Ball State University Music Education and *Takadimi*

Ball State University boasts one of the largest and most respected music education programs in the United States. With an annual placement rate of nearly 100%, BSU alums are regularly recruited to positions throughout the nation (e.g.: in 2004, graduates accepted positions in Arizona, Florida, Georgia, Illinois, Indiana, North Carolina, and New York). Over 50% of public school music teachers in Indiana hold a degree from Ball State University, as do a significant percentage of faculty members at Indiana colleges. Innovative leadership in the classroom and the profession is a hallmark of Ball State graduates. In a continuing effort to maintain this tradition of excellence, the comprehensive curriculum now includes training in the *Takadimi* rhythm-pedagogy system. The following material (excerpted from Dr. Ester's forthcoming book *Sound Connections*) provides an overview of the purpose and application of this innovative approach to rhythm instruction in the more complete context of music literacy pedagogy.

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The *Takadimi* Rhythm System

   Takadimi is a rhythm pedagogy system designed by three music theorists (Hoffman, Pelto, & White, 1996) and based on research, learning theory, and best-practice methods. This innovative system is gaining favor with music educators at all levels from kindergarten to college. One of its most appealing traits is that it can be used with all age levels and across the areas of general, choral, and instrumental music. As a result, prominent Kodály educators, public school teachers, and college aural skills instructors are adopting this unique approach to developing rhythm literacy. Importantly, *Takadimi* facilitates the effective teaching of both reading and notating (aural dictation) as required by National Content Standard #5.

   The *Takadimi* syllables are designed and employed much differently than other syllables such as Kodály, Orff, counting (1e&a), etc. **Absent an appropriate training in the proper application of the syllables, *Takadimi* can be misunderstood and misused. It is essential, therefore, for the teacher to have a solid grasp of the fundamental pedagogical principles associated with this system.** The following material (excerpted from Dr. Ester's forthcoming book *Sound Connections*) provides an overview of the purpose and application of this innovative approach to rhythm instruction in the more complete context of music literacy pedagogy. Further reading is encouraged.

The Challenges of Teaching Music Literacy

   Perhaps the most fundamental challenge to effective music literacy instruction in the United States is the presence of so many different approaches and the inability of the profession to agree on a common system. While variety may be the spice of life, in this case it often contributes to confusion and discontinuity. For example, it is not uncommon for multiple rhythm-syllable systems to be in use in the same school system. One elementary teacher might use the Kodály method (*ta ti-ti*) while another uses an Orff-Schulwerk approach (e.g.: "watermelon", "apple"). Further, the secondary ensemble directors typically use the counting system (1e&a), requiring the students to negotiate a transition between two or more unrelated systems. A similar discontinuity may exist for tonal-syllable systems, and all of this is to say nothing of the issues related to transferring between schools. Perhaps it is accurate to say that the only thing most music educators agree on is that we *should* agree. If the debate is briefly suspended, however, the following common sense principles might be assumed. Note the important perspective of what is best for student learning, not what is easiest for the teacher.

- All other things being equal, it is best for student learning to use one common tonal-syllable system and one common rhythm-syllable system throughout the K-12 curriculum and beyond.
- Because of the migratory nature of present culture, it is best that the same syllable systems be used throughout the country.

These principles might be referred to as the "womb to tomb" principles because they suggest that it is best for learners to have a common system used for all instruction at all levels and in all locations. This is, of course, at odds with "the American way" and strongly held values of academic freedom, and thus will probably never happen in American education. Nevertheless, it should happen at the local level, at least, and can happen more generally if educators can come to see the common ground that does exist.

