

# Takadimi: A Rhythm System for All Ages

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While variety may be the spice of life, too much variety can just be perplexing. The presence of so many different approaches to music-literacy instruction and the inability of the profession to agree on a common rhythm system may unnecessarily confuse our students. One elementary teacher might use the traditional Kodály syllables (*ta ti-ti*) while another in the same school system uses an Orff-Schulwerk approach (e.g., “watermelon,” “apple”). The secondary ensemble directors may use the counting system (*1-e-ε-a*), and so their students must learn two or more unrelated systems.

A recent national survey of vocal music educators reveals that some teachers use a combination of approaches within the same classroom.<sup>1</sup> Results indicate that 57 percent of those who teach at both the elementary and secondary levels prefer the counting system, but 58 percent regularly use both the Kodály and counting approaches. Those who teach only at the middle and high school level prefer counting more strongly (71 percent), but many (41 percent) still use both approaches. While no current data exists about instrumental teachers’ preferences, it is probably safe to say that most band and orchestra directors use counting.

Why do teachers use multiple approaches to rhythm instruction? One possible reason is that they are trying to help students make the transition from a system that works well for beginners (Kodály) to a system that works well for more complex rhythm patterns due to the emphasis on metric location (counting). A better solution might be to use a system that integrates the fundamental pedagogical principles so valued within the various systems.

## An Effective Learning Sequence

For at least two hundred years, “sound before symbol” has been a fundamental component of music learning theories such as those promoted by educational theorists Johann Heinrich

Pestalozzi, James Mursell, Jerome Bruner, Robert Gagné, and Edwin E. Gordon. In spite of this, published resources for music literacy instruction (e.g., sight-singing method books, beginning instrumental method books) often take a notation-first approach; it is the rare resource that mentions the need to develop an aural vocabulary before encountering notation.

The first exercise many students encounter in their method books generally involves notation. 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’s eye is flooded with information, making the primary objective of connecting symbol to sound needlessly complicated.

In contrast, an effective learning sequence builds on principles of music learning that are rooted in the ideas of Pestalozzi, formalized in the learning theories of Gagné, and applied in the skill-learning sequences of Gordon.<sup>2</sup> Students first learn to echo what they hear; then, 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 symbol.

An essential aspect of this process is *audiation*, as Gordon’s theory suggests, research supports,<sup>3</sup> and common practice confirms. Gordon defines audiation as “hearing and comprehending in one’s mind the sound of music that is not or may never have been physically present.”<sup>4</sup>

Looking for a rhythm-teaching system that both beginners and advanced students can use? Consider Takadimi.

Students must be able to hear a sound pattern in their heads before they can read or notate it. To be musically literate, they must then be able to connect the sounds of music with 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 accurate matches between what they audiate and what they visualize. They make firm connections between musical sounds and musical symbols. They establish these links by interacting with the symbolic language of music in both directions: translating notation into sound (reading) and translating sound into notation (notating). An effective rhythm-syllable system must facilitate both of these processes.

### **The Importance of Beat-Oriented Rhythm Syllables**

Any approach to rhythm literacy that is truly sound-first must use a beat-oriented rather than a notation-based syllable system. It is imperative to assign a specific syllable to the beat so that students always chant the beat using the same syllable, regardless of meter. Likewise, other syllables should be assigned to specific metric functions (e.g., division of the beat) so that the rhythm syllables connect directly with sound and link familiar sound patterns with 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 Kodály) seems logical from a notation perspective, but the youngest students who cannot read also don't understand notation. Because students should develop a vocabulary of sounds before reading symbols, and because the purpose of syllables is to link sound to symbol, an effective syllable system must connect most directly with sound.

