

Classical Music & Entrepreneurship 2013-2014

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(with support from administration)

Introduction:

This group of grade 2 students fit into one of three math levels. There are the students working at the current grade two level, those working at the grade three level and finally one student is working at the grade four level.

Goal:

The goal of this project is to

- increase the student engagement in mathematics activities.
- increase students' knowledge of numeracy concepts.
- increase student achievement in math.

Strategies:

- a. Math journaling.
- b. Use of reward system using money skills.
- c. Math centres and stations, including games on the iPad.
- d. Classical music integration into the daily math time.

Data Collection Tools:

- a. Evaluation of Critical Thinking - Use a rubric to determine a student's creative thinking process when figuring out math word problems.
- b. Entrepreneurship - End project for students to complete which will involve making a product to sell, coming up with a business plan and using money sense skills to sell the product.
- c. Ethical citizen - Evaluate the students ability to make ethical decisions within their entrepreneurial project.
- d. Student Engagement - Compare student's engagement at the beginning, with no music, then evaluate engagement over the course of the year, four more times.

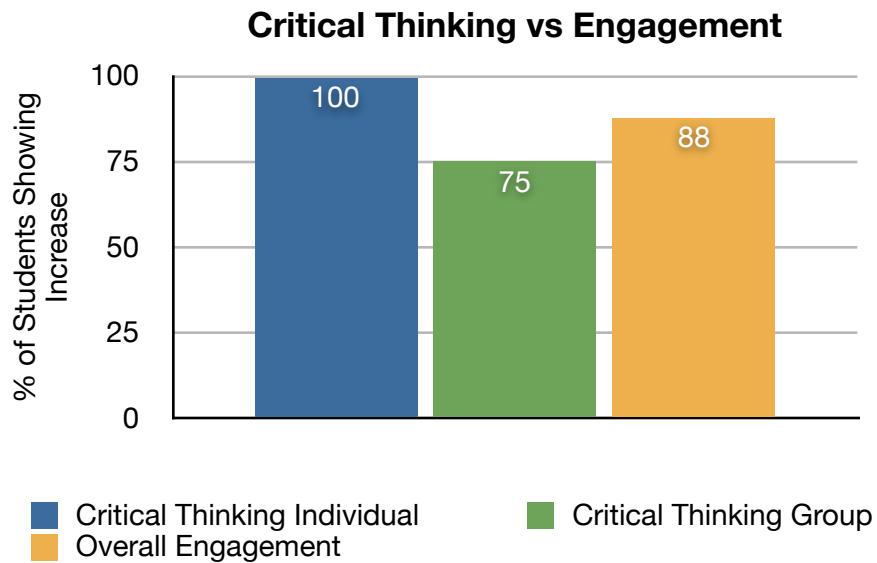


Fig. 1 This table seems to indicate that implementing the identified strategies resulted in a significant increase showing an increase in critical thinking as well as engagement.

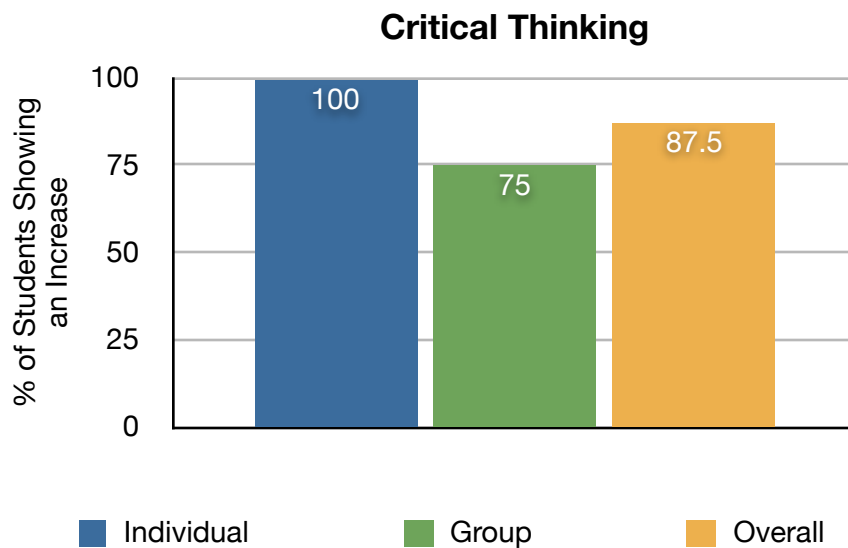


Fig. 2. This figure seems to indicate that the strategies used increased the percentage of students showing an increase in critical thinking.

