The Impact of Thinking Maps® in Elementary School Music Education:

Case Study with 5th Grade Flute Class in Teaching Rhythm

By YoungHoon Park

Overview

- **The purpose of this study** is to explore the effectiveness of Thinking Maps® in teaching instrumental music for fifth-grade flute class.
- Typically used in reading classes, provide a visual rendering of patterns, TM will be an effective tool to help students learn to count correctly and play in time.
- Four patterns were tested for their efficacy in helping students learn 6/8 rhythm: **Double Bubble Map** for comparing and contrasting, **Brace Map** for recognizing parts-in-whole, **Circle Map** for defining in context, and **Tree Map** for classifying.
- **Methods:** Case Study done with interviews, classroom observations, and summative pre- and post-assessments. Assessments evaluated both the students' understanding and their playing ability.

Questions

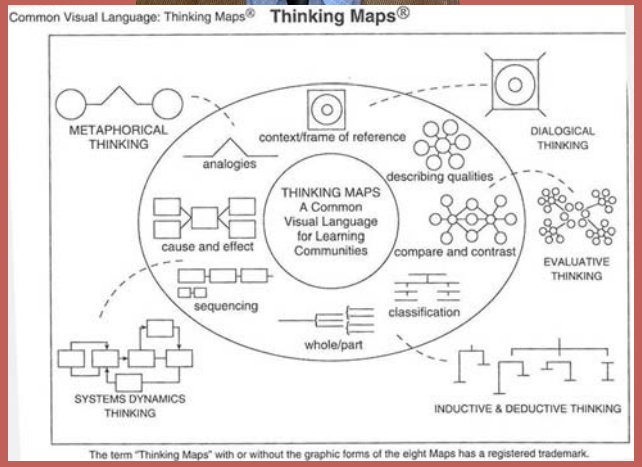
- Can “Thinking Maps®” improve students’ performance?
- Can “Thinking Maps®” make students understand clearly what they are learning?
- Do “Thinking Maps®” work for every student?

Methodology

- Literature Review
- Case Study
  - Class Observation
  - Comparison between Control Group Study and Test Group Study
- Interview with Co-Teachers and Staff
- Application of Thinking Maps®

Thinking Maps®

- Transformational Language for Learning



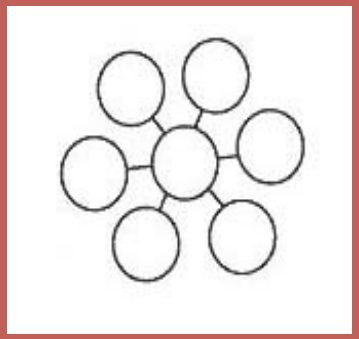
Holistic Work of Thinking Maps®

- Developed by David Hyerle
  - See References for “Brief History”
- Visual Learning Tool
- Adopted by many schools esp. for Literacy
  - David Hyerle, “Thinking Maps as a Transformational Language for Learning,” in *Student Successes with Thinking Maps: School Based Research, Results, and Models for Achievement Using Visual Tools*, edited by David Hyerle (Thousand Oaks, CA: Corwin Press, 2004), p. 2.

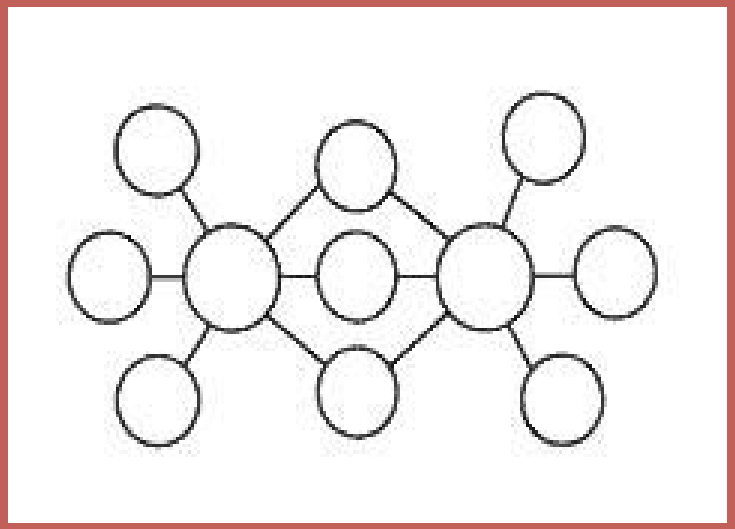
Basic Principal of Thinking Maps®

Double Bubble Map

"For Comparison or Contrast"