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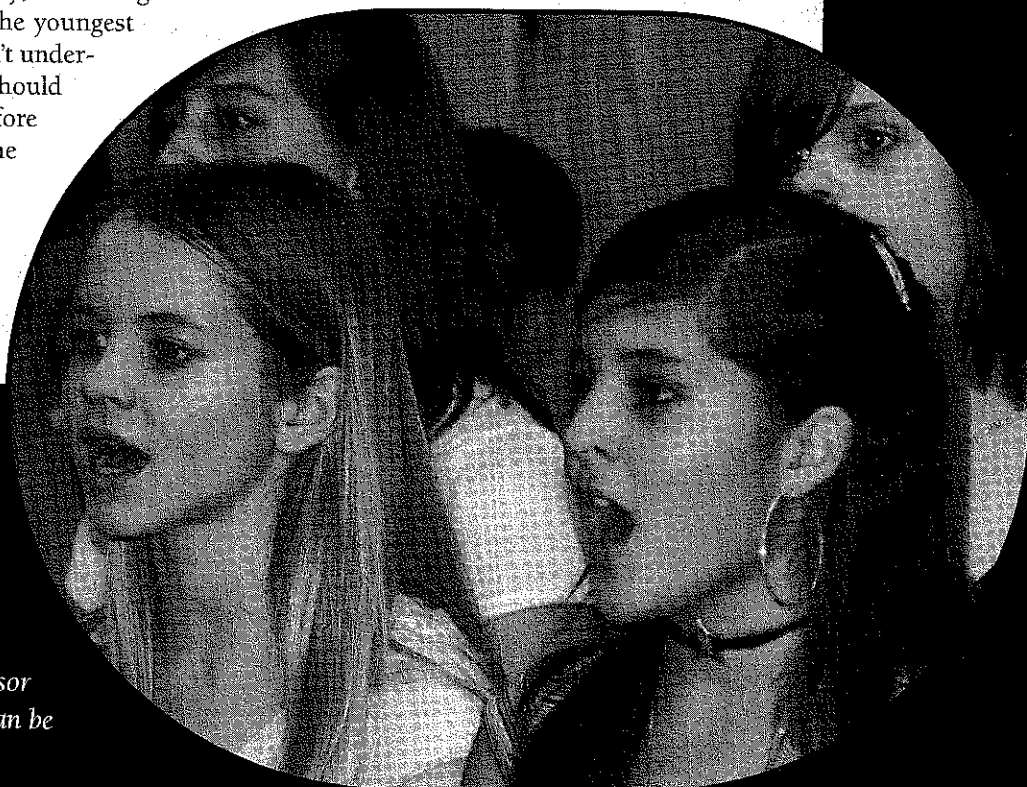


Photo by Becky Spray

Takadimi can be used with all age levels and across general, choral, and instrumental music.

## Simple Meter

Beat	Ta			
Division	Ta		di	
Subdivision	Ta	ka	di	mi

## Compound Meter

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



**Figure 1. Takadimi Rhythm Syllables**

### The Takadimi Syllables

Music theorists Richard Hoffman, William Pelto, and John W. White designed a rhythm-pedagogy system called *Takadimi* that is based on research, learning theory, and best-practice methods.<sup>5</sup> One of its most appealing traits is that it can be used with all age levels and across general, choral, and instrumental music. Kodály experts Philip Tacka and Micheal Houlahan of Millersville University have stated that “the Takadimi rhythm system solves the problems associated with the Kodály rhythm syllables. We believe that were Kodály alive today, he would certainly encourage his students and colleagues to use the Takadimi system.”<sup>6</sup>

Importantly, Takadimi facilitates the effective teaching of both reading and notating as required by National Content Standard 5.

Figure 1 shows how Takadimi syllables represent metric function; they are not symbol-specific. Note also the relationship between the rhythm-pattern examples in Figure 2: 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*).

However, Takadimi can provide more flexibility than counting. First, Takadimi can be used with the youngest learners (those who have an

incomplete understanding of counting). Second, Takadimi provides distinct syllables for simple and compound meters, thereby helping students become proficient in both meters from the very beginning. And finally, 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 irregular divisions (e.g. quintuplets and septuplets), and patterns in changing and irregular meters (e.g., 5/8, 7/8).<sup>7</sup> See figure 3 for examples of the Takadimi syllables for irregular divisions.

