Music Theory SI Resource Site

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University of Hawaiʻi at Mānoa
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Biography

Education
• M.Ed. LTEC
• Bachelor of Music
• A.S. Biology

Current Position
• Lead Tutors & SI Leaders (including musicians)
• Develop trainings and educational materials.
Supplemental Instruction (SI)

- Group activity facilitation for students
- Led by “near-peer”
- Develop skills vs. facilitator-led content delivery
- Utilizes visual, auditory, tactile, and kinesthetic strategies
- Primarily used in STEM
## When to Supplement with SI

<table>
<thead>
<tr>
<th>Ideal Conditions</th>
<th>Music Theory Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>• High Course DFW Rates</td>
<td>• &gt;25% DFW Rate</td>
</tr>
<tr>
<td>• “Gate Keeper” Courses</td>
<td>• Required for Degree</td>
</tr>
<tr>
<td>• High Attrition Rates</td>
<td>• 15-25% Attrition Rate</td>
</tr>
<tr>
<td>• Need to think “in major”</td>
<td>• “Internal Audiation” (Gordon)</td>
</tr>
</tbody>
</table>
Rationale

Internal Audiation

Flipped Instruction & Metacognition

Prevent “Knowledge Telling”

Curated, Resource-Rich Resources
Project Description

**The Problem:** Music Theory Supplemental Instruction Leaders do not incorporate enough multimodal strategies into their SI sessions because they do not know how to create multimodal strategies.

**The Solution:** Provide SI Leaders with a resource of multimodal session strategies and instruction on how to use them.

**Purpose Statement:** “Evaluate the efficacy of an online resource of multimodal learning strategies to be used by Supplemental Instruction Leaders for Music Theory.”
Music Theory SI Resource Site

Music Theory SI
Welcome to the Music Theory SI Resource Site!
Please watch the video below for a site overview, or click the icons at the bottom of the page to access the content you want to see.

mmercuriosantos.wixsite.com/musictheorysi
Technologies

- Music Theory Pro - Chords, Part I - Triads (Video)
- Music Theory Pro - Chords, Part II - Seventh Chords (video)
- Be the Chord
- Chord Bungees
- Circle of Thirds (Open Theory.net)
- Circle of Fifths Made Clear - Mobile Studio - (video)
Technologies
Presentations

Please watch these videos to gain a better understanding of how to provide Supplemental Instruction to Music Theory students. It is best to watch these videos in order.

- What is Multimodal Learning?
- Setting Smart Goals Using Bloom's Taxonomy
- How to Lesson Plan Using Multimodal Strategies
- This is Your Brain On Music - Knowing Neurons
Why is Multimodal Learning Important?

- Music is learned in MANY parts of the brain simultaneously.
- Music is multimodal, so it requires multimodal understanding.
- Visual notation MUST be learned to perform music, use music theory without attaching sound rhythm or function to them.
Note Learning

Are your students struggling to learn or remember note names and qualities? Please click on the links below for innovate strategies designed to get those note names to stick.

How to Read Music - Tim Hansen (TedED Video)

The Overtone Series

Online Frequency Generator

Music Theory Pro - Overview of Note Names, Clefs, and Accidentals

Whack A Note

Note Recognition Game: Music Theory.net

30+ Fun Ways to Teach the Notes of the Staff Using Technology
Adapted SI Strategies

Concept Mapping

A concept map is a type of diagramming that allows students to organize information according to relationships. The central idea is placed in a bubble in the middle of the map. Related ideas and pieces of information are placed in smaller bubbles around the central bubble. Lines are used to connect the bubbles together.

Concept mapping is commonly used to connect information from many types of subjects, so the students in your SI sessions are most likely familiar with the strategy. It is, therefore, helpful to adapt the strategy for use in Music Theory SI sessions, as it allows students to use information they already know (a familiar strategy) to organize information they don’t know yet.

Here’s what a concept map could look like for the different types of 7th chords. It’s been left uncompleted, so students can finish it on their own, using the information given.

To use this strategy:
- Put students in small groups or pairs.
- Have them identify the central word, concept, or question around which to build the map.
- List the concepts, items, or questions associated with the central word or concept.
- Work from the general to the specific.
- Write in the linking words on the lines connecting the bubbles.
- Have students tell you how all of the concepts are related.
Students often have difficulty remembering the number of accidentals needed in a given key signature, and often confuse the types of accidentals needed (sharps and flats). This adapted matrix is designed to help students remember the number of accidentals in a given key signature by recalling the number of accidentals needed in a similar key signature.