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A recent national survey of vocal music educators (Ester, 2004) provides evidence of the discontinuity resulting from the use of two rhythm systems that are completely unrelated to each other. Survey results indicate that those who teach at both the elementary and secondary levels *prefer* the counting system (57%) but *regularly use both* the Kodály and the counting approaches (58%). Those teachers who have only MS and HS responsibilities prefer counting much more strongly (71%) but still use both approaches at a relatively high rate (41%). (Note: While no current data exists regarding instrumental teachers preferences, it is safe to state that the counting system is used by the great majority of band and orchestra directors.) Given that counting is not a viable option with primary-level students and that the Kodály syllables are often considered limiting for older students, it is reasonable to conclude that teachers are employing both approaches because they are struggling to make the transition from a system designed for beginners (Kodály) to a system that works better for more complex rhythm patterns due to the emphasis on metric location (counting). In any case, the data confirms that the discontinuous transition from elementary to secondary levels mentioned earlier is an extremely common problem. Even this pedagogical chasm can be bridged, however, if music educators are willing to objectively consider an innovative system that integrates the fundamental pedagogical principles so valued by each side in this debate. The potential benefits for student learning resulting from a "womb to tomb" system are profound. This premise of a comprehensive approach that is effective at all age levels and in all rehearsal/classroom settings provides the foundation for the *Sound Connections* approach.

The Importance of Sound Before Symbol

"Sound before symbol" has been a fundamental component of music learning theories for at least 200 years (Pestalozzi, Mursell, Bruner, Gagné, Gordon) and empirical evidence now supports this tenet. In spite of this, virtually all published resources for music literacy instruction take a notation-first approach, either purposefully or by default. It is the rare resource that even mentions the need to develop an aural vocabulary before encountering notation. Rather, the first exercise encountered by the students almost always involves notation. Even more troubling, this initial exercise is usually visually complex in that it includes most aspects of music notation: staff, meter signature, clef, key signature, rhythm notation (including bar lines), and tonal notation. While the rhythm and tonal vocabulary are typically limited, the novice-reader's eye is overwhelmed with information, undermining the instructional objective of connecting symbol to sound. *Sound Connections* incorporates a comprehensive sound-to-symbol skill learning sequence, beginning with the development of a vocabulary of sound patterns and following a sequence of instruction that results in a strong link between sound and notation.

The Learning Sequence

The learning sequence in *Sound Connections* (see Figure 1) builds on principles of music learning that are rooted in the 18th-century ideas of Heinrich Pestalozzi, formalized in the learning theories of Robert Gagné (1977), and established in the skill-learning sequences of Edwin Gordon (2003). Students first learn to echo what they hear; second, they learn to connect these sound patterns to a coherent system of syllables; finally, they learn to connect these syllable patterns to musical symbols. The fundamental goal of music literacy instruction, then, is to connect sound to sight. An essential aspect of this process is *audiation*, as Gordon's theory proposes, research evidence supports (Saunders, 1991), and common practice confirms. According to Gordon, audiation is "hearing and comprehending in one's mind the sound of

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music that is not or may never have been physically present" (2003, p. 361). Another way to say this is "thinking sound". Students must internalize a sound pattern before they can read or notate it. For students to be musically literate, they must then be able to make the connection between the sounds of music and the symbols of music. So, not only must they be able to "hear symbols", or audiate what they see, but they must also be able to "see sounds", or visualize what they hear. Literate musicians make firm and accurate matches between what they audiate and what they visualize. Stated differently, they make *sound connections* between musical sounds and musical symbols. These connections are made by interacting with the symbolic language of music in both directions: translating notation into sound (reading) and translating sound into notation (writing). To be effective, therefore, rhythm and tonal syllable systems must facilitate both of these processes.

The Importance of Beat-Oriented Rhythm Syllables

Any approach to music literacy instruction that is truly sound-first must utilize a rhythm-syllable system that is beat-oriented rather than notation-based. Because students encounter the beat (and all other aspects of rhythm) aurally first, it is imperative to assign a specific syllable to the beat. In this way, the beat is always chanted using the same syllable, regardless of meter. Likewise, other syllables are assigned to other specific metric functions from an aural perspective (e.g.: division of the beat). As with tonal syllables, rhythm syllables will then connect directly with sound and serve as a strong link between familiar sound patterns and correlated symbols. Assigning syllables to specific *notation* symbols obstructs a sound-to-symbol strategy. For example, the quarter note in 2/4 is *aurally* experienced exactly like the dotted-quarter note in 6/8 and the half note in 2/2 – as the beat. Assigning different syllables to each of these symbols (as in the Kodály system) seems logical from a notation perspective, but those who cannot read do not understand notation. This approach is clearly illogical from an aural perspective, and this is the only perspective a non-reader has. Because a sound vocabulary must come first, and because the purpose of syllables is to link sound to symbol, an effective syllable system must connect most directly with sound.

