



If research is to inform state policy, important gaps in research should be filled.

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The Role of Arts Integration and Education in Improving Student Outcomes

State boards of education rely on educators and researchers for evidence about the value of approaches in arts education—as in all other disciplines—to help them weigh needs against the investment and the opportunities for good outcomes for all students and their communities. Yet there is only a modest body of rigorous research to inform education policy decisions related to arts education or arts integration.¹

For some important questions related to equity, career and technical education, and teacher preparation, there are descriptive results or results from pilots but no direct evidence. For example, it would be helpful to know whether specific

conditions in which students study the arts help them prepare for careers—whether in the creative industries or in the workforce generally. State leaders would also benefit from knowing whether the collaboration with intermediary organizations is the most effective way to provide access and ensure equity for all students who want to study the arts.

Two recent evidence reviews by the American Institutes for Research (AIR) examine the impact of the arts in education through the lens of the Every Student Succeeds Act (ESSA), which introduced criteria for evaluating the level of research evidence behind educational programs and practices. Informed by these reviews,

we find that there are four kinds of gaps with critical implications for state and district decisions related to the arts: gaps in research focus, where there is little or no rigorous research about a particular art type or outcome; gaps regarding size and type of populations participating in a program, such that the results of the research cannot be generalized to other school settings, population locations, or makeup; gaps in recency and reporting, because the timing of the collection of data is not consistent with the scheduled need or the results may not be publicly available; and gaps in understanding the role of mediating factors that affect outcomes, such as location of the program, the student focus, or level of implementation.

Federal Support for Arts Education

This is an important time in which to examine the role of the arts in education. Federal funding opportunities made available in the No Child Left Behind Act of 2002 and through ESSA since 2015 have already seeded local investments in arts education. The U.S. Department of Education’s Arts in Education

program, one part of the No Child Left Behind Act, comprised four components, including a Model Development and Dissemination Grant program and a Professional Development for Arts Educators Grant program. Together, these programs supported well over 100 projects.² Then, in 2018, the department awarded 22 grants totaling \$12 million through the Assistance for Arts Education Development and Dissemination Grants Program to support the development and sharing of arts-based instructional programming.

ESSA has raised awareness about opportunities for the arts in education. Through its emphasis on a “well-rounded education,” the law encourages states to include the arts as part of that education (see also the article on page 6). ESSA features at least a dozen funding opportunities that can help support arts integration, which is a specific approach, set of activities, strategy, or program that links arts with at least one other subject to improve student and school-related outcomes. In addition, ESSA features at least 10 opportunities to support arts education, meaning a sequence of classes in a given arts discipline taught by teachers certified to teach the arts (table 1).³

Table 1. Arts Integration versus Arts Education

Definition	Components	Examples
Arts integration is the practice of purposefully connecting concepts and skills from the arts and other subjects.	Arts integration interventions include professional development opportunities, the use of specialized personnel, the use of specialized instructional materials, field trips, and whole-school reform models.	<ul style="list-style-type: none"> ▶ Students learn about circles by painting them using art techniques, using creative movement to form circles with their bodies, and playing circular-shaped musical instruments. ▶ Teachers use the process drama technique to help students learn about inquiry in science and communicating about science topics.
Arts education refers to arts lessons or classes offered in prekindergarten through grade 12 that are (a) standards based and (b) taught by certified arts specialist teachers or teaching artists through (c) an explicit or implied sequential arts curriculum in the (d) subjects of art/visual arts, media arts, music, dance, and drama/theater.	Arts education generally occurs in self-contained classes taught by certified arts specialists. Arts education may vary in the expectations regarding the level of student performance and may be focused on small groups, regular-sized classes, or individual learners.	<ul style="list-style-type: none"> ▶ Researchers examined the effects of dance education on students’ creative thinking by comparing the creative thinking ability of students taking dance classes with the ability of students not taking dance classes. ▶ A drama intervention uses improvisational techniques in a drama class to foster critical thinking skills.

Source: Authors’ compilation developed from review of key documents, a logic model describing the types of interventions, and a review of examples of programs.

According to a 2019 survey, school districts are leveraging dollars available through the newly created Student Support and Academic Enrichment Grants program authorized under Title IV, Part A of ESSA to support learning in the arts. Nineteen percent of district respondents indicated that they used Title IV, Part A dollars to support well-rounded educational opportunities in music and arts education. The report of the survey indicated 92 percent of respondents made efforts to ensure that activities, strategies, or interventions purchased with these funds were evidence-based, as defined by ESSA.⁴

ESSA outlines four tiers for evaluating rigor in the research base for a given program or activity (box 1). The tiers reflect a level of evidence: strong, moderate, promising, and evidence supported by research-based rationale. ESSA encourages districts to choose programs that are supported by evidence. For the arts, this can be challenging. Variation in the quality and quantity of both the interventions and the associated available research complicates the search for evidence-based interventions.