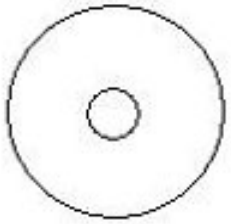
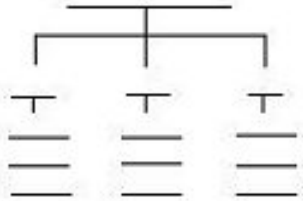
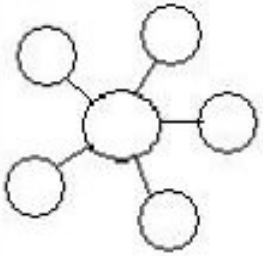
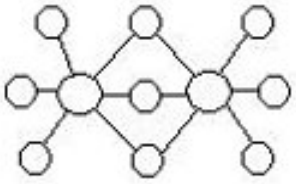
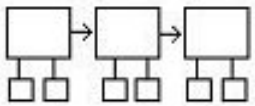
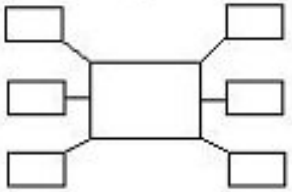
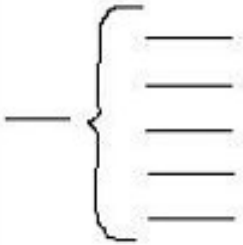