A system of rhythm syllables has emerged in the past decade that is beat-oriented and particularly elegant. The originators of the *Takadimi* system see it as evolving from Gordon's syllables (*du de*)and being effective for broad applications and life-long use. *Takadimi* offers the opportunity to connect the rhythm pedagogy of the elementary music classroom, the choral and instrumental ensemble, and the collegiate-level music course.

The *Takadimi* Syllables

As Figure 2 indicates, **the *Takadimi* syllables represent metric function; they are not symbol-specific.** For example, note the relationship between the rhythm-pattern examples in Figure 3: because the patterns in 2/4 and 2/2 *sound* exactly the same, the syllables associated with these patterns *are* exactly the same, as they should be. In this sense, *Takadimi* syllables are similar to counting syllables (1 e & a). This does not imply, however, that the counting system is an equally effective approach; numerous aspects of *Takadimi* are superior to counting. Three fundamental examples are 1) *Takadimi* can be used with the youngest learners (those who as yet have an incomplete concept of counting); 2) *Takadimi* provides distinct syllables for simple and compound meters, thereby helping students become proficient in both meters from the very beginning; and 3) *Takadimi* results in a more accurate performance of duplets and triplets (as a result of *di* marking the midpoint of the beat in both simple and compound meters), other

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irregular divisions (e.g. quintuplets and septuplets), and patterns in changing and irregular meters (5/8, 7/8, etc.). These and numerous other advantages are delineated in the original article in the *Journal of Music Theory Pedagogy* (Hoffman, Pelto, & White, 1996). The use of *Takadimi* syllables also allows for the option of switching to a beat-numbering system once the students are proficient with the syllables. Because each and every beat is chanted *"ta"* regardless of meter, replacing *ta* with the number of the beat makes for an extremely simple transition. The following example demonstrates how this might work:

2/4   6/8

1 ka di mi   2 di   1 ki da   2 va ki di da ma

This makes the *Takadimi* syllables particularly attractive to instrumental and choral ensemble directors. Consider the value of having 5th-grade beginning band students, for example, who are already adept at reading and notating in simple and compound meters and have 5 or more years of experience working with a rhythm-syllable system that can easily transform to an effective counting system. The problematic and discontinuous transition from Kodály syllables to counting need no longer be negotiated. **In fact, effective elementary music instruction using the *Takadimi* syllables can virtually eliminate the need to focus on rhythm reading during the crucial first stages of instrumental instruction, freeing valuable instructional time to focus on playing skills.** Given that a fundamental objective of music literacy instruction is the eventual internalization and *discarding* of the rhythm syllables, resulting in accurate rhythm reading while singing or playing an instrument, the transition to beat-numbering may not be necessary at all – at least at first. Eventually, an awareness of "which beat I'm on" may improve the performance of complex rhythm patterns in ensemble settings, and students can use the system to analyze new rhythm patterns as they encounter them. This is the ultimate confirmation of the value of the *Takadimi* syllables: they are not only appropriate for use with the youngest and most novice learners, but they also provide the necessary tool to facilitate life-long, independent rhythm literacy.

Becoming a Proficient Practitioner of *Takadimi*

It is imperative, of course, for the music educator intent on using the *Takadimi* syllables to become fluent with them. An effective way to accomplish this is to practice chanting basic rhythm patterns in both simple and compound meters, and progressively add more complex patterns to the repertoire. Given a little practice, it is possible to become a proficient practitioner in a relatively short time.

References
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Figure 1. Skill learning sequence.

**Sound Connections
Skill Learning Sequence**

The *Sound Connections* sequence is cyclical: as the first collection of patterns moves deeper into the sequence, another collection is introduced during daily echoing time. This cycle is constantly evolving, with new patterns being added as others are internalized.