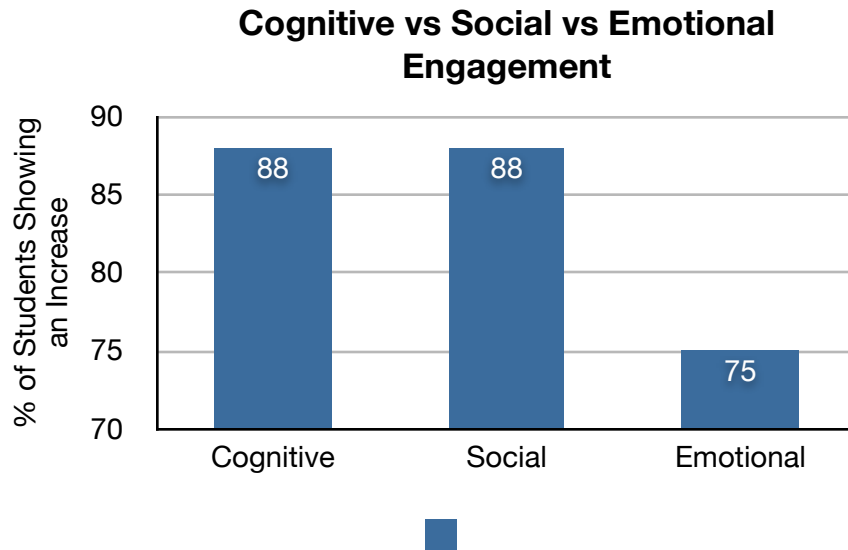


Figure 3. This graph indicates that the percentage of students showing an increase in cognitive and social engagement is greater than that of the emotional engagement.

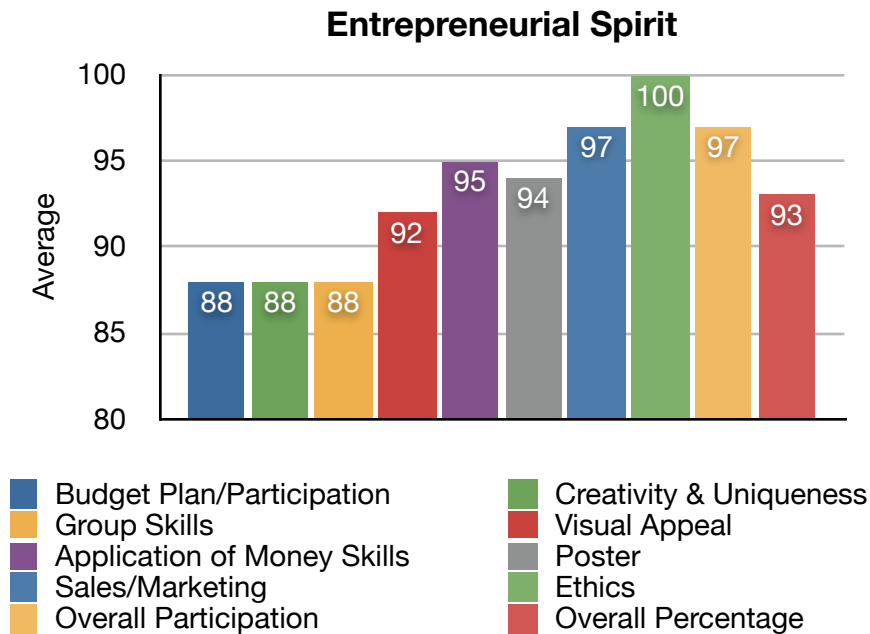


Fig. 2. This graph indicates that, involving students in a multi-disciplinary project proved successful in fostering the acquisition of not just math skills, but also other skills such as: sales/marketing skills, presentation skills, and others.

Conclusion and Discussion:

- The results have shown that utilization of several strategies was an effective means of improving the students' overall engagement in math.
- Math journaling has been a strategy that I have used over a two-year span. Math journaling allows students to implement their critical thinking skills. Students use problem-solving skills to solve everyday real problems. Over the course of this year, students have gradually become better problem-solvers, as the results indicate. Students began the year with only writing little to none in their math journals when given a problem. Slowly, the students became more detailed and more thorough in their thinking, including diagrams, pictures, math equations, and sentences to conclude their findings at the end of the problem. After completing problems on their own, students got into multi-math-level groups to discuss and show their findings to their group members. This allowed students the opportunity to teach their learning styles to their peers. It allowed students to see how to solve a math problem in new ways that they never thought possible.
- Classical music accompanied this time in the classroom. I first looked at the students' engagement without music during math time, and then I added music and looked at their engagement four additional times. What I found was an overall increase in engagement which I attribute to the addition of music since no other variables were introduced. Students shared with me that they felt more relaxed, more stimulated and more eager to do the math problems.
- Later in the year students were involved in a bigger project. This project allowed them to apply their math skills, their "new" ways of thinking about math, and their creativity to carry out a class-wide Art Sale. For this project, students took pieces of artwork from over the course of the year, one that they liked, and worked out a budget, a sale plan and a rudimentary business plan. The Plan was to make a profit from the sale of their artwork and this profit would help fund the development of our new school. Students worked out the breakdown of costs for making the artwork including the materials, the price of a frame and the cost of their time as the artist. Students priced for their work and made art posters to advertise the CAPE School Spring Fling Trade Show Art Sale. On the day of the art show, students came to sell their artwork to the public, salesmanship at its best. Students handled the money collection and made change.. At the end of the art show, students worked out our profit from the sale, being sure to include deductions such as the initial money float, and the money borrowed from student council. The art show made a profit of about \$300. This project made the students feel empowered to be involved in such an important task, to feel a part of the making of their new school.

Bibliography:

1. Palmer, Christopher Blake. (2011) *Are Math Journals Effective?* LaGrange, Georgia. pp. 1-29.
2. Merrell, Audrey. (2004) *The Benefits of Incorporating Music in the Classroom.* pp.1-11.

