Teaching Stringed Instruments According to Gordon's Music Learning Theory

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Playing an instrument requires both executive skills (physical skills) and audiation skills (mental-musical skills). String teaching, and instrumental teaching in general, have focused primarily on developing executive skills. Private lessons, master classes and string workshops are primarily concerned with the physical mechanics of playing. The teaching of audiation skills, however, has been largely ignored, or taken for granted. Instead of teaching audiation skills, much attention is given to teaching notation and music theory, often before the student has the necessary readiness to bring musical meaning to the notation. A music instrument can be no more musical than the person playing it, and musicianship must be learned through the ear. It cannot be learned from notation.

Shinichi Suzuki (1898-1998) rocked the string world in the 1960's when he demonstrated that the "*Mother Tongue Approach*" could be used to teach very young children to perform at a high level of proficiency before notation is introduced. Suzuki emphasized the importance of learning by ear before learning from notation, and learning executive skills one small step at a time in a carefully organized sequence. Suzuki teachers and students would benefit by incorporating aspects of Gordon's Music Learning Theory into their lessons.

Playing a music instrument requires the development of two types of skills: Executive Skills and Audiation Skills. Executive skill refers to all of the physical movements necessary to play the instrument. Audiation skill refers to the processing of sound in the player's mind

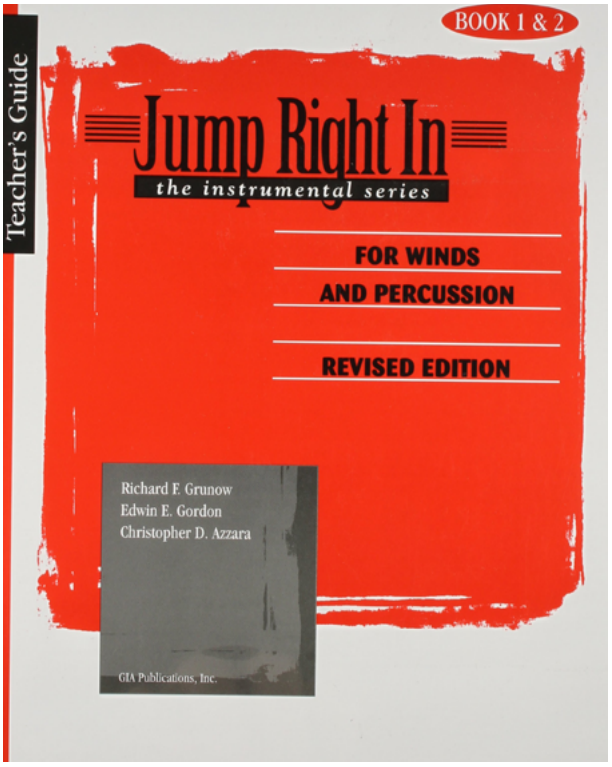
Edwin E. Gordon (1927-2015), American researcher, psychologist, and musician, developed Music Learning Theory, the only comprehensive theory of how audiation skills are learned. Jump Right In: The Instrumental Series is a beginning method for strings, winds, percussion and recorder. Based on Music Learning Theory, Jump Right In places equal emphasis on development of audiation skills and executive skills.

In this article, the author will discuss his own experience using Music Learning

Theory and Jump Right In with string students, recommendations for further improvements in the next edition of Jump Right In, how Music Learning theory can be combined with Suzuki and other methods, and implications and applications for string teachers around the world.

Audiation: The Missing Ingredient

Playing a music instrument requires the development of two types of skills:

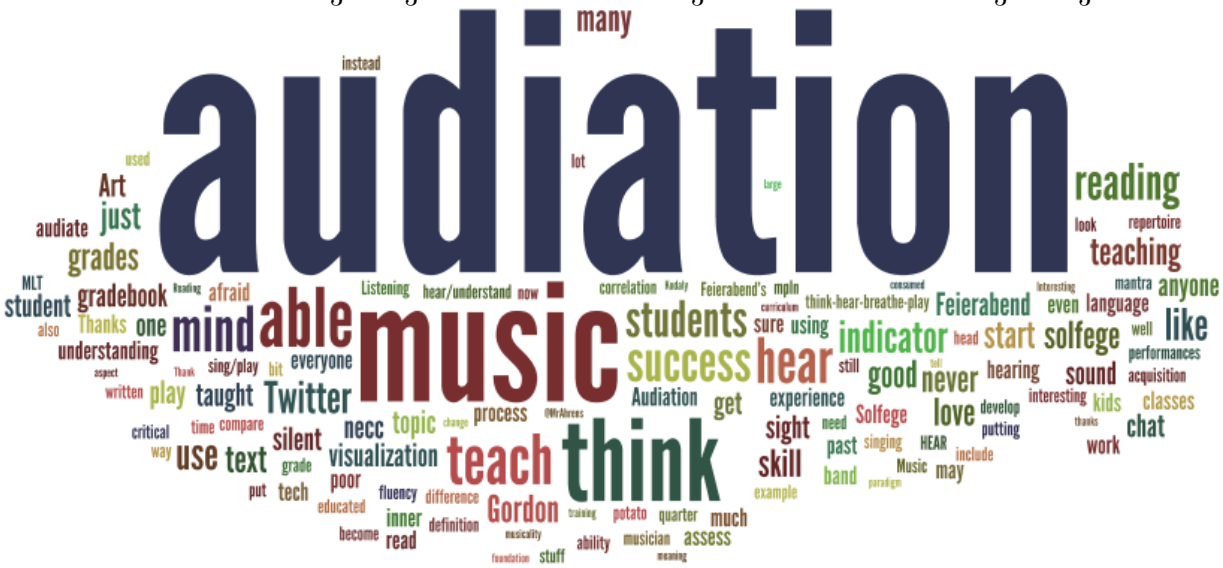


Executive Skills and Audiation Skills.[1] Executive skill refers to all of the physical movements necessary to play the instrument. Audiation skill refers to the processing of sound in the player's mind. An instrument can be no more musical than the person playing that instrument. Audiation is what the musician wishes to express. Executive skill is how the musician expresses audiation through the instrument. Both audiation skills and executive skills are given equal emphasis in Jump Right In: The Instrumental Series,[2] because both are essential. One must be hearing in one's mind and comprehending what one wants to produce on an instrument, AND one must possess the technical skills to communicate that musical thought.

Teaching of audiation skills is informed by Music Learning Theory. Teaching of executive skills is informed by a long tradition of string pedagogy. Music Learning Theory does not address

1 Audiation is a word coined by Dr. Edwin E. Gordon to describe the process of assimilation and comprehension of the intrinsic elements of music. For a complete definition and discussion, see, Edwin E. Gordon, Learning Sequences in Music: A Contemporary Music Learning Theory, (Chicago: GIA Publications, Inc., 2012).

2 Richard F. Grunow, Edwin E. Gordon, Christopher D. Azzara, and Michael E. Martin, Jump Right In: The Instrumental Series-for Strings, 2nd ed. (Chicago: GIA Publications, Inc., 2002).



executive skill development; however, executive skills become easier to teach when students are audiating. Students who are audiating will figure out how to move the bow to achieve the style and tone quality they wish to produce. Students who are audiating will adjust left hand to adjust intonation and execute accurate shifts. As with any approach, the teacher must be constantly vigilant that proper physical habits are being developed. Teachers should be encouraged to become experts in executive skill development and they should use their own preferred approach to technical skill development. The teacher should try to combine, whenever possible, the learning of executive skills with audiation skills. For example, as students learn new fingerings, they should be asked to sing pitches before and while they finger. Similarly, students should be asked to chant new rhythm patterns before and as they play them. Audiation should always precede executive skill. Everything should be audiated and performed with the voice and imaginary instrument, before performing on the instrument. Students must be taught that audiation is the most important skill for a musician. They must also be constantly reminded to audiate what they are about to play.

Teaching Audiation Skills

Audiation is best developed by involving students in two types of activities:

1. Learning many songs by ear.
2. Developing a vocabulary of tonal patterns and rhythm patterns.

SINGING SONGS

The largest part of the lesson time should be spent developing a repertoire of literature. Choose melodies your students can successfully learn to sing and play. Repertoire should include melodies in at least major and harmonic minor tonalities. Include melodies in at least

Usual Duple and Usual Triple Meters.[3] Include folk songs, classical melodies, and melodies from other cultures. Choose songs in a variety of styles.