Modest but Positive Student Outcomes for Arts in Schools

To help policymakers and practitioners identify arts-based strategies that meet ESSA's

“evidence-based” criteria, AIR conducted two reviews of research examining interventions where the arts were taught or incorporated in preK-12.⁵ Conducted from 2016 to 2018, these evidence reviews examined reports of 44 arts integration interventions and 87 arts education interventions with evidence in one or more of the four ESSA tiers. Each study included in AIR's two evidence reviews investigated the effect of an arts intervention on a particular sample and set of outcomes.

Among the arts integration interventions reviewed, just 10 met the evidence requirements for Tiers I–III, including one that met requirements for the most rigorous tier, Tier I (box 2); the other 34 interventions had evidence in Tier IV only. Similarly, among the arts education interventions reviewed, 17 met the evidence requirements for Tiers II or Tiers III, and 70 had evidence in Tier IV only (figure 1). As a final step, AIR analyzed the effect of arts integration across 27 well-designed, well-implemented studies and the effect of arts education across 20 well-designed, well-implemented studies.⁶

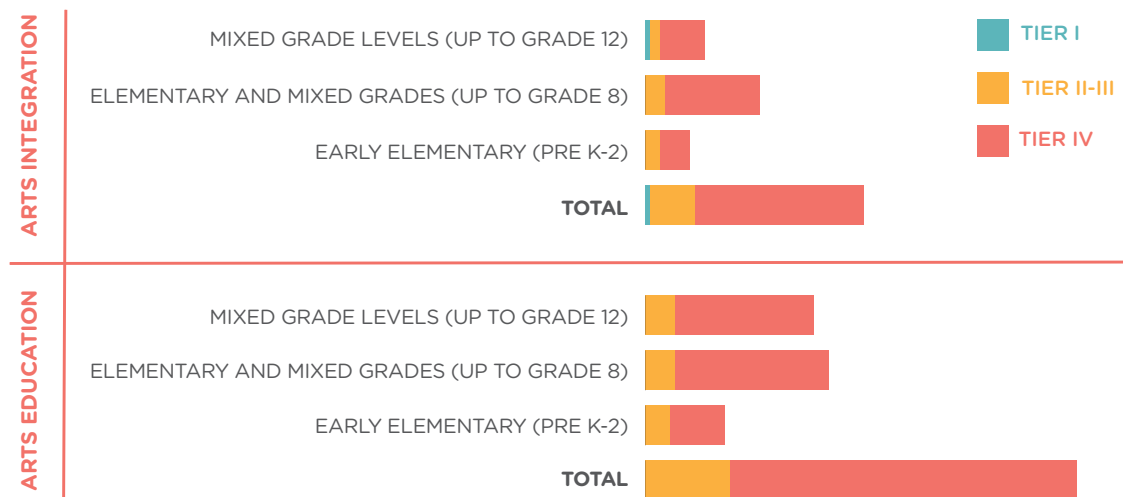
Both evidence reviews found moderate, significantly positive impacts for students who participate in arts integration activities and arts education classes, with an overall average effect size of 0.11 and 0.38, respectively. Thus, an average child could expect to gain 4 percentile

Box 1. What Is an “Evidence-based” Intervention? (from Section 8101(21)(A) of the ESEA)

“...the term ‘evidence-based,’ when used with respect to a State, local educational agency, or school activity, strategy, or intervention that —

- (i) demonstrates a statistically significant effect on improving student outcomes or other *relevant outcomes* based on —
 - (I) *strong evidence* from at least one well-designed and well-implemented experimental study;
 - (II) *moderate evidence* from at least one well-designed and well-implemented *quasi-experimental study*; or
 - (III) *promising evidence* from at least one well-designed and well-implemented correlational study with statistical controls for selection bias; or
- (ii) (I) *demonstrate a rationale* based on high-quality research findings or positive evaluation that such activity, strategy, or intervention is likely to improve student outcomes or other *relevant outcomes*; and (II) includes ongoing efforts to examine the effects of such activity, strategy, or intervention.

