Learning Styles and Piano Teaching

by Susanna Garcia

As teachers, we often find ourselves amazed by a student's strengths. Just as often, though, we may be baffled by their shortcomings. Our favorite strategies work wonders with some but fail miserably with others, and may leave us at a loss regarding a course of action. We may even conclude that a particular student can't learn certain skills. On many occasions, I have heard teachers make remarks such as: "My student makes up songs all the time but can't read a note of music," or, "My student can sight read anything but can't memorize at all." On some level, these conclusions admit to a failure of both teaching and learning. Acceptance of the notion that a student can succeed at some facets of music making but not at others may inadvertently deny that student total music literacy. More problematic may be the fact that only certain types of students are successful in our studios. These are the ones who happen to respond to the manner in which we present information or behave in the lesson as we would have. With other types of learners, we may feel frustrated by our lack of success.

These difficult experiences are not unique to piano teachers but shared by all who teach. Through learning styles research, teachers are finding ways to turn these failures into successes. Many educators believe that a better understanding of how students obtain, process and internalize information will result in more effective and efficient teaching. This management of information by a student is referred to as the student's learning style. There are many theories of learning style, mostly familiar to educators, but largely unknown to music teachers. Such theories have considered analytical vs. global learning styles, personality types, multiple intelligences, and learning modalities. This article focuses on modality theory and provides help for teachers who wish to identify a student's learning style and adapt their teaching to better match the student's needs.[1]

What are learning styles or modalities?

A modality is any of the sensory channels through which an individual receives and retains information. These sensory channels are visual, auditory, and tactile/kinesthetic. Everyone has a dominant modality, but in time learns to integrate the other modalities. Adults routinely transfer information from one modality to another. In children, however, the dominant modality is the most efficient channel to receive and retain information. Students often show a secondary modality which is excellent in reinforcing information.

VISUAL: A visual student actually thinks in images and must convert information into pictures. Information is best presented through visual means, by reading and writing or looking at pictures. These students tend to be successful in school because testing is done in a visual format. They will conform to classroom standards such as sitting quietly, writing neatly and organizing material well. They are neat, meticulous and like order. As

a pianist, this student is often the one who can sight - read well, but if you asked her to sing the melody that she just played, she just might not be able to. This student might play very accurately, but might have difficulty playing expressively or may have trouble memorizing her music.

AUDITORY: An auditory person learns best by hearing or listening, then repeating what they have heard. They are often talkative and may hum and subvocalize. They are easily distracted by sounds. They may have difficulty writing. In their dress, they may not match, although they may think that they do. As a piano student, the auditory student may be the one who can play just about anything by ear, but is stymied by reading even the simplest music. He would prefer to guess at what comes next rather than read it. This student may change notes or rhythms in a piece, preferring his improved version to the composer's.

TACTILE/KINESTHETIC: Tactile/kinesthetic students learn through their body or sense of touch. They learn best by doing, thus whole body movement is the preferred method. These students benefit by a game format using materials that they may manipulate. They often enjoy dance or athletics. The kinesthetic student may appear disorganized or restless, often lacking a sense of the consequences of their actions. These students may have difficulty in traditional classroom settings and are sometimes assumed to have learning disabilities. You might recognize the constant fidgeter or the one who can't keep from playing while you are speaking. These students delight in playing the same piece over and over again, never seeming to tire of it.

Teaching through modality strengths capitalizes on individual differences and results in an increased rate of learning. The teacher must be able to determine each student's dominant modality and learn strategies for presenting information through this modality. Consideration of the student's dominant modality demands flexibility in the teacher's habits of presentation. Teachers, however, tend to teach through their own dominant learning mode. In language reading, auditory teachers tend to prefer phonics. Montessori methods are favored by kinesthetics. Visuals prefer approaches that depend on recognition of words and their configuration such as in whole language learning.[2] As piano teachers, it is reasonable to expect that we would also teach through our most comfortable learning style, approaching the introduction of new material in the same way with every student. A visual teacher might insist that a student read through a new piece before hearing it. An auditory teacher might teach more by ear, with far less emphasis placed on deciphering notation. A kinesthetic teacher might be inclined to demonstrate a great deal and teach by rote. We probably can see ourselves in these descriptions and we can see our students in them as well. When our teaching style and the student's learning style do not match, frustration sets in with both teacher and student and effective learning is thwarted.

