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ARTS
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EVALUATION
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AND
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ASSESSMENT
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Measuring Impact in
Schools and Communities

With Foreword by
Michael Quinn Patton



Cultivating Sustainable School Culture: Tilling the Soil and Nourishing the Seeds Through the Arts

Ross Anderson and Christine Pitts

Arts integration is a creative opportunity to respond to the cultural elements of a school and explore the limitless design possibilities for teaching and learning, but it is not just one step (Corbett, Wilson, & Morse, 2005). Which steps are critical to transfer the benefits of arts integration from the classroom experience to a sustainable shift in school culture? What evaluation methods can help identify those steps early in the development of a model to support sustainability and impact? The evaluation presented in

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this chapter responds to these two driving questions through a mixture of methods and data sources.

The arts-based school reform model evaluated in this chapter situated school culture as a construct with overarching influence on all aspects of the school experience. School culture influences how an organization, as a whole, evolves and the way that teachers interact with students, collaborate with colleagues, approach instruction and curriculum, take risks with new ideas, engage in training, and share leadership responsibilities. By injecting struggling schools with a creative and artistic catalyst, the model sought to change instructional behaviors and curricular decisions as well as the culture supporting those features. As Guskey (1986) described, for new practices to sustain, attitudes and beliefs need to shift first. In schools suffering from a history of competing, short-term initiatives with little sustained improvement, those shifts may depend largely on a supportive school culture. Given this rationale, our evaluation of one arts-based school reform approach targeted the factors undergirding school culture—factors that both influence the promise of sustained change and become shaped by the arts integration experience.

THE ARTCORE MODEL

In the pursuit of an adaptable schoolwide arts integration model, the ArtCore project partnered with five middle level schools predominantly serving students who have been historically marginalized in K-12 education. This chapter documents the implementation during the first two years of a four-year model development, research, and evaluation grant-funded Arts in Education Model Development and Dissemination project. The project sought to reach more than 2000 students in five middle level schools with arts integrated opportunities in visual arts, music, and theater and core academic content areas. The project's goals were to boost academic achievement, motivation, engagement, and creative potential of students. To achieve those goals, the project aimed to increase the capacity of 50 middle school teachers to design, create, and deliver new pedagogy and arts integrated curricula. To ensure feasibility and sustainability of that objective the project focused on affecting positive schoolwide culture through a far-reaching unifying framework of student outcomes. The project aimed to establish the procedures, theory, and frameworks that can accelerate fragmented arts integration toward a coherent, sustainable, and

adaptable schoolwide transformation model uniquely contextualized to schools.

Conceptually, the arts integration approach built on theories of creative learning (Beghetto, 2016), motivation (Bandura, 1986, 1997; Skinner, Furrer, Marchand, & Kinderman, 2008), and school engagement (Martin, 2012) to shift pedagogical priorities and enhance school culture. Incorporation of the Studio Habits of Mind (SHOM) prioritized the development of metacognitive strategies that underlie creative thinking and artistic learning (see Hetland, Winner, Veenema, & Sheridan, 2013). Teacher and teaching artist teams attempted to emphasize learning objectives in the arts and academics equally, choosing the standards and disciplines that best fit their context and student needs. By implementing with a team of teachers in one grade at a time, the project provided an intensive level of embedded professional development followed by support and feedback. These best practices (Salas, Tannenbaum, Kraiger, & Smith-Jentsch, 2012) targeted ownership, self-efficacy, and locally grown practices alongside simultaneous development of a cohesive and supportive school culture (Fullan & Quinn, 2015).

Depicted in Fig. 6.1, the theory of change driving the ArtCore model suggests when teachers are given modeling, guided practice, tools, and structured collaboration with a teaching artist and supportive colleagues, they will increase skills and self-efficacy related to arts integration and creative teaching strategies. The intervention's effect on teacher attitude, effort, and satisfaction may depend on their school's culture for organizational learning and school leadership's commitment. Teacher skill development and collaboration will affect student motivation, engagement, and creativity when teachers approach professional growth proactively. Enhanced student motivation, engagement, and creativity in school will affect their academic achievement. As teachers recognize this effect, their self-efficacy grows to a level where practices become sustained and modeled for others. The evaluation presented in this chapter will explore early evidence regarding the school and teacher elements of this theory of change—the prerequisite factors to sustained student outcomes.

EVALUATION APPROACH

The evaluation described in this chapter illuminates the early developmental phase to understand the adoption and adaptation of a schoolwide strategy and to provide opportunities to improve the approach. Evaluating the