It is essential that students are able to sing a song before beginning to play it on their instruments. The process of audiation begins as students hear (aural) and sing (oral). Songs should be sung without words, on a neutral syllable, such as "doo doo doo…," allowing the child to focus completely on the sound of music. Following is a suggested procedure to begin the audiation process:

1. Engage the students in continuous flowing movement and deep breathing while singing the song FOR them.
2. Sing the resting tone for students and ask them to hold the resting tone in their audiation while you sing the song FOR them. Check to see if they are audiating the resting tone by pausing, asking students to audiate, breathe, and sing the resting tone.
3. Model by moving your heels to the macrobeats of the song, and ask students to move with you as you sing the song FOR them.

Model by moving your hands to microbeats of the song, and ask students to move with you as you sing the song FOR them. Model by moving to both macrobeats and microbeats of the song, and ask students to move with you as you sing the song FOR them. Ask students to silently audiate the whole song and signal when they are done.

4. Ask students to sing the entire song. Evaluate their performance. Do not sing or play WITH them.
5. Ask students to echo phrases of the song as necessary.
6. Add a chordal accompaniment (no melody).
7. Add words if desired.
8. Teach a bass line for the song, consisting of the roots of the harmonic progression (DO-SO-DO for I-V-I in major tonality).[4]

3 In Usual meters, macrobeats are all of the same temporal length. Macrobeats are divided into either two or three microbeats.

4 In Gordon's Music Learning Theory, the use of moveable DO with a LA-based minor is the preferred tonal syllable system, because of its internal logic and musical meaning. Gordon believed this system best provides the tools for students to be able to label and aurally discriminate among tonalities, meters and functions. This author is keenly aware of the difficulties this system may face in some languages and cultures; however, the teacher must find and use a logical system of syllables to teach musical meaning. The fixed-DO system, common in many countries and in some U.S conservatories, has no musical meaning or logic, and completely ignores CONTEXT. For a complete discussion of tonal and rhythm syllable systems, see Gordon, (2012).

9. Teach other simple harmony parts for the chord progression of the song (DO-TI-DO and MI-FA-MI for I-V-I in major tonality).

   One of the unique aspects of Gordon's Music Learning Theory is the focus on the deep structure of underlying tonality and meter. Gordon refers to this as the musical CONTEXT, as opposed to CONTENT, which refers to patterns in the "surface structure." Meaning is given to music through audiation of context, just as meaning is given to language by the context.[5] Gordon believed if students are audiating CONTEXT, they will be more likely to perform accurate CONTENT.

NEVER sing an entire song with tonal syllables, rhythm syllables, or pitch names. There are several reasons for this. The most important are:

1. Students will memorize and not audiate. Students' attention should be focused on the sound. As musicians, the sound should direct everything we do.
2. Students will confuse tonal elements and rhythm elements. Anytime tonal and rhythm elements are combined, use a neutral syllable.

SINGING TONAL PATTERNS AND CHANTING RHYTHM PATTERNS

Another unique aspect of Music Learning Theory is the teaching of patterns instead of the teaching of individual notes. Individual notes have no musical meaning, just as individual letters (with few exceptions) have no meaning in language. Patterns are the smallest unit of meaning in music, just as words are the smallest unit of meaning in language. Gordon believes 5 – 10 minutes of each class, lesson, or rehearsal should be devoted to the development of a vocabulary of tonal patterns and rhythm patterns. Gordon suggests one week be devoted to tonal pattern instruction and the next week to rhythm pattern instruction. This part of the lesson is known as "Learning Sequence Activities" or "LSA's," because, during this part of the lesson, we adhere to specific sequences of Skill and Content.[6]

5 For a discussion of deep structure, middle structure, and surface structure in language, see Noam Chomsky, Aspects of the Theory of Syntax, (Cambridge, MA: MIT Press, 1965). Chomsky believed deep structure in language gives meaning and explains surface structure.

6 For a complete discussion of skill sequence, tonal content sequence, rhythm content sequence, and pattern sequence, see Gordon, (2012).

What sequence of tonal pattern content is covered in Jump Right In: The Instrumental Series?

1. Tonic and Dominant (Major and Harmonic Minor)
2. Tonic, Dominant, and Subdominant (Major and Harmonic Minor)
3. Tonic, Subtonic, and Subdominant in Dorian and Mixolydian tonalities.

What sequence of rhythm pattern content is covered in Jump Right In: The Instrumental Series?