The use of Takadimi syllables also allows teachers to switch to a beat-numbering system once students are proficient with the syllables. Because every beat is chanted *ta*, regardless of meter, students can easily make the transition to counting beats by replacing *ta* with the number of the beat. Figure 4 demonstrates how this might work. This can make the Takadimi syllables particularly attractive to secondary ensemble directors.

Consider the value of having beginning instrumentalists who can already read and notate in simple and compound meters and have five or more years of experience working with a rhythm-syllable system that can easily transform to an effective counting sys-

ta ta ta di ta ta ka di mi ta ta di mi ta ta di di ta (a) di ta ki da ta ta (a)

ta ta ta di ta ta ka di mi ta ta di mi ta ta di di ta di ta ki da ta ta (a)

ta ta ta ki da ta ta va ki di da ma ta ta da ta ta ki ta ta va ki da ma ta ta di ta ta (a)

ta di ta ki da ta ta di ta di ta ki da ta di ta di ta di ta ki da ta di ta di ta ta di ta

**Figure 2. Basic Rhythm Patterns Using Takadimi Syllables**



**Figure 3. Takadimi Syllables for Irregular Divisions**

tem. The discontinuous transition from Kodály syllables to counting becomes unnecessary. Effective elementary music instruction in the Takadimi syllables could virtually eliminate the need to focus on rhythm reading during the crucial first stages of instrumental instruction, freeing valuable time to focus on playing and 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. On the other hand, an awareness of “which beat I’m on” may improve student performance of complex rhythm patterns, and students can use the system to analyze new rhythm patterns. This confirms the value of the Takadimi syllables: they are not only appropriate for the youngest learners who aren’t ready for counting, but they also provide a necessary tool for facilitating lifelong, independent rhythm literacy. The broad and practical relevance of the Takadimi syllables becomes even more apparent when considering specific aspects of these two settings.

### Elementary General Music

Rhythm is perhaps the most fundamental aspect of musical development in young children. Children between the ages of eighteen months and two years can demonstrate understanding of rhythmic pulse and recognition of rhythmic patterns through musical play and activities. The world is filled with rhythmic sounds, and children develop a rhythm vocabulary by mimicking the sounds that surround them.

Those who teach general music at the preschool and elementary levels establish students’ rhythm literacy by

channeling children’s natural rhythmic perceptions into more formal experiences with rhythm. Several systems of rhythm reading and notating are available for the elementary music specialist, ranging from the use of dashes and icons to represent lengths and patterns of sound to the commonly practiced Orff-Schulwerk approach and the Kodály syllables. Teachers often select the system they use based on their individual experience or specialized training. While these approaches offer consistent and creative experience with notational development for the child, each can lead to confusion during the transfer to rhythm reading beyond the elementary classroom.

The Orff-Schulwerk approach, for example, engages students in associating words and syllabic divisions contained in speech patterns, poetry text, and simple chants with notational symbols. When transferring these experiences to rhythm literacy, difficulties may arise with regard to note values, beat placement, and metric divisions. For example, “apple” is a common fruit icon used in rhythmic speech patterns. It is often presented as a picture with notational symbols places underneath to represent each syllable. The notation for the word is often inconsistent, appearing either as two quarter notes or as two eighth notes. Such inconsistent representa-

tions may confuse young learners.

Using traditional Kodály syllables involves memorizing symbolic representation for subdivisions; but once past the basic quarter, eighth, and sixteenth combinations, little connection can be found within the rhythmic notation. (Consider *tim-ri* ♪ ♪ ; *syncope* ♪ ♪ ; and *triola* ♪ ♪ ♪ ).