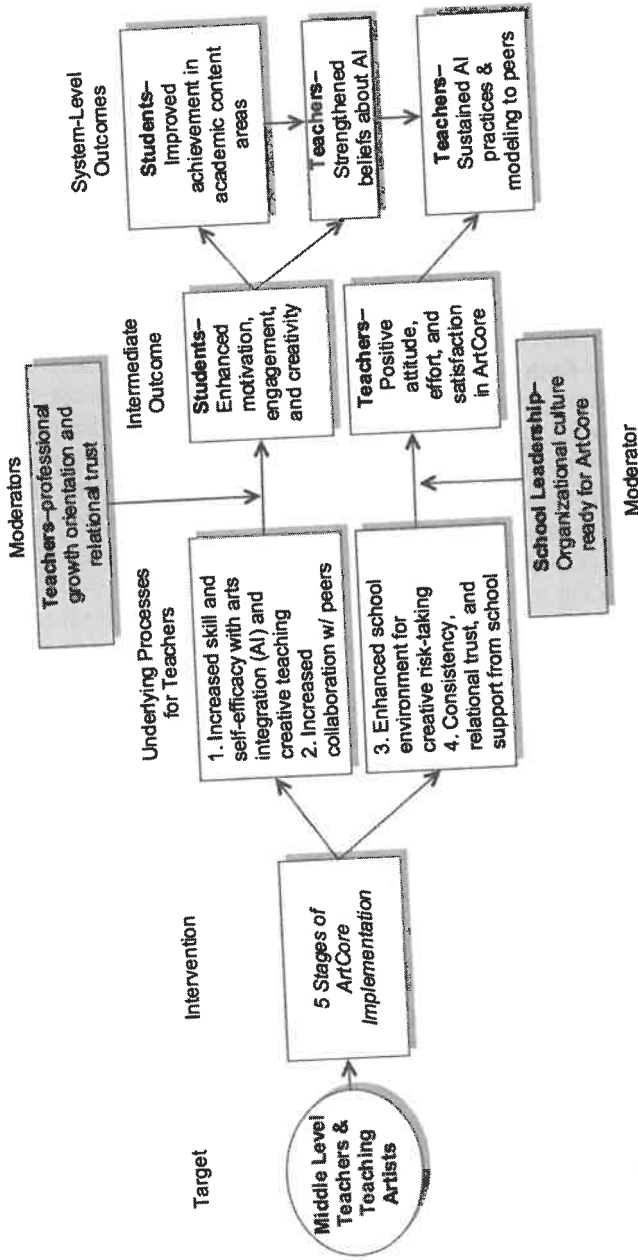


Fig. 6.1 ArtCore model theory of change

impact requires knowing *what* the intervention entailed and *how* schools interpreted and implemented the intervention differently. We employ an implementation framework where each step builds capacity and ownership of schools to become implementation and evaluation partners (Fullan & Quinn, 2015) and to clarify clear measurement parameters for the final summative evaluations (Blase, Fixsen, Sims, & Ward, 2015). In this developmental evaluation study (Patton, 2011), we sought to highlight the contextual irregularities of each unique implementation site rather than ignore these variations. Potential irregularities might include competition for time and resources of other initiatives or change in school leadership during implementation—potentially critical factors.

Given the complex and innovative nature of developing and evaluating a schoolwide model, the developmental evaluation approach allows for evaluators to synthesize ideas across the project. To learn from multiple angles that can inform continued innovation and improvement, we conducted (a) observations, (b) surveys, (c) interviews, (d) focus groups, (e) reflections, (f) self-assessments, (g) product reviews, and (h) video documentation throughout the year and across contexts. During this early stage of development, the research and evaluation team responded to needs and opportunities with the development of measures and tracking mechanisms aimed at detecting patterns across data and articulating the adaptation variability.

In order to evaluate the efficacy of an arts integrated school change model in future studies, our work in this current study first sought to understand how the development of school culture, supportive of arts integration, interacts with teacher mindset, affect, and behavior. This focus allows for school and community partners to know what aspects of early implementation, such as the development of shared values, may be highest leverage for sustained practice. The following questions guided the developmental evaluation.

1. Is there evidence that the ArtCore arts integration model may have affected teacher-level outcomes driven by a shift in school culture during the developmental phase?
2. How did the ArtCore implementation cycle work differently compared to the proposed model and across implementing schools? Does this cycle appear to support positive school change? If so, what were the catalysts? If not, what were the barriers?

3. How did the design of arts integration flexibly fit the unique context, assets, and needs of each school?

Hypotheses

We generated working hypotheses based on the theory of change undergirding the model—student-level effects depend on teacher-level effects, which in turn depend on the development of a supportive school culture driving adaptation in the arts integration model. We expected that some evidence would suggest effectiveness for shifting teachers' perspective, skill, and practices, but that the degree of this shift would vary across schools. We hypothesized that the work done to develop and align organizational culture may play an outsized role influencing the attitude and behaviors of teachers. Further, we believed that the implementation cycle and the design of arts integration would vary widely between schools. Establishing these hypotheses a priori required clarifying the theory of change driving the development of the model—a process that would allow alternative explanations to emerge. Testing these hypotheses explicitly supported refinement of the theory of change to improve future efficacy of the model.

Schoolwide Creative Engagement

The current education landscape is littered with school improvement approaches that often lack coherence with the preexisting context and fail to account for necessary adaptation (Fullan & Quinn, 2015). In contrast, a comprehensive arts-based intervention may create clarity and common purpose through the consistent integration of art disciplines across systems in the school that determine instruction, school climate, and interdisciplinary collaboration. Numerous evaluations of arts integration demonstrate promising links to student achievement in reading, math, and science for underserved populations (see Robinson, 2013, for recent meta-analysis). Few of these evaluation studies approached the variation in implementation as a potential means to learn what steps are most critical to sustain the effort (e.g., the proportion of teachers trained or number of disciplines integrated). Captured in a retrospective book (Noblit, Corbett, Wilson, & McKinney, 2009), the most comprehensive approach to date resulted from the Whole School Initiative in Mississippi. To gauge the effect of implementation on student outcomes in that initiative, evaluators

collected data from multiple perspectives. For instance, a teacher survey, complemented by school observations, compiled the extent of arts integration in the school, the variety of instructional approaches, professional development opportunities, and alignment to schoolwide planning.

Not surprisingly, evaluators of the Whole School Initiative found that high levels of implementation associated with higher rates of meeting achievement growth by school. Corbett, Wilson, and Morse suggested that staff endorsement of the initiative, opportunities for skill development, presence of skilled coaches, and continuity of efforts represented “front-end” developments in implementation (2005, p. 19). Their work provided strong recommendations for future models and left more questions regarding the structures and supports and overall school culture in place prior to implementation in the most successful schools. Additionally, understanding the role that practitioner mindset, attitude, and belief might play on implementation and the tension between adoption and adaptation may be key. Given the paucity of further investigations, especially in middle schools, our evaluation study aimed to begin to fill this gap.