1. Macrobeats and Microbeats (Usual Duple and Usual Triple Meters)
2. Rest patterns involving only macrobeats and microbeats (Usual Duple and Usual Triple Meters)[7]
3. Divisions of the microbeat (Usual Duple and Usual Triple Meters)
4. Elongations of macrobeat or microbeat (Usual Duple and Usual Triple Meters)
5. Other functions (rests, ties, upbeats in Usual Duple and Usual Triple Meters)
6. Macrobeats and Microbeats in Unusual Paired Meter
7. Divisions in Unusual Paired Meter
8. Macrobeats and Microbeats in Unusual Unpaired Meter
9. Macrobeats and Microbeats in Usual Combined Meter[8]

A level of content is always combined with a level of skill.

What Skill Sequence is covered in Jump Right In: The Instrumental Series?

Student is taught to:

1. Echo with a neutral syllable (Aural/Oral)
2. Name with syllable names and proper names of tonalities, meters, and functions (Verbal Association)
3. Play patterns on the instrument.
4. Create and Improvise: Student is asked to respond with a different pattern from the teacher's pattern without restrictions (Creativity) or with restrictions (Improvisation).
5. Recognize familiar tonalities and meters when series of familiar patterns are heard with a neutral syllable. (Partial Synthesis)
6. Read and Write familiar patterns

7 This is a new development which will appear in the 2nd Revised Edition of Jump Right In: The Instrumental Series.

8 For a complete discussion of rhythm content sequence, and how Gordon defines meters and rhythm functions, see Gordon (2012).

(Symbolic Association)

7. Read and Write series of familiar patterns (Composite Synthesis)
8. Read and Write familiar and unfamiliar patterns (Generalization-Symbolic)

Executive Skills

Although Gordon's Music Learning Theory does not tell us how to teach executive skills, here are a few suggestions. Most of these techniques were learned from observing other successful teachers.

Teaching of executive skills is best begun with the teacher holding a real instrument and the student holding an imaginary instrument. This will assure the student's full attention is directed at the teacher. Students should be asked to imitate the teacher as the teacher demonstrates posture, instrument position, left hand position, bow hold, and right arm movement. The right arm should be moved in both legato (detache) and staccato styles, while chanting, "doo doo doo doo…" for legato and "too too too too…" for staccato. All joints of the shoulder, arm, wrist, and fingers, as well as the entire body, should be moving with flexibility and no tension. Many rhythm patterns may be echoed while the student moves her right arm and chants the rhythm.

Once students can demonstrate proper posture, instrument position, left hand position, bow hold, and proper movement, the real instrument may be introduced, and the steps to achieve correct posture and position should be repeated. Names of strings and pizzicato may be introduced. Students may now play bass lines, pizzicato, on the open strings.

I have had much success introducing the left hand while violin and viola students are holding their instruments in "guitar" position. The left hand falls very comfortably into place with thumb relaxed and fingers curved over the strings. Plucking open strings with the pinky (4th finger) of the left hand, along with early shifting exercises will help establish good, flexible hand positions.

Flexibility and strength of the bow hand are essential. *The Jump Right In Teacher's Guide for Strings*[9] includes many suggested exercises for developing a strong, flexible bow hold. After good bow hold is established, students should begin by performing many rhythm patterns on the open strings, with both legato and staccato styles. For violins and violas, the middle part of the bow should be used at first, gradually expanding to use other parts of the bow. Cellos and basses should begin in the lower half of the bow. After this is successful, they should begin practicing string crossings.

9 Richard F. Grunow, Edwin E. Gordon, Christopher D. Azzara, and Michael E. Martin, Jump Right In: The Instrumental Series Teacher's Guide for Strings, 2nd ed. (Chicago: GIA Publications, Inc., 2002).

Learning Songs by Ear

Students are initially taught that any open string can be DO. If an open string is DO, the 1st finger will sound like RE, etc. Students begin by playing pizzicato, patterns such as DO RE MI, MI RE DO, DO MI RE, etc. (Violins and violas in guitar position, plucking with the right thumb.) Students should first sing these patterns, then sing while fingering, then play, adjusting the intonation of the fingers to match what they have just sung. Using this process, finger tapes may be avoided. Once students can perform these patterns, they are ready to perform many 3-note melodies they have audiated and sung. "Hot Cross Buns," "Mary Had a Little Lamb," and "Pierrot" are a few 3-note songs you might use. Sing the song again, then allow students 60 seconds to figure out how to play the song by ear. Allow time for trial and error. Most will be successful, if you have provided them with the executive skill readiness and the audiation skill readiness. You must create an atmosphere where mistakes are OK. We learn from our mistakes and try again! Students may first play the songs pizzicato (first in guitar position, then on the shoulder for violins and violas), then with the bow.