With both the Orff-Schulwerk and Kodály approaches, teachers may struggle with age appropriateness once the students reach the mid- to upper-elementary levels. Some systems offer limited age-appropriate materials for older students, and they don’t help young musicians develop more advanced rhythmic skills such as recognizing metric divisions, assigning specific duration to the various symbols or mnemonics, identifying beat placement in specific time signatures, and reading complex rhythmic figures across metric shifts. The beat-oriented Takadimi syllables may offer a solution to both the musical limitations of other systems as well as the concerns regarding age-appropriateness.

Ideally, training in the Takadimi syllables would begin at the youngest grade levels, with students echoing patterns in both simple and compound meters and then associating these patterns with the corresponding notation. Connecting learned patterns to classroom songs and activities makes the rhythmic patterns relevant to young children. The use of physical motion, such as the body percussion levels of stamping, patsching, clapping, and snapping, in connection with the Takadimi syllables is valuable as well. Assigning a level of body percussion, such as snapping for *ta* and snapping for *ta-di*, reinforces recognition of notation through physical movement. When dealing with longer



**Figure 4. Applying Beat Numbering to Takadimi**

note values, children can internalize the duration of sounds with simple physical gestures such as “clap and hold” for half notes. The physical motions allow children to maintain beat placement as well.

A common concern for teachers considering adopting a new rhythm-syllable system is the challenge of guiding students who are already studying one system through the transition. Those who use the word associations of the Orff-Schulwerk approach can gradually transfer to Takadimi syllables by using the word associations followed by Takadimi syllables. Depending on the age level of the students, moving from Kodály to Takadimi syllables may prove to be more challenging because of how the two systems use *ta*. In Kodály, *ta* represents a specific note value, while in Takadimi it defines the beat. Simultaneous use of both Kodály and Takadimi could confuse the students; therefore, teachers should introduce the new system at an appropriate time in the school year (e.g., beginning of the year, new semester).

### Secondary Ensembles

Rhythm skills continue to be a challenge for secondary ensembles. Whether the system used is counting, the foot-tap method (i.e., using arrows to designate the up or down stroke of the foot in relation to the rhythm

being performed), Kodály, or Gordon's Music Learning Theory, each system seems to have limitations that cause users to shift to an alternate approach when confronted by issues that do not fit within their primary system. For example, compound meters, asymmetrical meters, and asymmetrical rhythms (e.g., quintuplets, septuplets) are difficult to incorporate into the aforementioned rhythm systems. Takadimi, however, appears to have clear answers that are logical, pedagogically sound, and easily transferable (as shown in figures 1 and 3).

Takadimi also provides an opportunity to use syllables to understand and perform more complex rhythms while maintaining the rhythm's underlying beat division. For example, one group of students can perform sextuplets (*ta-va-ki-di-da-ma*) while their classmates simultaneously perform its root-division base of triplets (*ta-ki-da*) for a clear understanding of pulse, division of pulse, and subdivision of pulse. This can be extremely productive in teaching concepts of timing, rhythmic subdivisions, relationships between rhythms, and accurately performing said rhythm. And, as previously mentioned, teachers who want to use a counting system to show students the mathematical division of beats within a measure in relation to time signatures, can simply replace *ta* with the beat number (figure 4).

An added unintentional advantage of using Takadimi with instrumentalists is the tongue coordination that transfers quite naturally to the multiple-tonguing technique for brass and flute players. The first two syllables of sixteenth notes using Takadimi are the syllables commonly used when teaching double tonguing (*ta-ka*), and the Takadimi syllables used for triplets (*ta-ki-da*) can be used as a variation of triple-tongue technique. A major obstacle for students mastering multiple tonguing lies with the coordination of tongue movement to consistently produce the aural illusion of rapid single tonguing. Takadimi syllables might ease the transition from single to multiple tonguing technique for instrumentalists.