To reach sustainability, arts integration must move from the status as a singular program toward a composite of adapted and sustained norms and practices embedded in and supported throughout the school. The premise underlying this assertion emerges from organizational theory where the development of shared values and a unifying theoretical framework about teaching, learning, and student success takes on powerful symbolic meaning to influence individual beliefs and behaviors and organizational culture (Bolman & Deal, 2013; Fullan & Quinn, 2015; Nathan, 2011; Senge, 2006). As such, this element received attention in this evaluation across three interdependent levels: (a) the organizational culture shaped by a school’s history and context, (b) collaboration within a professional community of practice, and (c) individual teacher attitude, pedagogy and design of the classroom environment. Just as the theory of change driving the ArtCore model specified the role that each of these three levels play, the evaluation used data from each level to look for evidence of change and potential interactions between levels.

METHOD

Our study is a mixed-method design that consists of multiple phases to answer a set of research questions (Creswell & Plano Clark, 2011). In this interactive design, a team of embedded researchers pursued evaluation

questions that were connected and aligned to the program development of the study using qualitative and quantitative strands. To clarify the rationale for this approach, the use of quantitative data would demonstrate the degree to which the model shows promise, and in specific phases of the study, the qualitative data would illuminate potential mechanisms of change, illustrating perspectives independently of the quantitative data. During the phase of the evaluation represented in this chapter, both qualitative and quantitative data sources informed the findings and interpretation.

Schools

School and teacher-level data were collected from one rural and four urban middle schools in the Pacific Northwest. The five middle schools, within four school districts, participating in the intervention served high percentages of students identified as minority and low-income, compared to the average demographic makeup of the other schools in the state and participating districts. In four out of five schools, this early phase of the ArtCore project was implemented with a subgroup of sixth graders and their classroom teachers; in the remaining charter school (serving grades 7–12), the seventh and eighth graders and their teachers were included in the sample. All of the participating teachers from each school ($n = 17$) consented involvement in the research.

Measures

Our rubric, the ArtCore Measure of Adoption, Intensity, and Adaptation (AMAIA) provided the means for school and project administration to document the activities and efforts related to each implementation stage. The evaluation team designed this measure by adapting the National Implementation Research Networks' (2013) Stages of Implementation Framework and Implementation Drivers: Assessment of Best Practices measure (Fixsen et al., 2015). This adaptation aligned to the ArtCore stages of implementation, (a) organizational culture, (b) social capital and innovation, (c) adoption—adaptation, (d) schoolwide enactment, and (e) reflection and refinement.

Informed by the model's original design as well as features of implementation science, the details of the measure emerged inductively during the developmental phase, driven by how sources of evidence could

triangulate behaviors, attitudes, and artifacts for the indicators of each component. Early in implementation, each school's context varied widely and informed how components were operationalized in each case study (see Table 6.1).

To complete the AMAIA, evaluation team members used qualitative and quantitative evidence collected to identify the quantitative score for component indicators on a scale from zero to two, where zero indicates "Not yet in place", one indicates "Partially in place", and two indicates "In place". Then, team members described and referenced evidence that supported the score given. The AMAIA provides a predetermined, quantitative scale that accounts for differences in adoption and adaptation, incorporating evidence, such as activities, artifacts, teacher and administrative efforts, organizational practices, beliefs, attitudes, and shared vision. Figure 6.2 illustrates the procedures for how to implement the AMAIA in practice.

In addition to administrative records of activities and document analysis of teaching and learning artifacts, quantitative data from the ArtCore teacher survey protocol provided more evidence of indicators' level of implementation within AMAIA stages. This teacher survey is an integration of multiple scales that measure teachers' reported beliefs about, (a) teaching for creativity, (b) the value and efficacy of arts integration, and (c) orientation to teaching and school culture. The validated Teaching for Creativity Scale solicited teachers' beliefs about their own self-efficacy, student potential, and societal value, as well as perceived environmental encouragement for creativity at their school (Rubenstein, McCoach, & Siegle, 2013).

Identified in Table 6.2, we adapted some of the scales employed to be retrospective based on recent experiences in the project; others were general to their teaching experience. Additionally, we developed the *Teaching for Creative Engagement Scale* where teachers documented the frequency that they employed metacognitive and modeling approaches for students' creative learning—two strategies unique to the ArtCore model. The *Value and Efficacy of Arts Integration Scale* and the scales measuring orientation to teaching and school culture were adapted from the My School, My Voice Survey validated by the Chicago Consortium on School Reform (2014). On these scales teachers provided responses about relational trust and school climate, collaboration, consistency of reforms, enjoyment of teaching, and orientation to professional growth opportunities, retrospectively.

Table 6.1 Component definitions of the ArtCore measure of adoption, intensity, and adaptation

<i>Components</i>	<i>Definition</i>
1. Organizational culture	Teachers, administrators, and the broader school community develop, evaluate, and refine a shared vision. A common set of values and norms is agreed on that all personnel use to drive their personal and professional decision-making in the school. A unifying framework of student-learning and inclusion strategies are intentionally designed, planned, and applied. Formal and informal decisions are consistently evaluated for sense-making and strategic decision-making processes.
2. Social capital and innovation	School leaders and educators develop adaptive and strategic capacity in content-specific areas, learning skills, and leadership. Voluntary participation taps the unique skills of different educators. An action-oriented learning cycle frames teacher collaboration. Supportive leadership encourages risk-taking and innovation.
3. Adoption-adaptation	Assessment of student and educator assets and needs drives the adaptation of instructional and curricular models. Alignment of inputs and processes to common goals and outcomes is intentional. Authentic, challenging, and supportive student engagement ensures that student voice and choice remain at the center of design work. Formative feedback about the learning experience and skill development provides opportunities to continue to adjust and adapt.
4. Schoolwide enactment	Professional learning communities arise across content and grade level teams. Professional development is differentiated based on teacher interests but builds on a schoolwide unifying framework. Policies and practices are implemented based on an evaluation of resources, support, and opportunities for innovation. Continued Implementation is designed and implemented with consideration for existing politics, roles, and relationships.
5. Reflection and refinement	School leaders and teachers consistently evaluate their practices based on their shared vision and celebrate efforts and progress. Documentation of collaboration, strategies, and ideas informs future implementation cycles. Reflection builds greater coherence and community across a school of trusting and receptive learners.