Melodic Patterns

A valuable technique to help students learn by ear is the echoing of melodic patterns. Melodic patterns contain both tonal and rhythm elements. Tell the students, for example, that you are going to play melodies using only D-DO and RE (D and E). Then hide your fingers from the students and play a melody 4 macrobeats in length and have them echo without pause on their instruments. Use a lot of microbeats and repeated pitches at first. Gradually expand to use of 3 pitches, 4 pitches, 5 pitches, etc., as their ears become better.

Suzuki

Shinichi Suzuki (1898-1998) believed, as did Dalcroze, Kodaly, and Orff, in "sound before sight." Suzuki introduced his "Mother Tongue" approach to the world in the 1960's. Many were amazed to see groups of very young students proficiently playing great violin literature without the use of notation. Although his pedagogy was not new, Suzuki carefully sequenced his literature for the purpose of sequentially developing good executive skills[10]. Suzuki advocated listening and learning by ear before learning to read notation, just as one listens and learns to speak language before learning to read. In practice, however, instead of fostering audiation, many Suzuki teachers foster imitation and memorization by

10 Barbara Hanna Creider, "Music Learning Theory and the Suzuki Method," in Readings in Music Learning Theory, ed. Darrel L. Walters and Cynthia C. Taggart (Chicago: GIA, 1989), 260.

showing the student everything to do.

Gordon agreed with Suzuki that sound should come before sight, that all children are capable of learning music, and that building a listening vocabulary from a young age is crucial in order for a child to reach his highest potential in music. In order to foster audiation, a Gordon practitioner would supplement the Suzuki approach with the following: Variety in the repertoire. In addition to the Suzuki repertoire, the child should hear many tonalities, meters, styles and timbres. As Gordon often said, we learn by attending to differences. We learn very little if everything we hear is in the same tonality, keyality, meter, style and timbre.

- Singing everything before playing.
- Truly teaching the student to play by ear, by allowing students time for discovery through trial and error, and by having students echo melodic patterns while the teacher hides her fingers from the student.
- Most important, teaching students to understand what they are hearing, by teaching students to aurally recognize and identify major, minor, duple, triple, tonic, dominant, macrobeat, microbeat, etc.
- Improvisation.[11]

11 For a helpful resource for teaching older students to play by ear and improvise, see, Christopher D. Azzara and Richard F. Grunow, Developing Musicianship Through Improvisation, (Chicago: GIA Publications, Inc., 2011).

Recommendations for a Future Revision of Jump Right In for Strings

Although Jump Right In: *The Instrumental Series for Strings*[12] is the most comprehensive method book available, combining a logical sequence of audiation skills with a logical sequence of executive skills, we believe some revisions are due. The following are a list of improvements likely to be seen in a future revision:

- Recordings will be on downloadable audio files instead of CD.
- Many more "enrichment songs" will be included.
- Pages for writing notation will be included.
- Playing in minor will be introduced much earlier. Many easy songs in D-minor (open string LA) and E-minor (1st finger LA) will be included.
- Rest patterns, using only macrobeats and microbeats, will be introduced after macrobeat and microbeat patterns.
- Easy harmony parts will be introduced by ear, then in notation.

12 Grunow, Gordon, Azzara, and Martin (2002).

Conclusions

Music Learning theory can be applied to any music class, lesson or rehearsal. Music Learning Theory can enhance any method book or teaching approach. Jump Right In is the most comprehensive method book based on Gordon's Music Learning Theory. Teachers should be encouraged to continue teaching executive skills in the way they prefer. Use Music Learning Theory to inform the development of audiation skills. For beginning students, this author recommends spending at least 3 months developing the ear before introducing music notation. With older students who are already reading notation, spend the first 15 minutes of each lesson or rehearsal without notation. During this 15-minute period, sing, harmonize, play songs by ear, develop a pattern vocabulary, and improvise. As a result, your students will listen to each other, correct their own mistakes, and read with more accuracy and comprehension.