Primitive

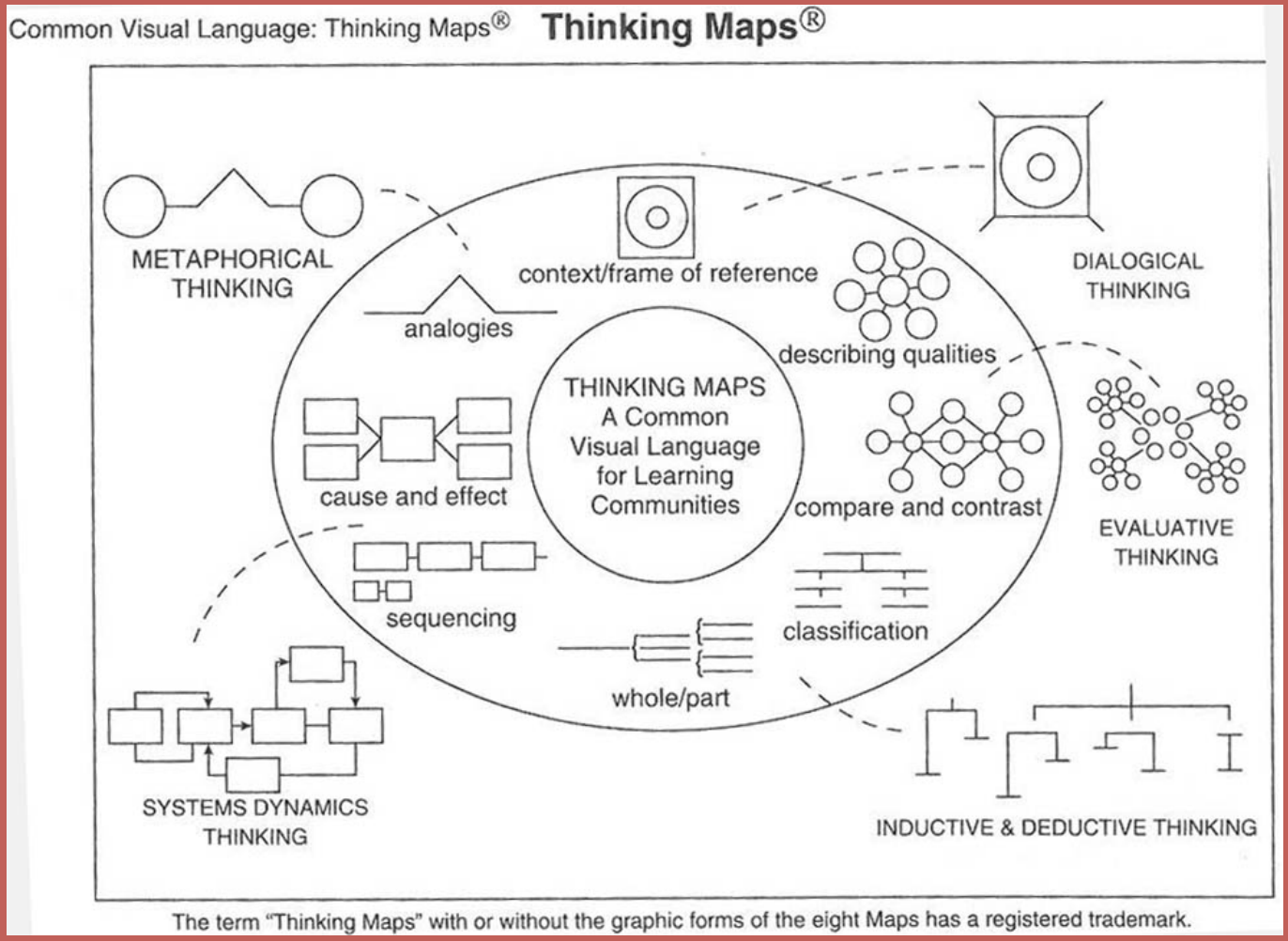


Expanded Map

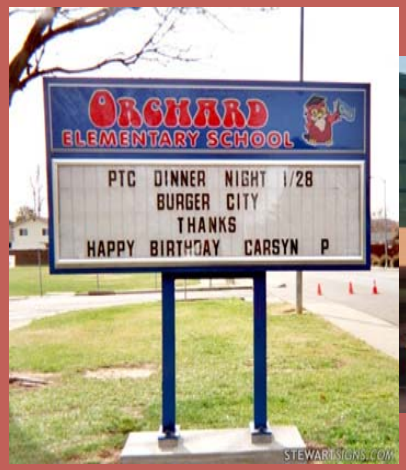
Eight Thinking Maps®

Circle Map  FOR DEFINING	Tree Map  FOR CLASSIFYING	Bubble Map  FOR DESCRIBING	Double Bubble Map  FOR COMPARING
Flow Map  FOR SEQUENCING	Multi-Flow Map  FOR CAUSE AND EFFECT	Brace Map  WHOLE TO PARTS	Bridge Map  FOR ANALOGIES