What does research say about learning styles?

Learning style research is extensive, especially in language reading. Generally, studies are done by administering a test such as the Learning Style Inventory (LSI) which identifies the student's preferred and secondary modality. The LSI has been used to

examine and compare the styles of underachievers, students in alternative education, students with disabilities, the gifted, good and poor readers, good and poor students in math, students with high and low self-concept, and students with strong hemispheric inclinations. It has been consistently found that **whenever students were taught through their identified styles, statistically significant increases occurred in achievement**. In addition, students evidenced improved attitudes and reduced numbers of discipline problems. Further gains were made when the material was reinforced through the student's secondary learning style.[3]

Additionally, research by Marie Carbo and Kenneth and Rita Dunn, indicates that beginning readers are usually tactile/kinesthetic. In their studies, it was indicated that at age 6 or 7, children are, in this order, kinesthetic/tactile, visual, then auditory.[4] The visual mode grows stronger as children get older as they adjust to language reading. But when a child is not able to integrate the visual modality, they are frequently unsuccessful in school. It is Carbo and the Dunn's contention that such students are often treated as learning disabled, when it is really a matter of a mismatch in learning styles.[5]

Research specifically related to music learning is limited, but one study of third graders confirmed that students learned simple rhythms in less time and with fewer errors through their preferred modality.[6] (Persellin, 1988) In another study, first graders scored significantly lower in recall of rhythmic patterns when the patters were presented visually only. (Persellin, 1992) The first graders seemed to quickly lose interest or become frustrated using only visual iconic stimulation. As expected, the number of students showing preference for the visual mode increased each year until the fifth grade. As the students matured, visual icons were helpful in allowing the subjects to recall patterns.[7] In this study, it was noted that first graders benefited from singing games, moving, and listening to music and suggested that teachers may want to consider spending more of their time teaching young children rhythm patterns through auditory and kinesthetic means prior to teaching notation. Notation may be introduced to children when they have had many auditory and kinesthetic experiences in music. Introducing notation after an aural vocabulary has been acquired may give the written note or icon more meaning. Such approaches may be seen in the methods of Carl Orff and Emile Jaques-Dalcroze.

How does a teacher evaluate learning styles?

Resources for learning style testing are many and range from sophisticated testing to simple observation.

The Learning Styles Inventory determines not only the student's modality preferences, but also his or her preference regarding the amount of available light, the necessity of food and drink consumption, the temperature of the room, the formality of the setting, or the benefit of quiet vs. music during studying.[8] It asks multiple choice questions such as:

I can follow directions most easily if the teacher a. says them aloud b. writes them on the board c. shows us how.

It also asks questions in a true-false format such as "My room or desk is usually disorganized." A disadvantage of this test is its biased format. The student must either read the question (visual) or be read the question (aural).

Another test, the Barbe-Swassing Test of Learning Modalities is administered without the necessity of reading.[9] The test format requires manipulation of objects.

For something simpler and less expensive, the internet has many sites providing a wealth of information about learning styles, as well as short questionnaires that are immediately scored on-line. These web sites allow one to determine the dominant and the secondary learning styles of the student quite easily. If you search the term "learning styles" on any search engine, you will come up with a wealth of sites but I have included a few direct links to such on-line tests:

http://www.hcc.hawaii.edu/intranet/committees/FacDevCom/guidebk/teachtip/vark.htm

http://www.howtolearn.com/personal.html

http://snow.utoronto.ca/Learn2/mod3/miinventory.html

http://snow.utoronto.ca/Learn2/resources/styletests.html

You might also use personal observations to determine learning styles, being careful to avoid bias. Observable characteristics of an auditory preference may include the student's ability to follow short verbal directions, to repeat simple sentences of eight to twelve words, or to sound out words and still retain the storyline. Contrast this with the ability to follow written or drawn directions, place pictures in proper story sequence, or discriminate between letters or words that look alike such as "fill/full; spot/stop. This would indicate a visual preference. Tactile/kinesthetic characteristics might include good handwriting, interest in drawing and crafts, and good physical coordination.