Note: This implementation cycle builds from the School Success Model developed at the Educational Policy Improvement Center (2017)

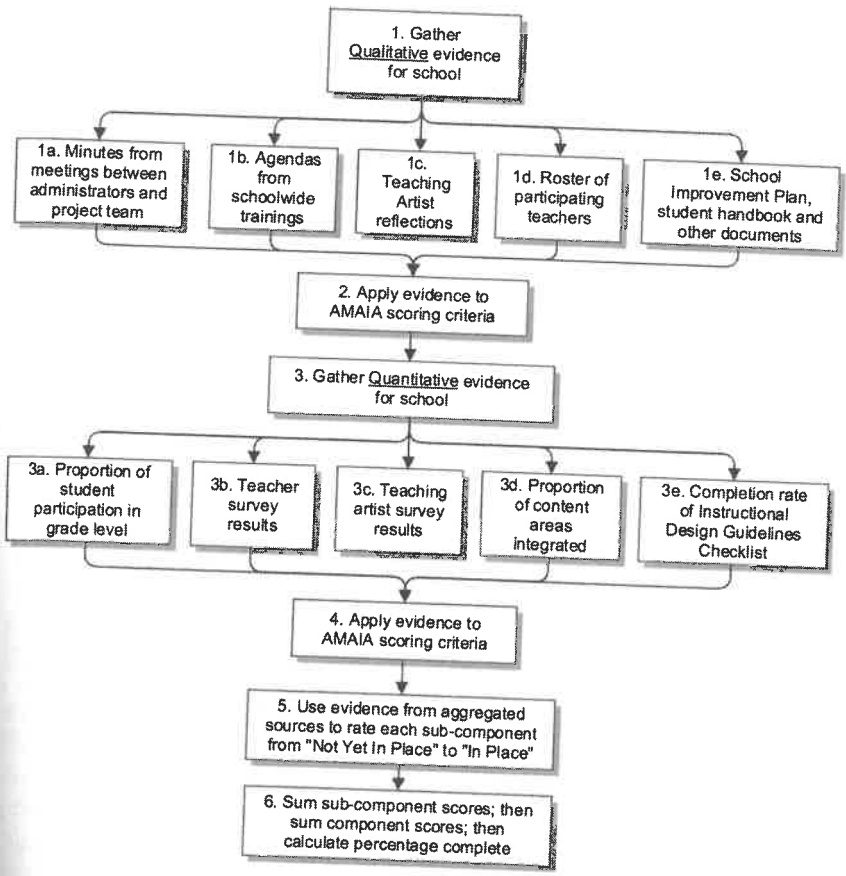


Fig. 6.2 Procedures for AMAIA implementation in practice

Student-level variables of interest correspond to teacher-level effects, but our focus for this chapter will be on the school- and teacher-level changes that we posit influence student-level effects. Though our larger program of inquiry includes student-level factors, those results are only preliminary and will be reported in future publications. As embedded members of the innovation team, researchers and evaluators learned lessons from multiple angles and data sources. Using our multiphase mixed methods research design we anchored quantitative findings to case study narratives, illustrating a developmental approach to evaluation. A rigorous

Table 6.2 Descriptive results of teacher-level factors included across implementation framework components

<i>Factor</i>	<i>Mean (SD) across schools</i>	<i>School mean range</i>
Retrospective measures ("Since participating in ArtCore, I feel...")		
Satisfaction and preparedness	4.97 (0.42)	(3.54–6.00)*
Arts integration positive effect on student engagement	4.88 (0.92)	(4.21–5.81)*
Improved relational trust of faculty	5.19 (0.38)	(4.54–5.67)**
Improved openness to collaboration of faculty	4.49 (0.56)	(3.94–5.50)*
Improved consistency of initiatives in school	4.14 (0.55)	(3.90–4.27)
Cross-sectional general measures (not specific to ArtCore)		
Teaching for creativity: self-efficacy	5.64 (0.80)	(5.39–5.71)
Teaching for creativity: environmental encouragement	4.33 (1.56)	(3.95–4.67)
Teaching for creativity: societal value	6.06 (0.28)	(5.72–6.41)
Teaching for creativity: student potential	5.12 (2.40)	(4.75–5.31)
Professional enjoyment	6.22 (0.42)	(5.81–6.63)
Perspective on professional growth	5.94 (0.43)	(5.25–6.38)*
Cross-sectional TFCE measures (frequency scale: "How often do you employ...")		
Practices for metacognition	3.50 (0.37)	(3.42–3.72)
Practices for modeling	3.66 (0.27)	(3.56–4.00)

Note: Responses are on a 7-point Likert scale for all factors except Teaching for Creative Engagement (TFCE), where 1 equals "totally disagree" and 7 equals "totally agree". For TFCE, responses are on a 5-point frequency scale where 1 equals "never" and 5 equals "very often". School mean range refers to the lowest and highest school averages. Symbols denote a statistically significant difference between the low and high means

* $p < 0.05$; ** $p < 0.10$

but responsive approach at this phase of evaluation provided lessons for model improvement.