Holistic Work of Thinking Maps®

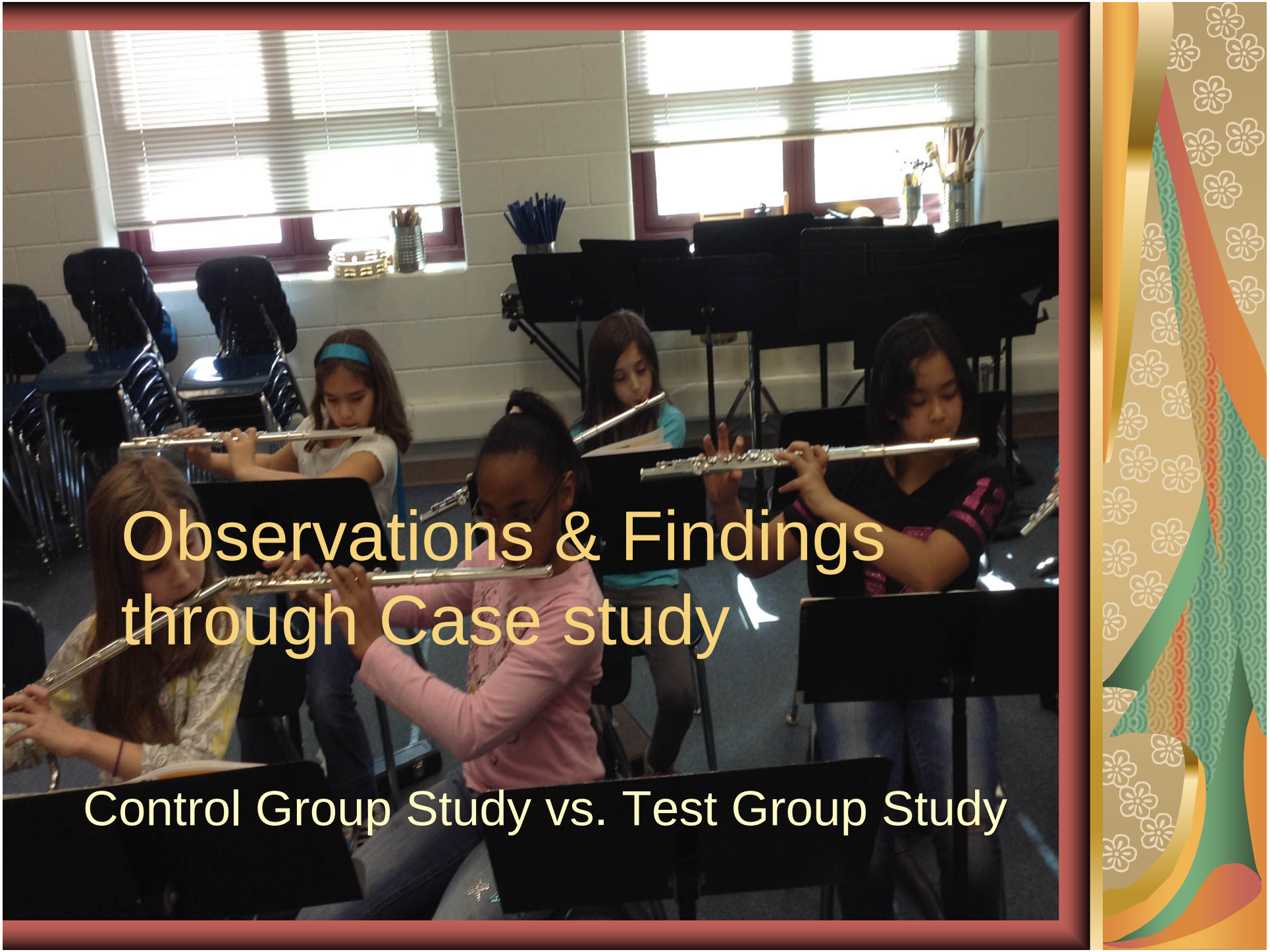


School Improvement Plan & Thinking Maps®



- P ES provides a safe learning environment that promotes academic excellence and personal creativity by challenging all students for success in real world. To accomplish the vision P ES implements 12 Key Practices:

- Under the supervision of **School Improvement Taskforce** … P ES expands the Exploratory Trail using collaborative data driven instructional planning to infuse ALPs strategies into 50% of each lesson. **Thinking Maps® - Language for Learning** is one of the resources, associated with this step.



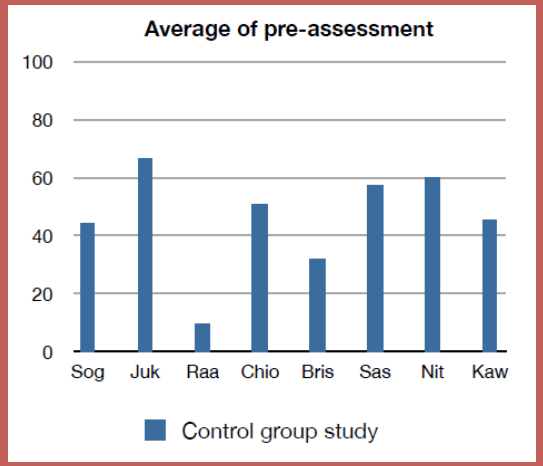
Observations & Findings through Case study

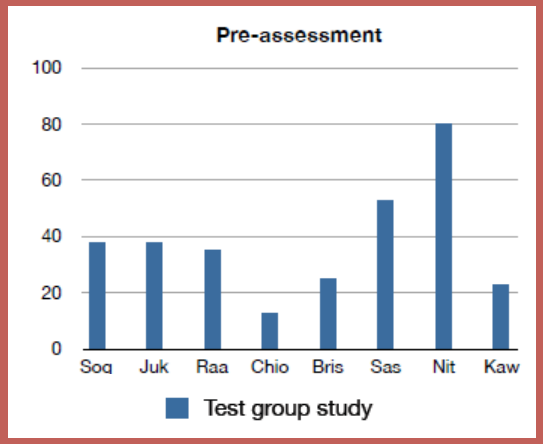
Control Group Study vs. Test Group Study

Pre-Assessment

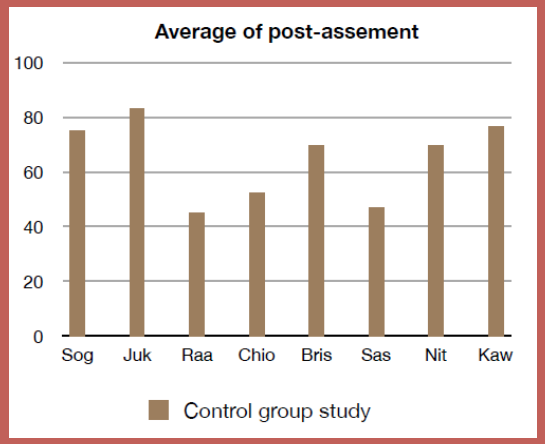
- On Basic Music Theories: Notation, Rhythm, Sixteenth Note, etc.
- Average Score: 47.2
  - Lowest: 9.6
  - Highest: 66