Learning style preferences can be seen in the musical behavior of our students (Table 1). Subsequent to several years of testing and observation, I have constructed a list of observable characteristics of piano students. In these descriptions, the natural inclinations of students with a single highly dominant modality preference can be seen. This list is intended to help the teacher identify the student's preferences. Armed with this knowledge, the teacher can use the student's natural strengths in planning teaching strategies which will address both weak and strong areas. This is the fundamental tenet of learning styles theory. Rather than assuming, for example, that a highly aural student will never become an excellent reader, a teacher sensitive to learning styles will engage the aural mode in the teaching of reading.

Table 1. Learning Styles and Characteristics of Piano Students

VISUAL	AUDITORY	KINESTHETIC/TACTILE
Good reader. Plays with note accuracy.	Heavy reliance on playing by ear. Might guess at notes rather than figure them out. Frequently changes notes in the piece because they "sound better".	Plays by feel. Is willing to repeat a pattern over to "get it in the fingers". May have a difficult time relating to notation presented in a conventional way
Dislikes playing by ear.	Often makes up songs or likes to improvise. Enjoys "picking out" songs.	Loves to keep playing the songs that have already been learned.
Sometimes demonstrates a lack of sensitivity to the sound quality or to phrasing. Might not be able to sing the melody that was just played. Might hold the pedal down inappropriately. May play mechanically.	Generally expressive player, careful about how it is sounding.	Will play with great enthusiasm. How it feels to play may be more important than how it is actually sounding. May "bang" things out.
Has trouble memorizing.	Memorizes well, can fake if necessary.	Memorizes easily, but tactually.
Lacks attention to fingering. May have difficulty learning a piece because of lack of consistent fingering.	May be more willing to work out different fingerings if the new fingerings affect the quality of the sound.	once it is in the fingers, is virtually impossible to change.
Can focus on details. Prefers to start from the beginning and work to the end, gradually mastering each section.	Likes to get a general sense of the whole piece, often with inaccuracies, before refining.	Likes to get a general sense of the whole piece, often with inaccuracies, before refining.
May have awkward technique due to over-reliance on the printed score. Generally unaware of how the body "feels".	Generally willing to work on technique.	Is generally comfortable at the keyboard. Is willing to work on technique if you are not trying to "unlearn" something. generally very aware of how the body "feels".
Learns best by following written instructions and reading music. Enjoys workbooks, written theory and "drill and practice" software.	Learns best through demonstration and imitation. Tape recording music and instructions may be most effective. Aural application of information is the best for them.	Learns best through demonstration and repetition. Games and movement activities are often necessary for understanding. This student often responds well to a chord approach, where they can "see and feel" the structures on the keyboard.

Teaching to a student's learning style

Modifying the presentation of a concept to suit the student's learning style is really quite simple. It doesn't require much other than sensitivity to the student's needs and the ability to be flexible. It is important to remember that the way we present information, while seeming to be the best, most logical way, may not be the best for an individual student. Awareness of modality preferences will enlarge our own repertoire of teaching strategies and may result in comprehensive musicianship for all our students. Here are three examples of teaching through the learning styles.

In teaching steps and skips, effective teaching results in a student's learning to read, hear, sing and play those intervals, a comprehensive approach requiring mastery of visual, aural, and kinesthetic tasks. When a student is visual, the most effective first step is presentation of the visual icon (the lines and spaces) in conjunction with the physical configuration on the keyboard. This should be followed by reinforcement through the student's secondary modality, then finally, the remaining one. An aural student may be first approached by listening to the intervals and matching them in singing games. If the student's secondary modality is kinesthetic, playing the intervals at the keyboard while continuing to sing could be the next step. Later, the student can be introduced to the notation of the intervals. A kinesthetic student would benefit from activities such as walking on an enlarged floor keyboard and/or a floor staff. At the keyboard, playing the intervals using all the different fingering combinations allows the student to learn the "feel" of them. Notation and aural discrimination should follow these activities in the order of the student's secondary and weakest modality.