FINDINGS

Findings focus on our three main research and evaluation questions. We address variations in the implementation cycle and the process of collaborative design to explore how the schools' organizational culture supported the growth of creative engagement at each level. We report on which elements of school organizational culture appeared to be most powerful in catalyzing or crippling this progress and how the process appeared to relate to shifts in perspectives and experiences of teachers. We provide

comparative analysis of each case study school and summative analysis across schools.

Teacher-Level Impressions

On the teacher survey, teachers answered three forms of questions outlined in Table 6.2. The teacher survey included retrospective measures regarding teachers' reported satisfaction with the project, feelings of support and trust across their school since the project began, and opinions about the school's efforts across various schoolwide improvement initiatives. Cross-sectional measures documented teaching for creative engagement that asked about their perceptions of arts integration, as well as beliefs about their own self-efficacy for creative teaching, school-based environmental encouragement for creativity, the role of creativity in society, and student creative potential. A frequency scale measured how often teachers practiced instructional techniques that explicitly engaged students' creative metacognition or modeled strategies for creative learning. The aggregate mean for all participating teachers is reported for each scale in Table 6.2; we reported the range from lowest to highest mean disaggregated by school, illustrating patterns of statistically significant variation between schools.

Retrospective Measures

Generally, the means for each retrospective scale, ranging from 1–7 (totally disagree to totally agree), were above a neutral level; however, the findings provided some evidence of both systemic changes and hindrances. Although teachers' satisfaction with ArtCore and feelings of preparedness were at $M = 4.97$ (somewhat agree) across participating schools, the school-level variation ranged from a low rating of $M = 3.54$ (indifference) to a high rating of $M = 6.00$ (agree). The highest scale among the retrospective measures was for improved relational trust with colleagues and principals ($M = 5.19$ or somewhat agree). In addition, since the range across school means was small, we can consider that the collaborative arts-integration experience contributed to improved rapport, generally. On average, teachers reported indifference about the improvement of the consistency of schoolwide initiatives ($M = 4.14$); this score was the lowest average among all of the retrospective scales indicating that any potential effect of greater coherence was not yet realized.

Cross-Sectional General Measures

Across the respondent's reported perceptions, they consistently reported that their professional teaching experiences were enjoyable ($M = 6.22$ or agree) with a positive orientation to professional growth ($M = 5.94$ or agree). Additionally, teachers reported, on average, that they believe in the societal value of creativity ($M = 6.06$) and feel self-efficacious supporting creative learning experiences ($M = 5.64$). However, teachers reported uncertainty about the school-based environmental encouragement to take instructional risks ($M = 4.33$) and personal beliefs about students' potential for creative learning ($M = 5.12$). Based on the large standard deviations ($SD = 1.56$ and $SD = 2.40$, respectively) and nonsignificant statistical difference between school averages, their individual perceptions varied widely across teachers but not across schools. On average teachers' showed uncertainty in regard to their perceptions of students' creative potential, a result that could indicate narrow conceptions of creativity or a lack of opportunities to witness the complete spectrum of creative thinking, behaviors and performance.

Cross-Sectional Frequency Scale The last two scales represent the frequency that teachers engaged students through metacognitive learning and modeling of explicit strategies for creative engagement. Teachers responded to questions about how often they engaged in each instructional practice on a scale from one, "never", to five, "very often". On average, teachers across the schools reported modeling creative learning behaviors "sometimes" to "regularly" ($M = 3.66$), just slightly more than they reported engaging students in metacognitive learning ($M = 3.50$). For each scale, there was little variance across individual teachers and school-level reports. The results provide evidence that teachers may need continued professional learning opportunities and guided collaboration to reinforce awareness about high-leverage strategies that engage students metacognitively and creatively.

ArtCore Implementation Cycle

AMAIA results from this developmental phase indicated that each school's adoption, intensity, and adaptation differed depending on the implementation component. In this developmental evaluation, we operationalized each component into a measured indicator based on the original design of the model as well as inductively during the

Table 6.3 Results from the ArtCore measure of adoption, intensity, and adaptation during the ArtCore developmental evaluation study in five middle schools

<i>Components</i>	<i>School A</i> (%)	<i>School B</i> (%)	<i>School C</i> (%)	<i>School D</i> (%)	<i>School E</i> (%)
1. Organizational culture	33	25	42	58	75
2. Social capital & innovation	40	40	70	70	90
3. Adoption-adaptation	72	56	78	67	61
4. Schoolwide enactment	25	13	50	38	75
5. Reflection & refinement	40	30	80	60	80
Total	48	36	64	62	74

Note: The percentages represent the number of elements in each component that a school completed. The scale range for each component differed. Component 1 ranged from 0–12; Component 2 ranged from 0–10; Component 3 ranged from 0–18; Component 4 ranged from 0–8; and Component 5 ranged from 0–10. Total scores range for AMAIA is 0–58

process of evaluating adaptation by each school (U.S. Department of Education, 2017).

As such, the overall quantitative results, presented in Table 6.3, from our early phase of implementation encapsulate indicators of each component in the AMAIA. These results illustrate how each component plays out in practice with anecdotal evidence from each case study school. Overall, in schools that showed consistent levels of adoption, adaptation, and intensity across components during the first year and a half of implementation, practices began to sustain and produce positive attitudes.