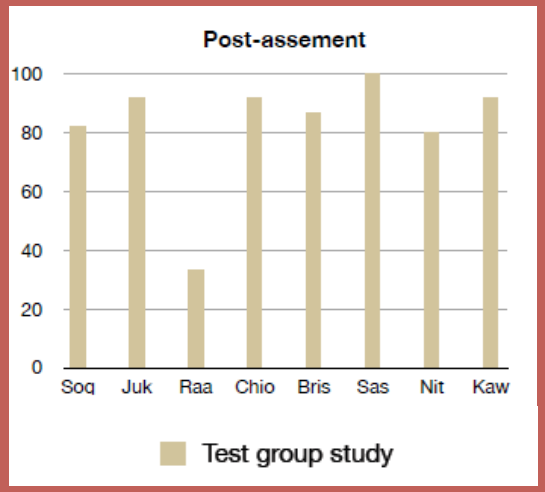
- On 6/8 Rhythm and Play
- Average Score: 37.81
  - Lowest: 0
  - Highest: 68





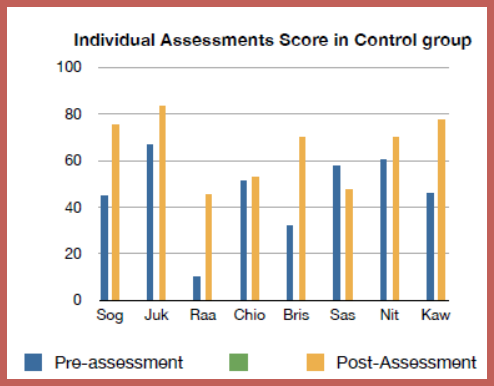
Post-Assessment

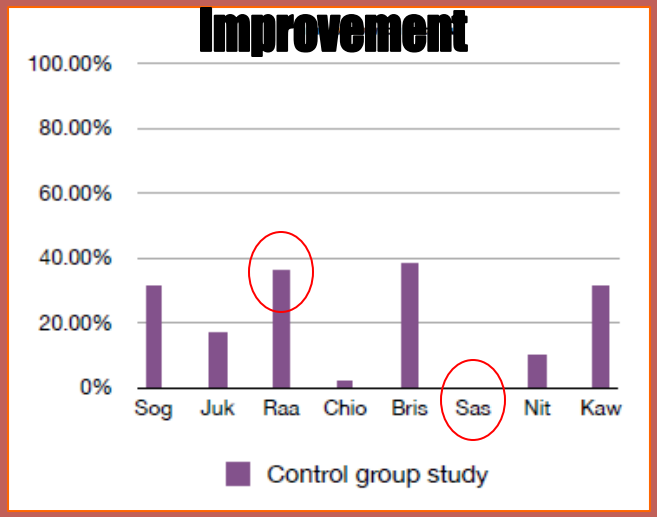




- Control Group
  - 2 weeks of Traditional Teaching
  - Average Improvement Rate: 17.9%
  - “Chio” Improved 1.7%
- Test Group
  - 2 weeks of Teaching w. Thinking Maps®
  - Average Improvement Rate: 44.2%
  - “Chio” Improved: 79.2%