Figure 1. Number of Arts Integration and Arts Education Interventions by Grade Level and Tier of Evidence



Source: Authors' analysis of findings from literature reviews on arts education and arts integration.

points in relevant outcomes as a result of participating in an arts integration intervention and 15 percentile points as a result of participating in an arts education intervention, based on the research reports we analyzed. An effect size of 0.25 standard deviations (an improvement of 10 percentile points) or larger is considered to be “substantively important” by the What Works Clearinghouse, a federal repository of evidence-based research on education.

We also analyzed differences in the research studies’ reported impacts based on the type of outcome or the type of art discipline examined. Results in student outcomes differed markedly, both among the arts integration and arts education studies and, within the arts education studies, by art types. For example, arts integration’s effects ranged from 0.11 for academic achievement outcomes and 0.91 for art learning outcomes; the effects of arts education interventions across student outcomes ranged from 0.09 for drama and 0.82 for visual arts. For some art types and types of programs, we were able to analyze effects from only one study. Some effects were positive, but not significant. Therefore, these findings should be viewed cautiously.

Gaps in Policy-Relevant Research

Researchers seeking to enhance the rigor of studies about the arts and equity of access have encouraged states and districts to report participation in and results of arts programs.⁷ However, this recommendation is challenging to implement due to the limited types of data routinely collected, inconsistencies in how variables are defined, and variation in the arts curricula from district to district.

The two AIR evidence reviews highlight gaps in research evidence about student outcomes in the four tiers by art type and types of student outcomes. Analysis of evidence gaps shows that the greatest number of interventions address academic outcomes, and the fewest address “other outcomes,” a catchall category that includes such things as school culture, teacher instruction, and later-life success. A gap map AIR prepared also highlights the difference in the amount of studies of approaches by discipline: The greatest number emerged in music and the fewest in dance.

Recent data about students’ access to arts education across and within states is hard to come by. The National Center for Education Statistics has produced overall snapshots, and

Results in student outcomes differed markedly, both among the arts integration and arts education studies.

Box 2. Research Providing Evidence at the Highest Tier

These studies met Tier I evidence criteria and were cited as such in our report:

Daniel H. Bowen, Jay P. Greene, and Brian Kisida, "Learning to Think Critically: A Visual Art Experiment," *Educational Researcher* 43, no. 1 (2014): 37-44.

Jay P. Greene, Brian Kisida, and Daniel H. Bowen, "The Educational Value of Field Trips," *Education Next* 14, no. 1 (2014): 78-86.

Brian Kisida, B., Daniel H. Bowen, and Jay P. Greene, "Measuring Critical Thinking: Results from an Art Museum Field Trip Experiment," *Journal of Research on Educational Effectiveness* 9, no. 1 (2016): 171-187, <https://doi.org/10.1080/19345747.2015.1086915>.

Research has not kept pace with the stakeholders' needs for policy-relevant information.

some researchers have mined longitudinal data sets to produce national pictures about arts education access and outcomes.⁸ And there are doctoral studies that make use of states' administrative, school-based data on achievement and course-taking patterns to show correlations between a variety of student outcomes and participation in the arts.

However, data about student achievement in the arts lag behind the schedules for state decision makers, and they are limited due to the variation in offerings and participation across the country. The most recent release of the National Assessment of Educational Progress (NAEP) regarding arts participation and achievement in 2016 was necessarily limited to a focus on music and visual arts because only a small percentage of schools offer students opportunities in dance and theater. Furthermore, NAEP Arts found that the percentage of eighth graders in the United States taking music and visual arts stayed about the same compared with data collected in 2008: 63 percent were enrolled in a class in music, and 42 percent took a course in visual arts.⁹ NAEP recently reported plans to eliminate four assessments, including the arts, that had been reporting national-level data. Thus, state reporting on the arts will be critical to assess the future of the arts in schools.

Several states are making progress in their efforts to identify a meaningful indicator about the arts in their ESSA-required state report cards, with 19 including arts within key areas of their state accountability systems.¹⁰

Conclusion and Recommendations

The past 30 years have seen an infusion of funds for program development and support for arts educators. For example, the Getty Education Foundation has supported reform in teaching the arts, the federal government has provided grants for arts integration, and a particular focus for investment has been arts integration for school turnaround through the A+ Schools and Turnaround Arts models (see article, page 42). During this period, educational practice has also changed to incorporate the development and use of technology in arts teaching and learning. And ESSA created leverage points for states to improve students' access to high-quality arts education.

But research has not kept pace with the stakeholders' needs for policy-relevant information. As national data become scarce and state responsibility for accountability reporting continues, states will have an increasing responsibility to invest in rigorous research and evaluations of programs. States and districts have an opportunity to develop partnerships with postsecondary institutions and independent research organizations to develop and implement rigorous studies around the policy issues of access, accountability, excellence, engagement, and economic viability. We offer the following recommendations on the implications for state board members who seek policy-relevant research.