Organizational Culture

During the exploration stage, school community members and program developers first explored the possibilities for program design examining their own beliefs and attitudes about why arts integration can work for their students. As with other components and in line with implementation science best practices, each indicator included in the AMAIA was (a) related to an observable process or event, (b) a measured attitude or behavior, or (c) connected to a tangible artifact of teaching and learning. As can be seen, participating schools ranged from 25% to 75% complete for this component reflecting a range of prioritization of time and energy. The outcomes were widely different, in part, because some schools weren't able to align or negotiate the commitments to other initiatives with this

stage of implementation. This step to define the rationale for each school operationalized differently across schools but focused commonly on alignment of shared beliefs, attitudes, and values with an undergirding unifying framework. According to indicators on the scale, in three out of the five schools, school administration dedicated time to focus on clarifying the purpose of arts integration early in implementation; records show that two of those three schools included the entire faculty and the other included a majority of staff. In the remaining two schools, a full-day workshop was held late into the developmental phase of implementation at one school and at the other school these schoolwide opportunities were scheduled and canceled twice due to competing priorities. Table 6.4 provides information about who participated in key activities for each component.

Social Capital for Innovation

The recruitment, selection, and early design phase of the arts integration work was a time for schools to recruit and sustain participation across a grade level team of teachers. At varying degrees from school-to-school, participation was voluntary. As seen in Table 6.3, it appears that when teachers weren't aware of the purpose of the project and how it fit into the school's culture, social capital remained a largely untapped resource. At the heart of social capital and innovation, a long-term, community-based

Table 6.4 Participation at each school across different activities included in each component

<i>Components</i>	<i>School A</i>	<i>School B</i>	<i>School C</i>	<i>School D</i>	<i>School E</i>
1. Development of unifying framework	7 Teachers 1 Principal	—	All teachers 2 Principals	—	All teachers 1 Principal
2. Design team or school leadership team	—	7 Teachers 2 Principals	7 Teachers 2 Principals	—	8 teachers 1 Principal
3. Participation in cross-site trainings	6 Teachers	4 Teachers 2 Principals	8 Teachers	4 Teachers	7 Teachers
4. Participation in school-based trainings	—	—	All teachers	All staff	All teachers
5. Collaboration with teaching artist	4 Teachers (4 subjects)	4 Teachers (2 subjects)	5 Teachers (5 subjects)	4 Teachers (4 subjects)	4 teachers (4 subjects)
6. End-of-year reflection	1 Principal	2 Principals 1 Teacher	All teachers 2 Principals	All staff	All staff

teaching artist, or *ArtCore Weaver*, served as chief instigator, integrator, and creative catalyst, threading the strategies through the grade level team and potentially the school. Though level of experience and artistic discipline varied across assigned *Weavers*, each had demonstrated prior skill as a teaching artist in different disciplines and contexts. According to their reflection logs, each *Weaver* accommodated teachers' schedules and communication procedures, built the capacity of teachers to integrate the arts independently, and asked for feedback from their teacher partners, regularly. After recruitment, the *Weaver* engaged in facilitated face-to-face training and collaborative design. At one school, not only did the first cohort of teachers (6th grade) include the entire grade but members of this cohort also took leadership roles in planning a schoolwide strategy for continued growth and transformation. At the other end of the spectrum, another school struggled to engage members from the first cohort of teachers, consistently. Based on interview and survey data, these teachers reported being overwhelmed with the trauma of initiative overload and felt little organizational coherence across their responsibilities—they also served the highest concentration of historically marginalized and underserved students.

Adoption-Adaptation Once a team was formed, the AMAIA results show consistently adequate levels (>50%) across schools for this component, ranging from 56%–78% of the component indicators rating as fully developed. The ArtCore instructional design guidelines (Fig. 6.3) emerged from this developmental phase based on the common strategies employed; we analyzed a sample of teaching and learning modules from each site for evidence using this checklist. Based on that analysis, each site demonstrated evidence of developing rigorous arts integrated teaching and learning opportunities, which translated to higher scores for this component on the AMAIA. According to Weaver logs, during the collaborative design and instruction phase most Weaver-Teacher teams appeared to make meaningful efforts to develop the efficacy of the classroom teachers (e.g., shared teaching responsibilities and manageable art projects). To account for behaviors in our assessment of this component, we incorporated the scores from an observation protocol designed to measure the metacognitive and creative strategies integrated into teaching and learning. Comparing the quantity and quality of teacher practices that support creativity and student engagement, an independent-sample t-test demonstrated a large effect in arts integrated lessons across schools compared to traditional lessons; $t(56) = 7.37, p < 0.000$ (Pitts, Anderson, & Haney, in press).



Instructional Design Guidelines

Collaboration

1. Norms and Agreements

- _____
- _____
- _____
- _____

2. Co-Teaching

- One teaches, one supports
- Parallel teaching
- Alternative teaching
- Station teaching
- Team teaching

3. Content Emphasis

- Art Discipline(s) / Standard(s):**

- Academic Content Area(s) / Standard(s):**

- Creative integration:**
Are students creating and demonstrating their understanding of and through one or more art forms? Describe: _____
- Is classroom teaching leading design and guiding collaboration?

checked: _____

Module Design & Instruction

1. Creative Arts Integration Strand: These strands can overlap in practice considerably. Based on the needs and assets of your school and your students, select your focus that can drive the design work. (If you are feeling ambitious, select and define all three)

- Standards-based**—Arts and academic learning objectives
Define: _____

- Metacognitive**—Studio Habits of Mind (SHOM) thinking objectives
Define: _____

- Social-Emotional Skills**—Motivation and engagement objectives
Define: _____

Fig. 6.3 ArtCore instructional design guidelines

Across the participating schools, arts integrated assessment approaches ranged from (a) an exhibition of learning with authentic community audience members to give students feedback, (b) self-assessment of the SHOM, (c) creative or reflective performance in front of peers and adults, (d) an arts history competition of ancient Greece, (e) concept mapping about creative learning, (f) memory recall, and (g) pre- and post-reflection on levels of anxiety in the face of math learning and assessment. According to interviews and observations, this authentic demonstration appeared to make several critical factors visible to participating teachers: (a) the rigor of quality arts integrated learning, (b) high levels of student thinking and engagement demanded through this approach, and (c) the latent creative potential of students.

