionally recorded CD containing familiar tunes, their bass lines, and rhythm section accompaniments. Also included are tracks for practicing tonal and rhythm patterns in various tonalities and meters.

## **Early Childhood**

One's potential to learn is never greater than at the moment of birth. The early years of life are crucial for establishing a foundation for lifelong music development. A child's musical experiences from birth to age five have a particularly profound impact on the extent to which she will be able to understand, appreciate, and achieve in music as an adult. Children must be exposed to a rich variety of music during these years in order to develop the necessary readiness for formal music learning when they are older.

Children learn music in much the same way they learn a language. After listening to the sounds of her native language for some months, a child goes through a stage of language babble, in which she experiments with speech sounds that do not make sense to adult listeners. Soon afterward, she "breaks the code" of her language and is able to first imitate words, and then use them meaningfully in phrases and sentences of her own.

Children also go through stages of music babble, in which they make sounds that typically do not make musical sense to adults. In tonal babble the child sings in a speaking voice quality. In rhythm babble she moves erratically, without consistent tempo or discernible meter.

Children who have not yet emerged from music babble do not benefit from formal music instruction. They should not be taught as if they are young adults or kindergarten children. Parents and teachers should instead informally guide them to an understanding of music just as they informally guide them to an understanding of their spoken language before they receive formal schooling.

## **Guidance And Instruction**

All guidance is informal in nature, because the parent or teacher does not impose information and skills upon the child. Rather, the child is exposed to her culture and encouraged to absorb that culture. Nothing specific is expected or demanded from children in terms of their musical responses.

There are two types of informal guidance. In unstructured informal guidance, which is appropriate from birth to approximately age three, the parent or teacher does not plan specifically what she will say and do. In structured informal guidance, which should take place roughly between ages three and five, the parent or teacher does plan specifically what she will say and do, but does not expect specific responses from the child.

Formal instruction should normally commence at age five, when the child enters kindergarten. In formal instruction, in addition to the parent or teacher specifically planning what will be taught, teaching is organized into allotted time periods, and cooperation, including specific types of responses, is expected of the child.

## **Preparatory Audiation**

The musical thinking of children who have not emerged from music babble is called preparatory audiation. Children in preparatory audiation should receive unstructured and structured informal guidance in music. They will not benefit from formal instruction until they have learned to audiate.

There are three types of preparatory audiation. They are acculturation, imitation, and assimilation. The seven stages of preparatory audiation exist within the three types of preparatory audiation according to the following table.

## Types And Stages Of Preparatory Audiation

TYPE	STAGE
<b>Acculturation</b> Birth to age 2-4: Engages with little consciousness of the environment.	Absorbtion: Hears and aurally collects the sounds of music in the environment.
	Random Response: Moves and babbles in response to, but without relation to, the sounds of music in the environment.
	Purposeful Response: Tries to relate movement and babble to the sounds of music in the environment.
<b>Imitation</b> Age 2-4 to age 3-5: Engages with conscious thought focused primarily on the environment.	Shedding Egocentricity: Recognizes that movements and babble do not match the sounds of music in the environment.
	Breaking the Code: Imitates with some precision the sounds of music in the environment, specifically tonal patterns and rhythm patterns.
<b>Assimilation</b> Age 3-5 to age 4-6: Engages with conscious thought focused primarily on self.	Introspection: Recognizes the lack of coordination between singing and breathing and between chanting and muscular movement, including breathing.
	Coordination: Coordinates singing and chanting with breathing and movement.

The types and stages of preparatory audiation are hierarchical and progressively cumulative, the extent of success with each higher type being dependent upon the extent of success with all types below it.

### Acculturation

Acculturation is fundamental to children's musical development. It takes place as children absorb the music of their culture. Gradually they learn to distinguish the sounds in their environment from the sounds that they themselves produce. Then they learn to discriminate among sounds in their environment.

When a young child engages in acculturation her attention is not continuous, but she is aware of most of what she hears. She will often respond to music, but not necessarily with the response that adults want or expect. Further, immediate results in terms of music achievement should not be expected at this stage. It may take eighteen months or longer before the benefit of guidance in music acculturation can be observed.