Encourage districts to gauge the theoretical and empirical support for arts integration

or arts education interventions they wish to adopt. Theory-based programs—while they may not yet be supported by strong evidence—may be suitable for pilots and exploratory studies as a jumping off point for innovation. As districts consider investments in such programs, state leaders should require that school districts build in an evaluation component. As a body of evidence becomes available because of local evaluations, successful programs will come to the attention of more educators.

Ask whether and how your state’s education department is collaborating with other states to design systems for collecting and sharing data on arts participation and achievement. As states work together to design measures of arts learning, they may, for example, discover approaches to improve data quality. The National Endowment for the Arts (NEA) and the Education Commission of the States’ efforts to provide recommendations for state data systems could, in the long run, lead to the use of consistent metrics and access to comparable data for research studies. Decisions on the nature and frequency of the data collected locally may have an impact on decision making. A focus on unanswered questions will lead to improved programs and outcomes.

Advocate for partnerships between independent organizations and researchers to support more rigorous research and thus stronger evidence for arts integration and arts education. Researchers can help provide more Tier I evidence (i.e., strong evidence) by using a randomized controlled trial study design, including a large enough sample of participants, documenting the attrition of study participants, and providing sufficient details of analyses and findings. Such studies require specialized, technical knowledge, which is available in research organizations, for example, such as the grantees of the NEA’s research labs initiative.

In sum, further research is needed to understand the effects of arts integration and arts education on specific types of educational outcomes and for different populations of students. Various factors are present in each study about the arts, such as type of art, program type, mix of sample, and setting of the study. It is not possible to say with certainty which factors influence the effects that are documented. The

findings are promising but indicate that additional direct evidence is needed, especially if participation in arts learning is being examined in the context of broad policy directions. ■

¹Meredith Ludwig, Andrea Boyle, and Jim Lindsay, “Review of Evidence: Arts Integration Research through the Lens of the Every Student Succeeds Act” (Washington, DC: American Institutes for Research, 2017); Yinmei Wan, Meredith Ludwig, and Andrea Boyle, “A Review of Evidence: Arts Education Research through the Lens of the Every Student Succeeds Act” (Washington, DC: American Institutes for Research, 2018).

²Yael Silk, “A Decade of Federal Arts in Education Funding: Trends, Analysis, and the Story behind the First 10 Years” (Washington, DC: Americans for the Arts, 2015); Rose Goff and Meredith Ludwig, “Review of Literature: Lessons on Assessing Teacher Practice and Student Outcomes in Arts-Integrated Learning Settings,” unpublished working paper for the Wolf Trap Foundation for the Performing Arts, 2011.

³Ludwig, Boyle, and Lindsay, “Review of Evidence”; Wan, Ludwig, and Boyle, “A Review of Evidence.”

⁴AASA, “Summary of the 2019 National ESSA Title IV-A Survey” (Alexandria, VA: AASA, 2019), https://aasa.org/uploadedFiles/Policy_and_Advocacy/Resources/ESSATitleIVSummaryofFindings-070219.pdf.

⁵Ludwig, Boyle, and Lindsay, “Review of Evidence”; Wan, Ludwig, and Boyle, “A Review of Evidence.” The Wallace Foundation sponsored the evidence reviews as part of a larger group of reviews providing information that would help state and local educators identify and use promising interventions that meet ESSA program funding opportunities and evidence requirements.

⁶Meta-analysis is a statistical tool that uses data from studies even though the results may not be statistically significant and the design may not meet the strictest criteria.

⁷Brian Kisida, Bob Morrison, and Lynn Tuttle, “To Elevate the Role of Arts Education, Measure It,” report (Washington DC: Brookings Institution, 2017).

⁸Including, most notably, James S. Catterall, Susan A. Dumais, and Gillian Hampden-Thompson, “The Arts and Achievement in At-Risk Youth: Findings from Four Longitudinal Studies” (Washington, DC: National Endowment for the Arts, 2012).

⁹The Nation’s Report Card, “Arts Assessment 2016, Grade 8,” web page, https://www.nationsreportcard.gov/arts_2016/.

¹⁰Lynn Tuttle, “How Does Arts Education Fare in the Final Round of State ESSA Plan Submissions?” *Ed Note* blog (Denver: Education Commission of the States, January 18, 2018).

Theory-based programs may be suitable for pilots and exploratory studies as a jumping off point for innovation.

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