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Fostering elementary students' mathematics disposition through music-mathematics integrated lessons.

Int. J. Math. Teach. Learn. 2014, 19 p., electronic only (2014).

Summary: Two classes of third grade students ($n = 56$) from an elementary school located on the western coast of the United States participated in this research study. A pretest-posttest control group design was utilized to examine changes between two groups of participating students' in mathematics achievement and dispositions, including beliefs about success, attitude, confidence, motivation, and usefulness. The students in the music group received music-mathematics integrated lessons, while the students in the control group received traditional lecture and textbook based mathematics instruction. Analysis of the results demonstrated that despite statistically equivalent pretest scores prior to the intervention, after the intervention the music group students had statistically significantly higher positive mathematics dispositions scores than their non-music group peers. These findings provide empirical evidence that there are advantages to teachers utilizing music-themed activities as a context for offering students the opportunity to learn mathematics in a challenging yet enjoyable learning environment.

Classification: D42 M82 C22

Keywords: elementary school students; teaching methods; interdisciplinary instruction; music-mathematics integrated curriculum; student attitudes; student characteristics; mathematics achievement; innovative instruction; instructional effectiveness; mathematics disposition

<http://www.cimt.plymouth.ac.uk/journal/an.pdf>