Start by having students draw a matrix that is 3 columns wide by seven columns 8 columns high. Label the first three cells across with the words "Letter", "Sharps", and "Flats." Have them write the letters A to G in the remaining cells of the first column, as follows:

<table>
<thead>
<tr>
<th>Letters</th>
<th>Sharps</th>
<th>Flats</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>3</td>
<td>4 (Ab)</td>
</tr>
<tr>
<td>B</td>
<td>5</td>
<td>2 (Bb)</td>
</tr>
<tr>
<td>C</td>
<td>0</td>
<td>7 (Cb)</td>
</tr>
<tr>
<td>D</td>
<td>2</td>
<td>5 (Db)</td>
</tr>
<tr>
<td>E</td>
<td>4</td>
<td>3 (Eb)</td>
</tr>
<tr>
<td>F</td>
<td>6 (F#)</td>
<td>1 (F)</td>
</tr>
<tr>
<td>G</td>
<td>1</td>
<td>6 (Gb)</td>
</tr>
</tbody>
</table>

At the end of the exercise, point out to the students that for any given letter, the number of sharps in the sharp key signature, and the number of flats in the flat key signature almost always add up to seven (the exception is that C#, has 7 sharps, Cb has 7...
Desktop and Mobile

Site Directory

All of the strategies in this website are listed here in alphabetical order for quick and easy access. Just click on a link below to access the strategy you desire.

Be the Chord
Be the Interval
Caveman Key Signatures
Concept Mapping
Chord Bungees
Circle of Thirds (Open Theory.net)
Circle of Fifths Made Clear - Mobile Studio - (video)
Everything Adds Up to Seven
How to Lesson Plan Using Multimodal Strategies

Be the Chord
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Everything Adds Up to Seven
Methods

• Provided site to staff with no mandate to use it
• Lesson Plans
• Analyzed Data (GoogleForm)
• Compared strategy use from 2018 Spring to 2017 Spring
Desired Outcomes

- Auditory, Kinesthetic and Tactile
- “Big Four”
- Constructivist, collectivist learning
- Staff motivation and creativity (see Oreos)
- Less “paper based” learning
Results - Usage

Use of Strategies from Resource Site

- Site Strategies: 45.0%
- Non-Site Strategies: 55.0%
Results – Strategy Types

Comparison of Strategy Types - 2017 Spring vs. 2018 Spring

- Visual Strategies
- Auditory Strategies
- Kinesthetic Strategies
- Tactile Strategies

Supplemental Instruction Strategy Modalities
Results – Visual Strategies

• Less "passive learning" - SI Leaders doing the work while students watched

• More "Active Learning" - Students up on the board doing work together
Results – Auditory Strategies

• Less "discussion based"
• More "singing, solfeging, voicing, and harmonizing"
Results – “Big Four” & Paper Based

"Big Four" and Paper Based Strategies

- 2017 Spring
- 2018 Spring

<table>
<thead>
<tr>
<th>Strategy Type</th>
<th>Percentage of Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Big Four</td>
<td>0.00%</td>
</tr>
<tr>
<td>Paper Based</td>
<td>30.00%</td>
</tr>
</tbody>
</table>
Results – “Big Four”

• Big Four Strategies DOUBLED
• ...but we still need more!
Results – Paper-Based Strategies
Conclusion:

YES!

It worked
**Staff Feedback**

<table>
<thead>
<tr>
<th>Pros</th>
<th>Cons</th>
</tr>
</thead>
<tbody>
<tr>
<td>• “Loved the adapted SI strategies for us SI Leaders”</td>
<td>• “The majority of pages and strategies were geared towards Music Theory fundamentals through II or III”</td>
</tr>
<tr>
<td>• “Love the layout”</td>
<td>• “Needs more strategies and general help”</td>
</tr>
<tr>
<td>• “There’s good reminders (incorporating auditory as well as visual methods) as well as good strategies that I hadn’t utilized before”</td>
<td>• “Add names to the category icons”</td>
</tr>
<tr>
<td>• “I mostly used the directory page to find activities”</td>
<td>• “Have SI Leaders submit their ideas.”</td>
</tr>
</tbody>
</table>
Next Steps

Site Development:
✓ Add More Strategies (rhythm, kinesthetic)
✓ Add More “Big Four” Strategies
✓ Develop Masterclass SI Sessions

Research:
✓ Impact on Course Grades
✓ Longitudinal Grade Improvement
✓ Establish Standards and Practices
Mahalo!