I. Developing a Sound Vocabulary
 1. **Neutral Echoing**
    • Teacher presents rhythm/tonal pattern on neutral syllable; students echo pattern on the same neutral syllable
    • Students determine whether two patterns are the same or different
    • Short patterns are eventually combined to form series
 2. **Syllable Echoing**
    • Teacher presents rhythm/tonal pattern on rhythm/tonal syllables; students echo on rhythm/tonal syllables
    • Students label patterns with function names. For example:
       Rhythm: simple or compound meter

       Tonal: major or minor
    • Students audiate and sing tonal patterns from Curwen Hand Signs
    • Short patterns are eventually combined to form series (developing aural syntax)
 3. **Echo-Translating**
    • Teacher presents rhythm/tonal pattern on neutral syllable; students translate and echo pattern on rhythm/tonal syllables
    • Students label patterns with function names
    • Short patterns are eventually combined to form series
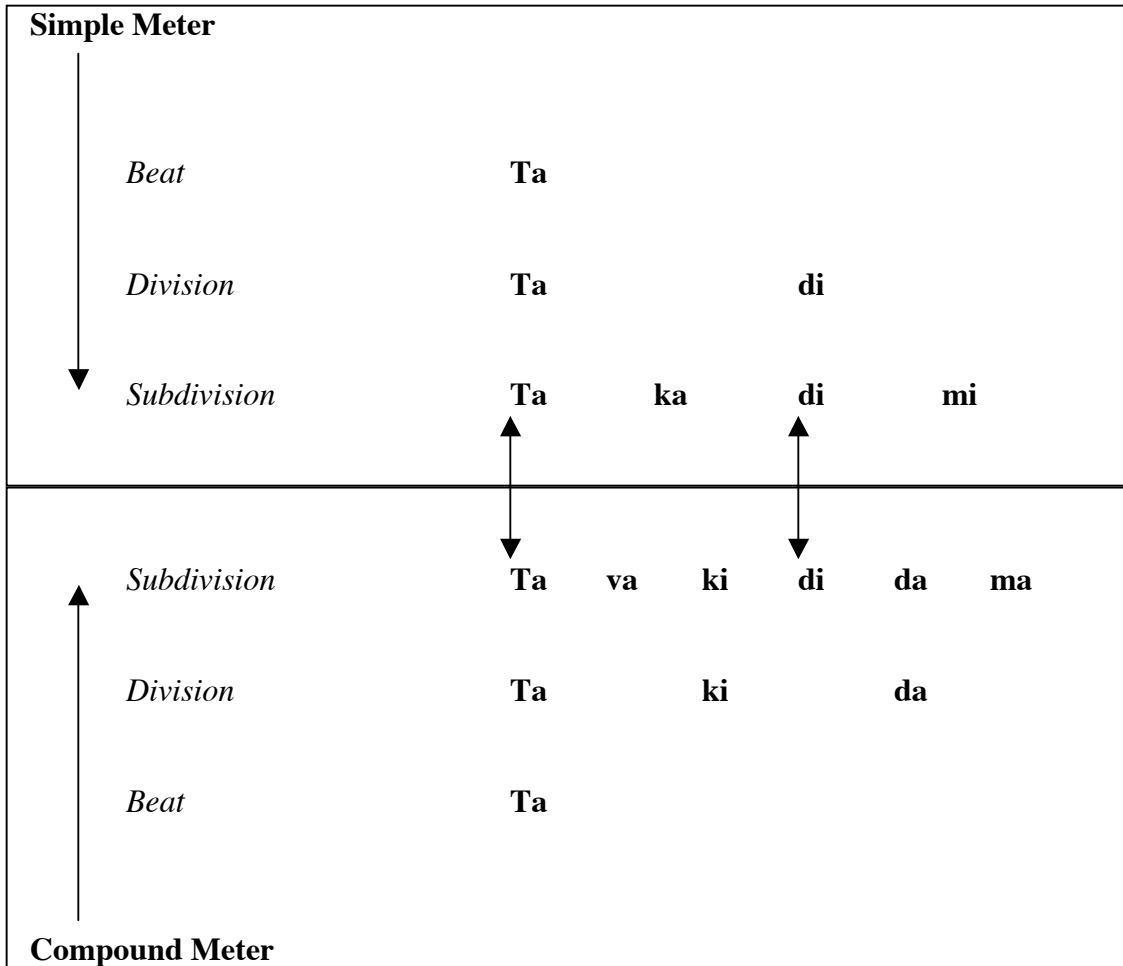
II. Reading & Notating – Connecting Sound To Symbol
 • Students learn to read rhythm/tonal patterns, matching new symbols to known sounds Initially on rhythm/tonal syllables; eventually on a neutral syllable
 • Students learn to notate aural patterns via echo-translation
 • Short patterns are eventually combined to form series (developing visual syntax)
 • Once students can internalize the syllables and separately read rhythm and tonal patterns without actually voicing the syllables, the rhythm and tonal patterns are combined and students read melodic patterns.