Absorbtion. Ideally, this stage takes place from birth to age eighteen months. The type of informal guidance is unstructured. In this stage of preparatory audiation, children absorb the music of thier culture by listening to music comprised of many tonalities, keyalities, harmonies, meters, and tonalities. Instrumental music is best, as the words of vocal music tend to distract children's attention from musical characteristics. Children also benefit greatly from hearing their parents and teachers sing and chant to them. They should not be "taught" songs nor expected to respond in specific ways to the music they hear.

Random Response. Ideally, this stage takes place between the ages of one and three years. The type of informal guidance is unstructured. Whereas listening is the emphasis of stage one (absorption), participation is emphasized in stage two. The child makes various music babble sounds and movements. Although listening to live and recorded instrumental music continues to be beneficial, hearing chants and songs "live" from parents and teachers assumes major importance at this stage. Care should be taken in singing and chanting a given song or chant in the same tonality, key quality, range, meter, and tempo.

Purposeful Response. The typical child engages in stage three of preparatory audiation when she is from eighteen months to three years old. At this stage, children should receive structured informal guidance. The structure is not centered around songs and chants. Instead, children are encouraged to participate in the singing of tonal patterns and the chanting of rhythm patterns. Children in stage three of preparatory audiation attempt to echo the tonal patterns and rhythm patterns they hear, although they should not be expected to perform accurately.

### **Imitation**

In musical imitation the child begins to make the transition from preparatory audiation and music babble to audiation. Her musical actions become more purposeful than in the three stages of acculturation. Whether her attempts to imitate are correct or incorrect, a child profits greatly from engaging in music imitation. She begins to learn how to teach music to herself.

Shedding Egocentricity. In this stage the child first becomes aware that what she is singing or chanting is not what another person is singing or chanting. Guidance from a parent or teacher is crucial. After hearing a tonal pattern or rhythm pattern, the child will usually imitate incorrectly, with her own pattern. At this point the parent or teacher imitates the child's pattern. In time the child learns to discriminate the differences between the pattern she heard and her own performance of it.

Breaking the Code. In stage five of preparatory audiation the child first attempts to enter and to participate successfully in the adult's world of music. She develops the ability to perform tonal patterns and rhythm patterns with some accuracy. The parent or teacher assists in this process by echoing the child's inaccurate performances of patterns first with the child's version, then a repetition of the correct pattern. The confusion that the child experiences as she engages in stage five of preparatory audiation is good confusion. That the child is attempting to perform the pattern is an indication that she is learning. Eventually, incorrect responses are followed by correct responses.

### **Assimilation**

During the assimilation type of preparatory audiation the child starts to become aware of musical syntax. Whereas imitation is analogous to performing individual words in speaking, assimilation involves the ability to use and comprehend musical phrases. She learns to perform patterns with some precision as she coordinates and assimilates the imitation of those patterns with the movement of her body and muscles.

Introspection. In this stage the child learns to compare what she is performing with how she is moving. She must discover for herself that the patterns she is performing are not coordinated

with her movement. This stage is crucial to the development of audiation, because she must be able to coordinate musically with herself before she can be expected to coordinate musically with someone else.

Coordination. In this stage the child learns to coordinate her singing of tonal patterns with her muscular movement and breathing, and her chanting of rhythm patterns with her muscular movement and breathing. She is able to learn to audiate as she listens to, performs, reads, writes, creates, and improvises music.

## Types Of Audiation

The types of audiation are not hierarchical. Some of the types, however, serve as readinesses for others.

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 and improvising	unfamiliar music
Type 7	Creating and improvising	unfamiliar music while reading
Type 8	Creating and improvising	unfamiliar music while writing

## Stages Of Audiation

As theorized, the six stages of audiation are hierarchial—one stage serves as a readiness for the next. The table below outlines the stages of audiation as they occur in Type 1 of audiation (listening to familiar and unfamiliar tonal patterns and rhythm patterns in familiar and unfamiliar music).

Stage 1	Momentary retention
Stage 2	Initiating 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	Consciously retaining in audiation tonal patterns and rhythm patterns that we have organized
Stage 5	Consciously recalling patterns organized and audiated in other pieces of music
Stage 6	Conscious prediction of patterns