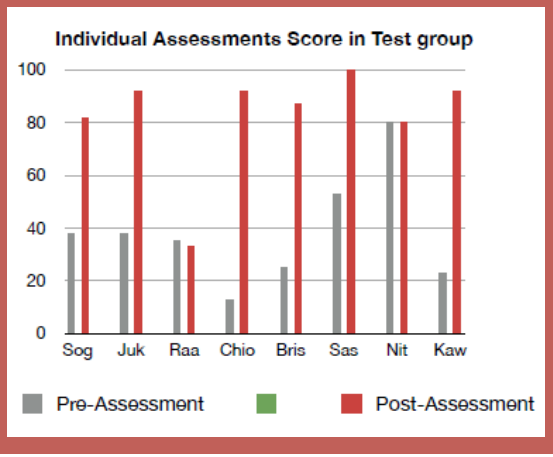
Improvement in Control Group

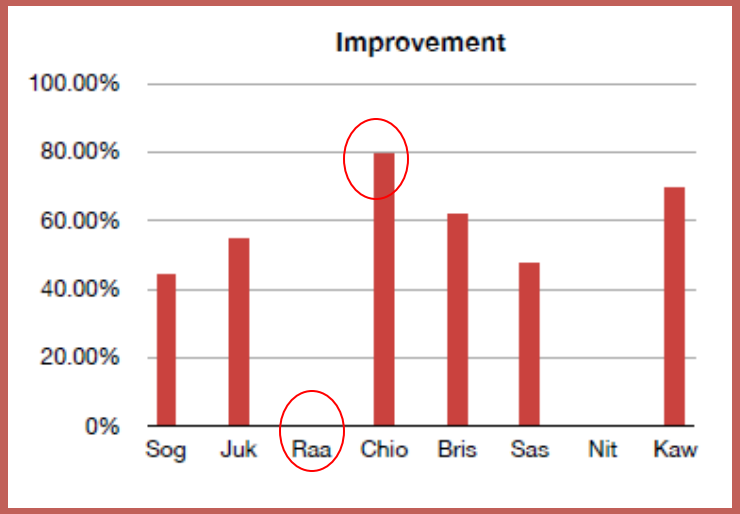




- Test Areas: Basic Music Theories: Notation, Rhythm, Sixteenth Note, Performance.
  - "Raa" with IEP shows Greatest Improvement
  - "Sas" shows -10.3% (negative) improvement
- Findings
  - Students with LD learn well with traditional learning pattern, such as lecture style, memorization
  - Normal students in Control groups may lose motivation.

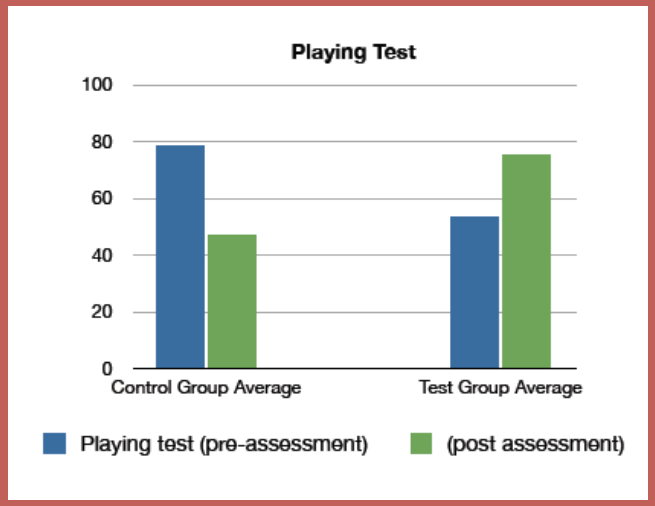
Improvement in Test Group

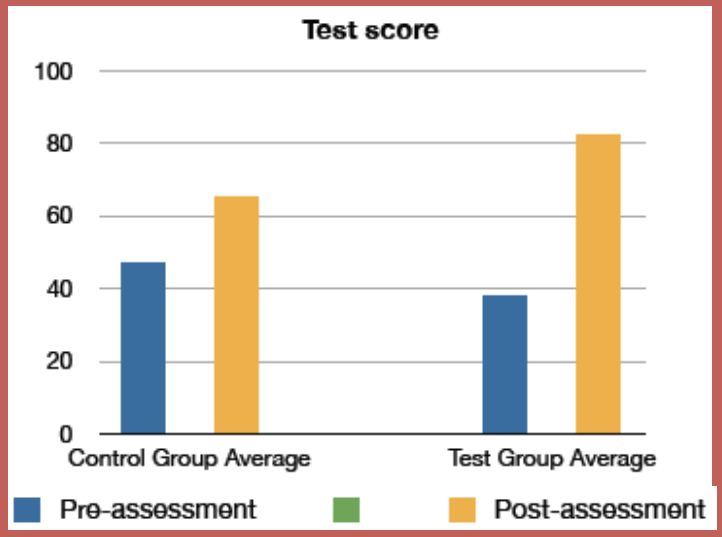




- Test Area: 6/8 Note Value
  - Majority of students shows great improvements
  - “Chio” shows greatest improvement
  - “Raa” with IEP shows lowest improvement
- Findings:
  - Research proves that Thinking Maps® bring effective learning for many students
  - Thinking Maps® don’t necessarily work well for all, esp. for Students with LD

Other Findings





- Thinking Maps® help performance with effective literacy in instrumental music education.
- Thinking Maps® increase average group score eventually.