Understanding, executing and reading rhythms can be approached in much the same way. A visual student will retain information best when it is accompanied by a visual representation. If you are teaching the counting of the rhythmic pattern "two-eighths," the student will be most successful if she can see the icon while learning to execute the rhythm. For the aural student, listening to a piece that uses the rhythm while counting aloud will increase understanding and retention. For this learner, the visual representation of the rhythm should follow, not precede this type of activity. Clapping games or movement exercises incorporating the rhythmic pattern are a necessity for the kinesthetic student. Dalcroze exercises are excellent for large motor interpretation of rhythmic patterns. In these exercises, student perform the rhythm with their whole body, walking the rhythmic pattern while clapping the beat. This is always done with musical accompaniment and the student is often called upon to make choices based on aural and visual stimulation, making it an excellent method for all three types of learners.[10]

It is important to reiterate that we should not accept our students' weaknesses as unalterable. Teaching through modality strengths actually enables us to effectively address these. As a further example, I will describe this approach in three "classic" situations.

When working with a visual student who plays mechanically, you may begin with a scan of the score for information given visually such as intervals, notes, rhythms. Reading through the score is often what a visual student likes to do as an initial activity. We can

use this visual strength to help him play more expressively. For example, during the visual scan, have the student locate the melody. This can then be isolated, played at the piano, then sung or worked on for phrasing, noting at this time any visual cues which focus on expression. These interpretive markings or dynamics could lead to a discussion of the mood of the piece using highly visual imagery. The student may be asked to draw a picture that represents the mood of the piece. Visual students also enjoy diagramming the musical shape of phrases. I have seen these activities transform the performance of visual students who may need help connecting with the emotional qualities of the music.

When teaching an aural student who may have difficulty with reading, model the sound by playing for them, asking them to listen for familiar figures such as scales, triadic patterns or frequently recurring rhythms. The student may then be asked to play, by ear, the identified figures. This can be followed by locating the figures in the score, a meaningful action connecting the notation to their familiar world of sound. Other scores can be examined for the same figures, emphasizing the notational aspects or a now familiar sound. A song using such figures can be improvised or composed, then notated. For aural students, sound must always precede notation. Exercises which ask students to discriminate between differing sounds, then matching those sounds with the written icon are effective techniques to improve reading skills.

There are many ways to work with kinesthetic students who might have trouble focusing during the initial reading through of a new piece. Rote presentation of the various elements of a piece is highly effective. (In this discussion, rote does not refer to simple mimicry, but to informed imitation.) Physical repetition of these small units is vital. Later, when the student sees the score, the motor aspects will have been already rehearsed. Activities at the piano should be alternated with whole body movement activities. Walking and clapping the notated rhythms prior to seeing them is important and allows the student to later associate the printed music with a kinesthetic activity. These activities get the student off the bench and will cut down on fidgeting. For kinesthetic students who may "bang," moving or acting out the musical sense of the piece will encourage musicality with more sensitivity to phrasing, dynamics, and tempo.

Ten tips for teaching through learning styles

In general these simple suggestions offer a starting point for any teacher interested in modifying their approach to embrace a wider range of teaching styles.[11]

1. Evaluate the materials you currently use for their learning style bias.

2. Order, design and create needed materials.

3. Exclude poorly written and/or dull music. Use high interest repertoire, especially expressive music which conveys clear moods, tells stories, or describes familiar experiences.

