Rhythmic Acuity 
Measurement Scale

Eight Areas of Overall Development

Supplement for Music Therapy: An Introduction to the Profession
Chapter 4: Musicianship in Music Therapy

Kalani Das and Bill Matney:

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Further details available:

Eight Areas of Overall Development

- Response
- Timing
- Fortitude
- Resiliency
- Frequency
- Orientation
- Division
- Variation
## Rhythmic Acuity Measurement Scale (RAMS)

*Kalani Das and Bill Matney*

<table>
<thead>
<tr>
<th><strong>Response</strong></th>
<th><strong>Timing</strong></th>
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<tbody>
<tr>
<td><strong>Physical Reaction to external stimuli</strong> (auditory, kinesthetic, or visual).</td>
<td><strong>Ability to align with a pulse</strong> (from 40 to 120 bpm).</td>
<td><strong>Ability to maintain a steady pulse in relation to external stimuli.</strong></td>
<td><strong>Ability to realign with the pulse after straying from it.</strong></td>
<td><strong>Maximum rate of play as measured by alternating SPM</strong> (Strokes Per Minute).</td>
<td><strong>Ability to align with a musical pattern’ or phrase’.</strong></td>
<td><strong>Ability to subdivide’ and syncopate’ beats and measures.</strong></td>
<td><strong>Ability to modify a pattern through accents’, ornamentation’, expansion’, and reduction’.</strong></td>
</tr>
<tr>
<td>0</td>
<td>No response.</td>
<td>Demonstrates limited alignment with pulse (below 80% accuracy).</td>
<td>Stops completely, &amp; must be guided back into realignment with the pulse’.</td>
<td>Plays below 200 spm (16th notes at 50 beats per minute).</td>
<td>Does not play in relation to the rhythmic pattern or phrase’.</td>
<td>Does not subdivide or syncopate beats</td>
<td>Does not change the pattern</td>
</tr>
<tr>
<td>1</td>
<td>Exhibits abrupt, sudden, and seemingly uncoordinated movements.</td>
<td>Matches the pulse with at least 80% accuracy.</td>
<td>Plays steady pulse only when supported by external stimuli.</td>
<td>Plays a minimum of 200 spm’ (16th notes at 50 beats per minute).</td>
<td>Plays in alignment with phrase when prompted and from start (1).</td>
<td>Sub-divides the beat. (Eight notes)</td>
<td>Removes and adds notes to form new patterns.</td>
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<tr>
<td>2</td>
<td>Responds with coordinated, parallel play’.</td>
<td>Matches the pulse with at least 95% accuracy.</td>
<td>Plays pulse and grounded rhythm patterns’ despite changing external stimuli</td>
<td>Plays a minimum of 360 spm’ (16th notes at 90 beats per minute).</td>
<td>Plays in alignment with phrase’ from start (1).</td>
<td>Subdivides into 16th notes and 8th-note triplets. Syncopates the divided beat.</td>
<td>Uses accents, and dynamic changes along with above items.</td>
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<tr>
<td>3</td>
<td>Engages with coordinated, cooperative play’.</td>
<td>Plays’ rhythm patterns’ with at least 95% accuracy at 80-120 bpm</td>
<td>Plays pulse and grounded rhythm patterns under highly syncopated external rhythms.</td>
<td>Plays a minimum of 500 spm’ (16th notes at 125 beats per minute)</td>
<td>Plays in alignment with phrase from any primary beat.</td>
<td></td>
<td>Incorporates ornamentations in play (e.g. flams, ruffs, and rolls) along with above items.</td>
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<tr>
<td>4</td>
<td>Initiates and engages in self-actualized play.</td>
<td>Plays’ rhythm patterns’ with at least 95% accuracy at 40-180 bpm’</td>
<td>Plays pulse and grounded rhythm patterns while conversing, singing, or demonstrating other multitasking abilities.</td>
<td>Plays a minimum of 720 spm’ (16th notes at 180 beats per minute)</td>
<td>Plays in alignment with phrase from any beat, primary or secondary.</td>
<td></td>
<td>Timbre variation, expansion, and reduction. Can incorporate all of above skills in the moment to create new patterns.</td>
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Figure also available in:
Matney, B., & Das, K. (in press). The rhythmic acuity measurement scale: Implications for music therapy education, training, and practice. *Music Therapy Perspectives, TBD.*

“Plays” refers to an action that continues for at least 30 seconds.