In the choral setting, singers often come to their first ensemble experience with limited music-reading skills and multiple rhythm-syllable vocabularies. The director intent on providing a rewarding performance experience must choose between two poor options: spending inordinate amounts of time teaching difficult literature by rote or preparing less-challenging repertoire while dedicating significant time to rudimentary music-literacy instruction. The pedagogical continuity that effective elementary instruction using the Takadimi syllables provides can significantly improve this situation. Even given no baseline abil-

## A Model Sequence for Notating from Dictation

1. Establish a beat and then chant a brief pattern on a neutral syllable.

beat beat please ech - o me pa pa pa pa

2. Have the students immediately echo the pattern on rhythm syllables.

ta ta ta ki da ta ta ki da ta

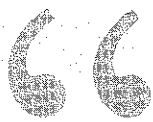
3. Have the students notate the syllable pattern they chanted.

Eventually, students will learn to audiate the syllables and move directly from listening to notating.

ities, secondary students can achieve rapid growth in both rhythm reading and notating skills when a sound-first pedagogy is applied.

### A Simple Application

The exercise shown in the Model Sequence for Notating from Dictation shows how the Takadimi syllables can help students at any level increase their reading and notating skills. Both of these important skills involve the connection between symbol and sound. Once students are proficient at echoing basic rhythm patterns on the syllables, they can begin associating



*Rhythm syllables serve as the vital link between sound and symbol.*



these patterns with notation. This learning leads directly to the emergence of reading skills; students can transform known symbol patterns into verbalized syllable patterns, resulting in proficient rhythm reading.

The beat-based Takadimi syllables allow students to easily invert this symbol-to-syllable-to-sound process, resulting in significant notating skills. With proper guidance, even beginning students will be able to translate rhythmic patterns demonstrated by the teacher to Takadimi syllables and then to notation, as shown in the Model Sequence.

### A System for the Whole Learning Journey

Rhythm syllables serve as the vital link between sound and symbol, providing the essential connection that facilitates transforming both notation into sound (reading) and sound into notation (notating). Because each syllable system was designed for a particular purpose, the selection of a rhythm-syllable system has inherent long-term implications. Once students become proficient in reading and notating, the syllable system becomes less and less relevant, but consistency is vital to the learning journey, especially in the earlier

stages. The best rhythm systems are child-friendly but robust enough to serve learning needs throughout the elementary, middle, and high school years—and ideally beyond.

The Takadimi syllables meet a number of very important pedagogical criteria. The syllables connect very efficiently with the aural syntax of music, allowing learners to easily link syllables to patterns before encountering notation. The syllables link to musical symbols in a practical and intuitive manner. They are appropriate for all ages. They promote rhythmic accuracy. They facilitate the gen-

eralization of identical patterns from one meter to another, and they assist in the aural identification, labeling, and accurate performance of different meters. In summary, Takadimi is uniquely appropriate for the youngest and most inexperienced learners as well as the most advanced musicians, providing a necessary tool for lifelong, independent rhythm literacy.

### Notes

1. Don Ester, "The Music Literacy Pedagogy of Vocal Music Educators: A National Survey" (working paper, Ball State University, Muncie, IN, 2006).
2. Johann Heinrich Pestalozzi, *How Gertrude Teaches Her Children*, ed. Ebenezer Cooke, trans. Lucy E. Holland and Francis C. Turner (London: Swan Sonnenschein, 1894); Robert Gagné, *Conditions of Learning*, 3rd ed. (New York: Holt, Rinehart, and Winston, 1977); Edwin E. Gordon, *Learning Sequences in Music* (Chicago: GIA, 2003).
3. T. Clark Saunders, "The Stages of Music Audiation: A Survey of Research," *The Quarterly Journal of Music Teaching and Learning* 2, nos. 1 and 2 (1991): 131–37.
4. Gordon, *Learning Sequences*, 361.
5. Richard Hoffman, William Pelto, and John W. White, "Takadimi: A Beat-Oriented System of Rhythm Pedagogy," *Journal of Music Theory Pedagogy* 10 (1996): 7–30.
6. Personal communication with the authors, April 20, 2005.
7. Hoffman, Pelto, and White, "Takadimi." ■

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