4. Instruct more through modeling rather than verbal directions.

5. Provide recordings of repertoire being learned.

6. Simplify directions and provide concrete examples.

7. When appropriate, de-emphasize reading skills that require a highly analytic style.

8. When appropriate, eliminate/abbreviate skill work and replace with movement activities.

9. Consider exploring computer software to provide additional high interest activities for all learners.

10. Incorporate rote teaching techniques into every lesson.

Teaching with sensitivity to learning styles is effective and gratifying, and the benefits are many. The three modalities serve as reminders of the many aspects of good musicianship. For the teacher, learning styles theory creates a framework for consideration of each student's learning patterns resulting in improved analytic and diagnostic skills. It creates opportunities for more students to achieve a higher degree of musical success through its varied approaches. Finally, it rejuvenates as we constantly search for the best, most effective means to reach our students.

Notes:

1. Learning styles or modalities in this article are those set forth by educational theorists W.B. Barbe and Raymond Swassing and further developed by Marie Carbo and Kenneth and Rita Dunn.

2. Barbe, Swassing, p. 14.

3. Carbo, Dunn, Dunn, pp. 254-257.

4. Ibid., p. 55.

5. Ibid., p. 49.

6. Persellin and Pierce (Persellin, 1988) This study examined the relationship between preference for learning modality and the learning and short-term retention of musical rhythm patterns. Fifty-five third graders completed the Swassing Barbe Modality Index. These students were also presented two-measure rhythm patterns through their visual, auditory, and kinesthetic modalities. Analysis indicated that children who preferred on the modality index one modality over others tended to prefer that same modality when learning simple musical rhythms.

7. Persellin (Persellin, 1992) The purpose of this study was to examine the effect of three rhythm presentation modalities on the recall of rhythm patterns. Seventy first graders, 70

third graders, and 70 fifth graders were tested either visually, auditorily, kinesthetically, or with combinations of these modalities. Each child was asked to memorize and clap six rhythm patterns of increasing difficulty, which were presented either iconically (visually), by playing a resonator bell (auditorily), by patting the child's hand (kinesthetically), or through combinations of these treatments. Grade level was significant ($p < .0001$). Test scores from students who were presented rhythm patterns using a multimodality presentation indicate that students were not confused by the multisensory input. The first grade visual test results were significantly lower ($p < .05$) than results with older children. These findings suggest that the incorporation of learning modalities into music teaching methods could result in more efficient learning of rhythm patterns. Although the visual method for first graders was not as effective as other presentations, older children were successful with all combinations of teaching presentations.

8. This test, listed in the bibliography, can be purchased for about $50.00.

9. It is priced at $160.00.

10. Emile Jaques-Dalcroze was a Swiss musician and composer who developed a method of music education called Eurhythmics. A Dalcroze education comprises the basic elements of music: rhythm, dynamics, tone and form. The system is based on the kinesthetic sense. For practical applications of Dalcroze exercises, see Findlay and Abramson.

11. Adapted from Carbo, Dunn and Dunn, pp. 110-116.

Resources

Web Sites of Interest:

http://www.learningstyles.net/ The website for the International Learning Styles Network at The Center for the Study of Learning and Teaching Styles at St. John's University.

http://www.howtolearn.com/personal.html Contains a personal learning styles inventory.

http://www.ldpride.net/learningstyles.MI.htm The site for the Island Adult Development Association - a registered non-profit association for adults with learning disabilities and attention deficit disorder. It contains information on learning styles and multiple intelligences. Links to a test based on Gardner's theory of multiple intelligences.

http://www.hcc.hawaii.edu/intranet/committees/FacDevCom/guidebk/teachtip/teachtip.htm Faculty Development page for Honolulu Community College. From learning styles to stress management to dealing with problem students, this web site is a fantastic resource for all kinds of teaching tips.

http://snow.utoronto.ca/Learn2/introll.html A nice general information website designed for learners with disabilities.

http://www.dalcrozeusa.org/ The website for the Dalcroze Society of America. An excellent resource for anyone interested in additional reading or attending a workshop.

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Tests

Learning Styles Inventory for grades 3-12 (Must send off for scoring) Learning Styles Inventory - primary version. (Can be scored by the user)

Contact Learning Styles Network 8000 Utopia Parkway Jamaica, N.Y. 11439 (718) 990-6161 ($45 + $10 shipping)

Modality Kit by Barbe and Swassing. (Zaner-Bloser) $160. (800-421-3018)

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