Schoolwide Enactment

This component had the widest range within this sample of schools (13%–75% completion). At this point in the developmental adaptation of the model across schools, those farthest along in this component had developed a unifying framework and incorporated that framework into pedagogical innovations, vernacular for student feedback, staff meetings, strategic vision for the school, and other teacher and student supports.

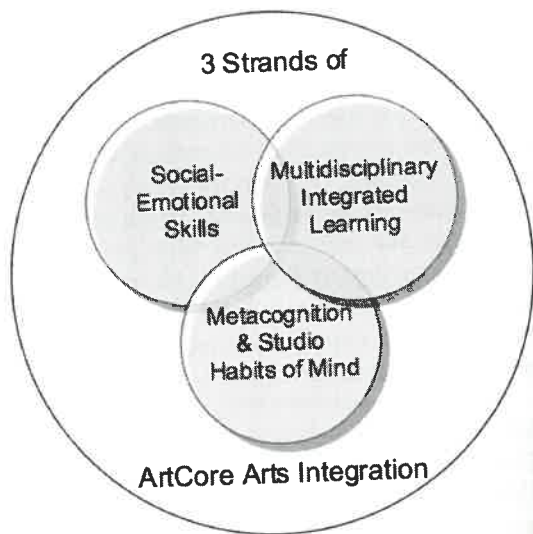
Reflection and Refinement

Using a journey map, video, or photographs that captured the evolution of the work in each school, two of the five schools isolated time to complete a reflection as a staff. In other schools, reflection occurred between school leaders and project partners, using this reflection to set a course for the following year. In its furthest development, this stage systematically reviewed the accomplishments, challenges, and growth in skills, behaviors, and attitudes during the first cycle of implementation.

Three Strands of Arts Integration

As Fig. 6.4 illustrates, a tripartite model of arts integration emerged from the theoretical framework for instruction and the resulting teaching and learning modules created in ArtCore during the developmental phase. Intentionally, we asked Weavers to follow their instinct and respond to the assets and needs of the landscape—the students, the classroom setting, and the teachers. In response to these conditions, a common approach developed that integrated multidisciplinary arts learning and metacognitive

Fig. 6.4 Tripartite model of arts integration



habits of mind within-interrelated academic and social-emotional themes. The model established the concept of creative engagement—where learning is charged emotionally, aesthetically, and metacognitively—as a heuristic to guide the design of coteaching experiences (Anderson, 2017). The collaborative design sparked new student-learning opportunities. Based on the documentation of these modules, these experiences simultaneously connected art and academic skills, creative dispositions, and adaptive motivational orientation.

Each school built a unique take on one of the three strands incorporating culturally specific factors of the school: (a) social-emotional learning, (b) multidisciplinary integrated learning, or (c) metacognitive habits of mind. Their arts integrated approaches operationalized the ArtCore module design guidelines to varying extents with integrated standards, shared instructional efforts, authentic learning experiences, and authentic classroom-based assessments. One module that focused on socio-emotional skills aimed to reduce students' anxiety around math learning and assessment by guiding students through a process of manifesting their "anxiety monsters" with sculptural depictions, naming and describing them, and confronting them with expressive strategies. In another example, the integration of academic and arts standards drove module design and instruction. In this standards-based module, students learned science

concepts behind the water cycle, plate tectonics, and ecology as well as illustration techniques in order to create national park coloring books for neighboring elementary school students.

The metacognitive SHOM were the focus of a student-centered “starburst book” in one school where students described, illustrated, and explained attributes about their unique identities through different media. The Weaver and teachers supported students’ self-assessment of their books and mastery of the SHOM and ultimately gathered community members for a public screening and discussion of their work. In another school, students studied the anatomy of different insects, drawing scientific pictures in preparation for sculpting enlarged versions of their insect out of clay. When one of the sculptures exploded during firing, damaging the rest of the pieces, students and teachers practiced the habits of *persistence* and *exploration* improvising with wire and other materials to remake their sculptures into far more interesting hybrid creatures than the original works. Similarly, at the fifth school students integrated ecology, design, and engineering to design solutions to ecological disasters, practicing the SHOM at each stage of the process. Although these examples depict only one set of lessons from each school, they describe the consistent trend across each school’s designed modules. Though a cohesive focus at each school began to emerge as distinct strands of arts integration, they overlapped considerably in practice. These strands appeared to complement the styles proposed by Bresler (1995) and extend those styles to focus the purpose of arts integration around different aspects of the learners’ experience, skill development, assets, and needs.

DISCUSSION

This developmental evaluation aimed to investigate the factors both driving and thwarting adoption, adaptation, and implementation of arts integrated practices in five middle schools. Our initial analysis aimed at determining how the ArtCore project implementation cycle varied across schools. Given the overarching influence that classroom teachers have on student opportunities for creative engagement in learning, this evaluation aimed to learn about the relationship between aspects of implementation and teacher-level outcomes. We tested the ArtCore model theory of change through a variety of methods and data sources appropriate to developmental evaluation. We crafted research questions that targeted

different features of the theory of change and built hypotheses from the literature that supported the theory of change. We recommend that evaluators consider these steps during the developmental phase in collaboration with implementation partners. By testing the hypotheses concerning organizational, implementation, and teacher-level aspects of the theory of change at this developmental stage, continued refinement may add to precision of future analyses of student-level outcomes.