Level 4 describes common, minimum entry-level demonstrations for the professional percussionist.

Orange denotes areas where a beginning professional music therapist is recommended be able to demonstrate at a minimum.
Rhythmic Acuity

Response -

Physical reaction to external stimuli
Rhythmic Acuity
Measurement Scale

Timing:
Ability to align with a pulse
Rhythmic Acuity

Fortitude -

Ability to maintain a steady pulse in relation to external stimuli
Rhythmic Acuity

Measurement Scale

Resiliency -

Ability to *re-align* with pulse in relation to external stimuli.
Rhythmic Acuity Measurement Scale

**Frequency** -

Maximum rhythmic rate of play.
Rhythmic Acuity Measurement Scale

Orientation -

Ability to align with a musical pattern or phrase.
Rhythmic Acuity Measurement Scale

**Division** -
Ability to divide and syncopate beats and measures.
Rhythmic Acuity

Variations -

Ability to modify a pattern through accents, expansion, reduction, and ornamentation.
Summary: Eight Areas of Overall Development

- Response
- Timing
- Fortitude
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- Frequency
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Rhythmic Acuity Measurement Scale (RAMS)

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<td>Plays below 200 spm (16th notes at 50 beats per minute).</td>
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<td>Plays a minimum of 200 spm’ (16th notes at 50 beats per minute).</td>
<td>Plays in alignment with phrase when prompted and from start (1).</td>
<td>Sub-divides the beat. (Eight notes) Syncopates the divided beat.</td>
<td>Removes and adds notes to form new patterns.</td>
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<td>Responds with coordinated, parallel play’.</td>
<td>Matches the pulse with at least 95% accuracy.</td>
<td>Plays pulse and grounded rhythm patterns despite changing external stimuli.</td>
<td>Plays a minimum of 360 spm’ (16th notes at 90 beats per minute).</td>
<td>Plays in alignment with phrase’ from start (1).</td>
<td>Subdivides into 16&lt;sup&gt;th&lt;/sup&gt; notes and 8&lt;sup&gt;th&lt;/sup&gt;-note triplets. Syncopates the above.</td>
<td>Uses accents, and dynamic changes along with above items.</td>
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<td>Engages with coordinated, cooperative play’.</td>
<td>Plays’ rhythm patterns with at least 95% accuracy at 80-120 bpm</td>
<td>Plays pulse and grounded rhythm patterns under highly syncopated external rhythms.</td>
<td>Plays a minimum of 500 spm’ (16th notes at 125 beats per minute).</td>
<td>Plays in alignment with phrase from any primary beat.</td>
<td>Plays 3/2 or 4/3 polyrhythms in relation to beat. Syncopates the above.</td>
<td>Incorporates ornamentations in play (e.g. flams, ruffs, and rolls) along with above items.</td>
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<td>Initiates and engages in self-actualized play.</td>
<td>Plays’ rhythm patterns with at least 95% accuracy at 40-180 bpm’</td>
<td>Plays pulse and grounded rhythm patterns while conversing, singing, or demonstrating other multitasking abilities.</td>
<td>Plays a minimum of 720 spm’ (16th notes at 180 beats per minute).</td>
<td>Plays in alignment with phrase from any beat, primary or secondary.</td>
<td>Plays all of the above &amp; moves freely between them.</td>
<td>Timbre variation, expansion, and reduction. Can incorporate all of above skills in the moment to create new patterns.</td>
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