

Arts for Academic Achievement: What does arts integration do for students?

Ingram, D., & Riedel, E., (2003). Arts for Academic Achievement: What does arts integration do for students? University of Minnesota: Center for Applied Research and Educational Improvement, College of Education and Human Development.

Abstract:

This report examines the relationship between arts-integrated instruction and student achievement. It is part of a series of reports based on a longitudinal study of the Arts for Academic Achievement (AAA) program conducted by a team of researchers at the Center for Applied Research and Educational Improvement (CAREI) at the University of Minnesota over the last three years of the program's four-year implementation. The purpose of the AAA project was to transform teaching and learning through partnerships between schools, artists, and arts organizations. The researchers report results separately for each of the three years they studied, followed by overall findings. Although the project served students in grades K-12, the achievement study only included students in grades three through five and focused on reading and mathematics achievement.

Key Findings:

The researchers found that:

- Third-grade reading gain scores were reliably higher for students whose teachers integrated the arts into English/reading lessons. For each unit increase in the use of arts integration, students' gain scores increased by 1.02 points. The relationship between arts integration was strongest for low SES students (those in the free- and reduced-price lunch program) and ELL students.
- For third-graders, the relationship between arts integration and math achievement was statistically significant. For each unit increase in the use of arts integration,

students' gain scores increased by 1.08 points.

- Fourth-grade reading gain scores were reliably higher for students whose teachers integrated the arts into English/reading lessons. For each unit increase in the use of arts integration, students' gain scores increased by 1.32 points.
- For fifth graders, the relationship of arts integration and math achievement was statistically significant. For each unit increase in the use of arts integration, students' gain scores increased by .71 points.
- For those grade levels and achievement tests where a significant, positive relationship between arts integration and achievement was not found, the AAA program did not lower student achievement. Also, greater achievement gains were evident with increased dosage.

Significance of the Findings:

These findings may be of importance to educators and to those designing and implementing arts-integrated instructional practices, particularly regarding the findings concerning dosage and the potentially greater benefits for some subgroups of students. Findings indicate teachers and curriculum developers may benefit students by integrating the arts into instruction, especially among economically disadvantaged and ELL students.

Methodology:

Three sets of multiple regression models were used to estimate the effect of arts integration on student learning as measured by standardized tests in reading and mathematics. The first set of models examined the impact of arts integration, while controlling for variables known to influence achievement such as gender, race/ethnicity, SES, special education, and ELL status. A second set of models examined the relationship of arts integration and student achievement for certain subgroups of students such as low SES and ELL. A third set of models examined interaction effects.

Limitations of the Research:

The evaluation focused on the analysis of achievement gain scores for treatment group students only with no comparison; a weaker quasi-experimental design. The evaluation also lacked an implementation metric. The measure of arts integration relied on teacher survey data (self-report). Teachers also had access to arts partnerships through sources other than AAA posing a potential confound.

Questions to Guide New Research:

Would a more rigorous quasi-experimental or experimental design, that included an assessment of implementation, yield the same findings concerning AAA program impacts? What are the effects of AAA at other grade levels where it was implemented?

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