Improvising & Composing
At all stages of the sequence students can and should use known patterns to improvise, both responsively to the teacher or other students and independently. This process facilitates the internalization of the patterns.

The *Sound Connections* approach is grounded in current research and accepted learning theory, most significantly the theories of Gagné and Gordon.

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Figure 2. Takadimi Rhythm Syllables

Simple Meter

Beat	**Ta**			
Division	**Ta**		**di**	
Subdivision	**Ta**	**ka**	**di**	**mi**

Subdivision	**Ta**	**va**	**ki**	**di**	**da** **ma**
Division	**Ta**		**ki**		**da**
Beat	**Ta**				

Compound Meter

Irregular Divisions

Figure excerpted from Hoffman, Pelto, & White,1996, p. 15.

Figure 6. The Takadimi System: irregular divisions

Simple meter (quarter note = beat)

Ta di   Ta ki da   Taka di mi   Takadi mi ti   Ta va ki di da ma   Ta va ki di da ma ti

Compound meter (dotted quarter note = beat)

Ta di   Ta ki da   Takadimi   Takadimi ti   Ta va ki di da ma   Ta va ki di da ma ti
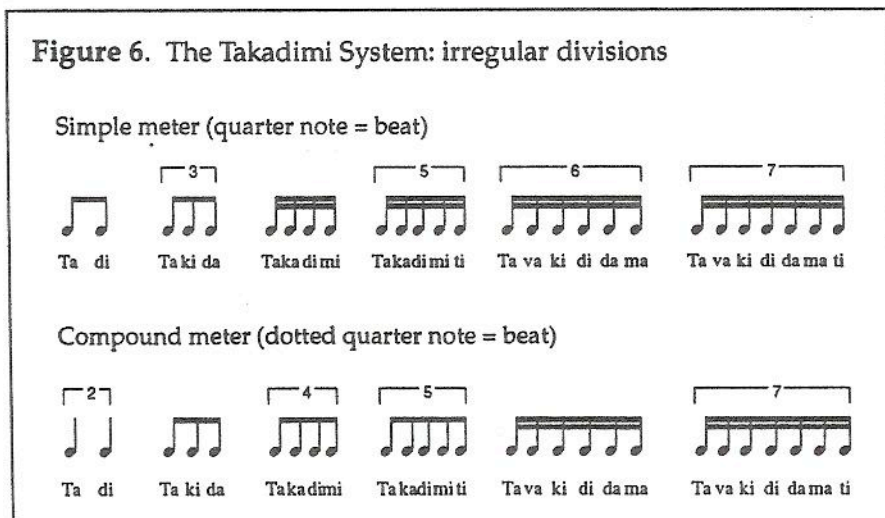
Figure 3. Basic Rhythm Patterns Using Takadimi Syllables

Quintuplet = ta ka di mi ti   Septuplet = ta va ki di da ma ti

Derived from: Hoffman, R., Pelto, W., & White, J. (1996). Takadimi: A Beat-Oriented System of Rhythm Pedagogy. *Journal of Music Theory Pedagogy*, v.10, pp. 7-30.