Discovery from Interview

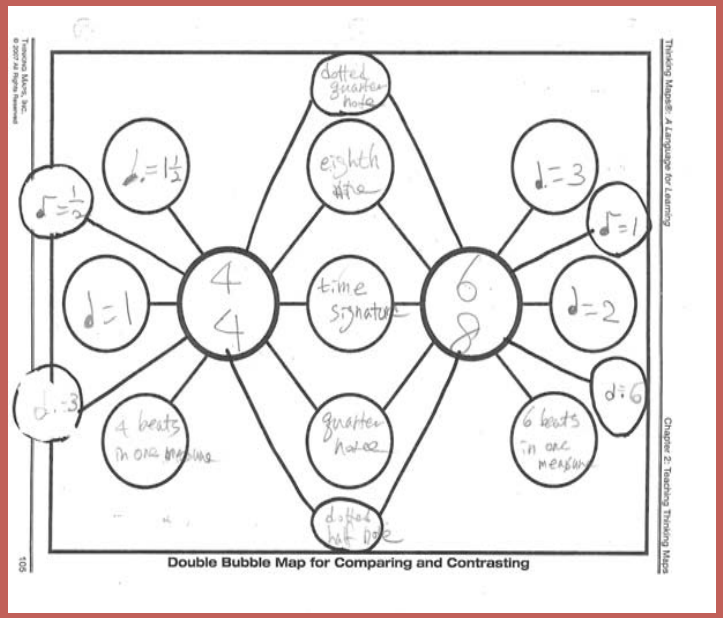
- Are you using the Thinking Maps? Why or why not?
- Do you like using them? Why or why not?
- What success have you had with thinking maps?
- What seems to be the most effective way to use them?
- What problems have you had with thinking maps?

- Yes - Excellent Program
- Yes - Love to Use because Kids Like
- Organizing Info; Motivation
- Used Group Level, Instead of Individual Application
- Seldom Used due to Limited Time during Class

Use of Thinking Maps®

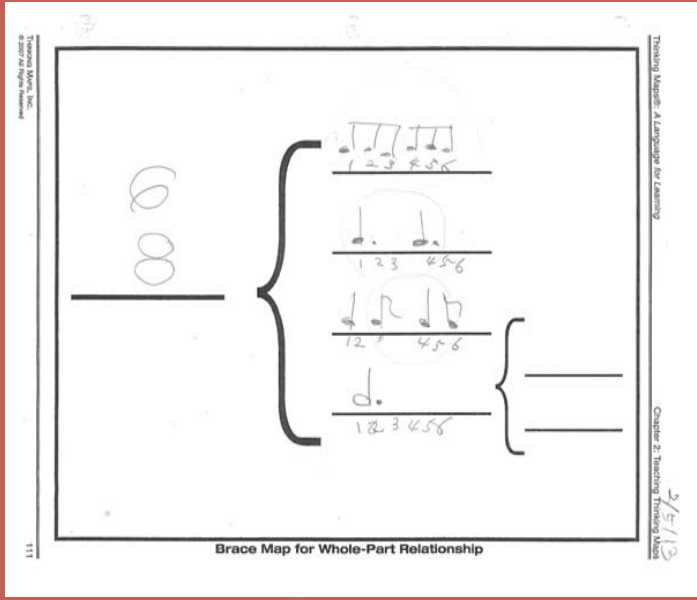
Double Bobble Map
Brace Map
Circle Map
Tree Map

Double Bubble Map



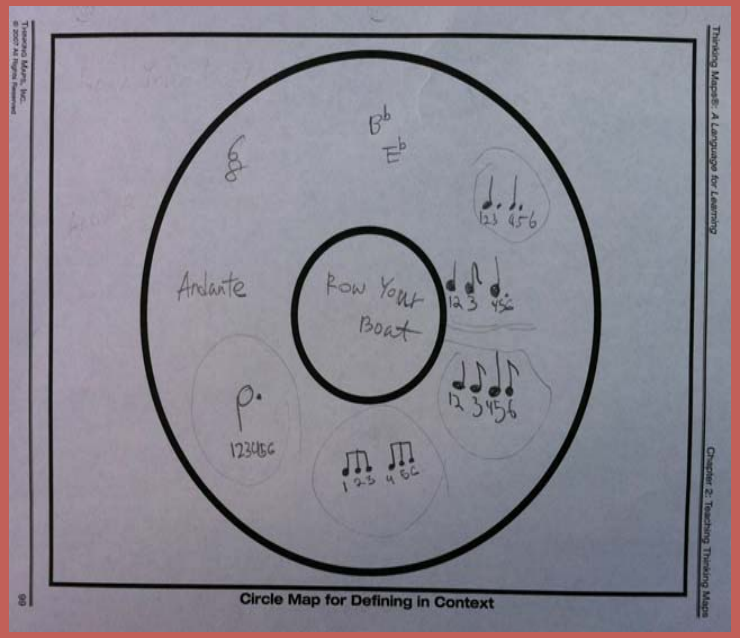
- Time Signature - 4/4 versus 6/8
  - Helps Comparison & Contrast
  - Visualize complicated parts
  - Avoid Confusion in Performance

