

# **How Can Knowing the Music Aptitude of Students Help Plan for Better Music Instruction?**

**Marianne Tagge, Music Teacher**

**Deer Park Elementary School**

**June 2004**

## **Origin of Question**

This past summer, I attended Level I Kodaly training at James Madison University. It was there that I first heard about a music aptitude test called the PMMA (Primary Measure of Music Audiation) and the IMMA (Intermediate Measure of Music Audiation). The instructors highly recommended the use of these tests for two reasons. First, the test helps you to find out about the children you teach and, secondly, it helps you meet the individual needs to the children you teach. The instructors administered the test twice a year, in the months of October and May. I decided to use these tests as the basis of my research project. I wanted to see how knowing the music aptitude of my students would help me plan for better instruction.

## **Research Question**

*How can knowing the music aptitude of my students help me plan for better instruction?*

## **Data Collection**

Plan: I gave the PMMA to Grades 1 & 2 and the IMMA to Grades 3 & 6 in October. Tests scores were recorded and analyzed. Strategies for instruction were planned and implemented. The same test was administered again in May. The results were compared and used in future teaching strategies.

## **Background Information**

The PMMA & the IMMA are tests to measure developmental music aptitude. Dr. Edwin Gordon, the developer of these tests, said that 40% of children with high music aptitudes are never identified throughout their school careers. By identifying these students, we, as music teachers, can help them realize their full music potential.

Research has shown that music aptitude is developmental from birth to approximately the age of 9. This means that the environment can greatly influence a child's music aptitude because it is constantly changing. At approximately age 9, music aptitude stabilizes and the environment no longer affects a child's music aptitude. By knowing a child's music aptitude and tracking it throughout the elementary years, the teacher can develop and set realistic expectations for each of their students and as well as plan appropriate instruction.

Music aptitude, as defined by Dr. Gordon, is the potential to achieve in music. It should not be confused with achievement. Since our children do not come to us with equal ability, the use of these tests measures the child's ability so that we can plan for their needs.

The PMMA is designed to be given to students in kindergarten through grade 3; and the IMMA is designed to be given in grades 1 through 4, or for any students who, as a group score exceptionally high on the PMMA. The format for both tests is the same, but the IMMA is more difficult.

Each test contains two subtests: a Tonal test and a Rhythm test. For each of these tests, the students are asked to listen to a pair of tonal or rhythm phrases done by a single-line, synthesized sound. They are to determine whether the phrases in each pair are the same or different from one another. The tonal phrases are heard without rhythm; the rhythm phrases have no melody. There are 40 items in each test. The test is designed for nonreaders. For each question, the student circle a pair of smiling faces if the phrases sound the same and to circle a pair of faces, one smiling and one frowning, if different.

### **Data Collection and Analysis**

The tests were administered and recorded as a raw score. There were 3 scores for child: A tonal score, a rhythm score and a composite score (adding together the tonal and rhythm score). With the use of a table given in the test manual, the raw scores are then converted into norm percentiles.

Scores were recorded in an Excel database for each child by class and analyzed in the following ways:

1. Individual differences: raw scores of the tonal and rhythm test were compared. In most cases, the scores will be different. If a child's score differs by 3 or more points, it is likely that a real difference exists.
2. Children are divided into 3 groups according to their percentile ranks for the test taken. If the score lies in the 80th percentile or above, the child is in the high group, 21st &ndash; 79th percentile, the average group and 20th and below, low group. This is done for both the tonal and the rhythm scores. In an average class of 30, there should be between 5 &ndash; 10 children in the high group, 15 &ndash; 20 in the average group, and 5 &ndash; 10 children in the low group.
3. By looking at the Tonal, Rhythm, and Composite scores on the IMMA, children with exceptionally high overall music aptitudes can be identified. A child must meet or exceed the criterion score for their grade to be identified as such.

### **Strategies for Instruction**

Looking at the overall scores, most classes fit the national norm. As you can see in Table I, I had two classes of 1st graders with no low aptitude and both of my 2nd grades had no low aptitude children. Since the scores were high in grade 2, next year, I will give the IMMA starting in 2nd grade. I want to note that only the scores of the children that took both of the tests were used. Because of children leaving and coming in during the school year and the special needs children mainstreamed into our classes, I was unable to get data from all children. For example, a 2nd grade autism child went ahead and circled his answers before the test was started and said he made a pattern. With another autistic child, the aide that was helping her, helped her with the answers. Another problem is with children who were retained a year.