Brace Map



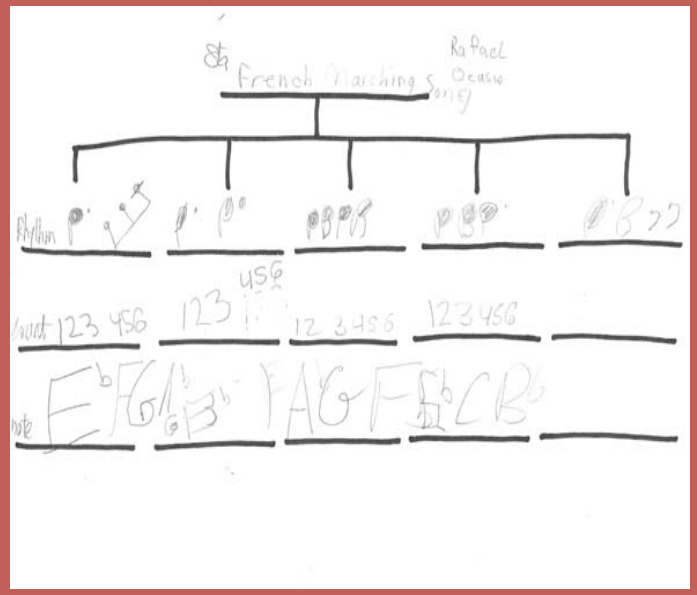
- 6/8 Music Value
  - Helps to understand Different Value
  - Helps See “Parts in Whole”
  - Understands a Recurring Pattern in the whole music piece

Circle Map



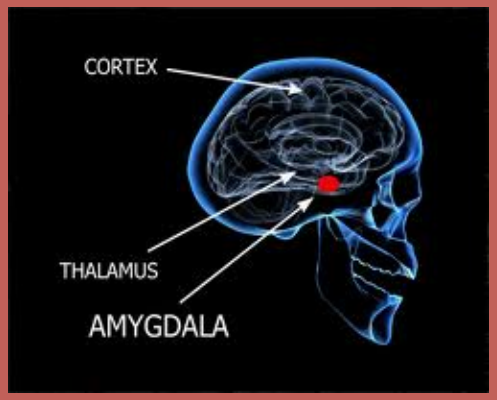
- Defining Music
  - Recognizing Characteristics of music
  - Finds Distinctions of music, along with Elements of Music Symbols, Markings, and Emphases Used in the Music

Tree Map



- Analyzing Music
  - Helps Classifying
  - Tree Map shows frequently appearing music pattern
  - Essential for performance with excellence

Impacts of Thinking Maps®



- Thinking Maps® Enhance Metacognition of Brain
  - Chris Yeager, "Linking Brain Research to Best Practice," in *Student Successes with Thinking Maps: School Based Research, Results, and Models for Achievement Using Visual Tools*, edited by David Hyerle (Thousand Oaks, CA: Corwin Press, 2004), pp. 23-25.
- Thinking Maps® Promote Equal Education
  - Bonnie Singer, "Leveling the Playing Field for All Students," in *Student Successes with Thinking Maps: School Based Research, Results, and Models for Achievement Using Visual Tools*, edited by David Hyerle (Thousand Oaks, CA: Corwin Press, 2004), pp. 33-37.
- Thinking Maps® Differentiate
  - Alan Cooper, "Tools for Integrating Theories and Differentiating Practice," *Student Successes with Thinking Maps: School Based Research, Results, and Models for Achievement Using Visual Tools*, edited by David Hyerle (Thousand Oaks, CA: Corwin Press, 2004), pp. 40-46

Conclusions

- Thinking Maps® as Transformational Learning Language for All
  - Global language of learning for all
  - Visualize; organize; and make effective learning
- We Still Have Room for Perfection
  - Thinking Maps® can be a huddle for some students esp. for students with LD
  - Thinking Maps® is a tool for learning, not the content itself – the knowledge and information
  - Need time for utilization within the limited time during classes

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Gonzalez, L. Personal Communication, November, 05, 2012.

5 Teachers and Staff for Interview

Fifth Grade Flute Class of 2012-13