**Table I**

<b>Class</b>	<b>High</b>	<b>Average</b>	<b>Low</b>
1A	3	16	0
1B	7	12	0
1C	5	13	3

2A	6	14	0
2B	7	14	0
3A	4	12	9
3B	7	13	6
4A	3	15	8
4B	5	12	5
5A	9	10	5
5B	3	9	10
6A	3	19	10
6B	10	14	4

In most classes, the rhythm scores were significantly lower (by more than 3 points) than the tonal. My strategies for this were to do more beat and beat division work. I also changed the rhythm syllables that I use to align with the Kodaly method that I learned over the summer.

To help me plan for individualized instruction, I used Dr. Gordon's "Reference Book for Learning Music Sequences." Each week, I alternated between tonal and rhythms patterns. This was integrated into my lesson for about 5 &ndash; 10 minutes. Dr. Gordon has sequenced tonal and rhythm patterns to learn by children. These patterns are also divided further into those that should be learned by High, Middle and Lows during a session. During this period of time, each child was heard individually and assessed.

I experimented with different ways to seat children. The 2nd nine weeks, I matched a low student with a high student; the 3rd nine weeks I placed the Highs in the middle of the class with Lows on one side and Averages on the other side of the Highs.

I adapted my seating charts by using colored highlighters to designate each child's aptitude. This way, when working with individual children, the appropriate rhythm or tonal pattern could be used.

### Comparison of Tests

The same test was administered in May. The results were recorded and analyzed in the same way. Results of the two tests were compared. Most children benefited from formal music instruction. Table II shows the analysis of the changes in composite scores.

**Table II**

<b>Grade Level</b>	<b>Change Aptitude Up</b>	<b>Changed Aptitude Lower</b>	<b>Stayed the Same</b>	<b>Improved Score but not Level</b>	<b>Score Dropped but not Level</b>
1	20	3	7	17	7
2	10	1	5	11	4
3	18	7	5	6	13

4	7	7	2	16	11
5	8	7	6	9	12
6	6	9	7	13	11

It was interesting to note which children had high aptitudes. They were not always the ones I expected them to be. Some of them were behavior problems, others were very quiet, and still others didn't participate in music activities to their full extent. In checking with these children, most were already participating in other musical activities outside of school, such as private lessons, drama classes, or chorus, band or strings. There was no one with exceptionally high aptitude.

### Conclusions

I have found that the use of the PMMA & IMMA was very beneficial to my teaching this year and I will continue their use for the following reasons:

- As an objective measuring tool to assess each child's music aptitude
- To individualize instruction for each child
- To track progress throughout the elementary school years
- To see that each child's musical needs are being met and
- To identify those children with high aptitudes.

### References

Bluestine, Eric. (2000). *The Ways Children Learn Music: An Introduction and Practical Guide to Music Learning Theory*. Chicago: GIA Publications, Inc.

Gordon, Edwin E. (1997). *Learning Sequences in Music: Skill, Content and Patterns: A Music Learning Theory*. Chicago: GIA Publications, Inc.

Gordon, Edwin E. (1986). *Intermediate Measures of Music Audiation*. Chicago: GIA Publications, Inc.

Gordon, Edwin E. (1986). *Primary Measures of Music Audiation*. Chicago: GIA Publications, Inc.

Gordon, Edwin E. (1985). "Reference Handbook for Using Learning Sequence Activities." E. Gordon & D. Woods, *Jump Right In: The Music Curriculum*. Chicago: GIA Publications, Inc.

Hubbard, Ruth Shagoury, and Power, Brenda Miller. (2003). *The Art of Classroom Inquiry: A handbook for teacher-researchers*. Portsmouth, NH: Heinemann.

Taggart, Cynthia Crump, and Walters, Darrel L., ed. (1989) *Readings in Music Learning Theory*. Chicago: GIA Publications, Inc.

e-mail: [marianne.tagge@fcps.edu](mailto:marianne.tagge@fcps.edu)