As organizational theory led us to predict, it appears critical that a school community refer to a locally grounded unifying framework early in the process of implementation. This foundational piece seems to provide a common target and a shared purpose across learning environments and the constellation of initiatives in a school. The arts create an accessible, expressive, and inquiry-based approach for school teams to discover their own framework. Early experiences in the ArtCore model appear to have had a positive effect on the professional community and school culture experienced by teachers. In spite of teachers' lingering doubts about their schools' support for risk-taking, they indicated the highest level of agreement in the area of their own professional enjoyment and openness to growth—two critical assets on which arts integration programs should build. In contrast, our finding that some teachers felt uncertain about the creative potential of students requires greater attention. Arts integration programs might consider creating more opportunities to make the many dimensions of creativity visible in all learners. Measuring these perceptions in an evaluation may provide key moderators to test student-level effects.

School Culture and Social Capital

According to our results, in the three schools furthest along in the organizational culture component, the first had a unifying framework that underwent a consensus-building process of renewal and clarity. The second school made steps toward adoption of the SHOM, and the third school began an intensive process to get input from stakeholders on a new framework, aligned to the SHOM. In order to develop a locally grounded unifying framework (i.e., profile of a learner or habits of a successful graduate), examples were provided to all schools. This step appeared to be critical because it clarified a common target for student learning and expectations and norms for the adult community of practice. Most importantly, it created the opening for how the ArtCore model could enhance

school goals. Based on the results of each AMAIA component, lack of progress in this component appeared to have thwarted progress in other components, especially schoolwide enactment.

Across schools, the intervention focused on cultivating the social and intellectual capital across teachers, teaching artists, and administrators within the school. Not surprisingly, we found that the three schools that developed the organizational culture component in depth alongside social capital showed the most evidence of sustainability—greater participation, enhanced collaboration and risk-taking, professional growth, and intention to continue efforts. In the organizational landscape where social capital was low, system-wide sustainability appeared tenuous. Communication between cohorts of teachers at cross-site professional development opportunities may have laid a foundation of common understanding and alignment. The three schools scoring highest in the schoolwide enactment component allocated school professional development time to the project during the school year to engage the entire faculty—including classified staff on occasion—in refining the unifying framework and integrating the ArtCore model to their shared vision for their school. Possibly due to consistently strong adoption-adaptation of instructional practices in each school, all schools appeared to attain higher levels of *reflection and refinement* compared to the early component of organizational culture. For instance, though School B scored the lowest on most components during this early phase, they completed the most effective reflection and refinement of their approach in preparation for the next year of work. They committed five half-days of schoolwide professional development to exploring drama-based arts integration as a staff.

Based on results from this early phase, a coherent, supportive organizational culture and commitment of leadership may moderate the effect of the ArtCore intervention on teacher outlook, future effort, and overall satisfaction and openness most profoundly. The greatest threats to accessing social capital appeared to be the perception of competing initiatives, a pervasive *either-or* attitude about arts and traditional academics, and the lack of a unifying framework to converge seemingly disparate content areas and programs under a coherent focus. Underlying some of these barriers may be a shallow understanding of the nature of arts learning. In their phenomenological study of the teacher experience in an intensive arts-based reform project, Lackey and Huxhold (2016) suggested similar explanations. As past efforts demonstrate, a unifying framework that

echoes shared values, recognizes student creative potential, clearly defines the role of the arts, and undergirds an assets-based approach that can bridge teaching and learning across a large school (Nathan, 2011). Sites that committed to this effort consistently demonstrated such potential. In practice, evaluators should consider the influence of organizational culture on the creative risks that teachers are willing to take to shift practice.

Fidelity Versus Flexibility

One of the major challenges facing this evaluation effort was measuring the implementation fidelity of a model early in its development in five schools in four different districts. Although a few past studies identified supportive conditions that appear to associate with successful arts integration (e.g., Catterall & Waldorf, 1999; Pepler, Catterall, & Bender, 2015), results often focused on student-level outcomes rather than teacher- or school-level implementation. Given this limited past research, this current evaluation sought to understand more about implementation drivers and the tension between fidelity and flexibility.

This natural tension leads evaluators and researchers to question how to measure implementation fidelity while prioritizing adaptation based on context. To this end, we framed our developmental evaluation around key ideas from the field of implementation science (Blase et al., 2015), organizational change, and adaptation of innovations (e.g., Fullan & Quinn, 2015; Hall & Hord, 2014) to build capacity and strengthen school organizations through implementation. Implementation science, which examines the explicit functions that scale up evidence-based interventions for sustainability, provides us with important schema for understanding the organizational drivers that matter during implementation. Inherently, evaluators must be concerned with the fine balance between fidelity to prescribed practices and adaptation to existing contexts—potential moderators of program effects.

The approach to schoolwide integrated arts learning in the ArtCore model required continual documentation of implementation functions throughout the cycle. Contrary to common belief, evidence-based programs with tightly prescribed steps are not a sure-fire way to achieve implementation success across contexts; indeed, school-based adaptations may increase the likelihood participants will engage in the program and improve the outcomes of interest (Martinez & Eddy, 2005). Early in evaluation design, evaluators should consider aspects of their models of inter-

est that may require extensive adaptation and plan to account for that adaptation in their measurement of implementation. The National Implementation Research Network (Fixsen et al., 2015) employs a 6-stage developmental implementation framework for researchers and policymakers to investigate, apply, and evaluate new programs across a variety of contexts with culturally specific evidence. We adapted that framework to our own emerging implementation cycle. As our investigation aimed to do, other evaluators of arts initiatives should describe contextual irregularities within schools rather than explain them away.

Adapting Arts Integration

Arts integration, generally, can be thought of “as an approach to teaching in which students construct and demonstrate understanding through an art form ... a creative process, which connects an art form and another subject area and meets evolving objectives in both” (Silverstein & Layne, 2010, p. 1). One of the challenges to evaluating the effects of arts integration is the different form it can take. Bresler’s (1995) framework classified arts integration by style and suggested that efficacy of arts integration would depend on style and application. Though this evaluation did not compare the efficacy of different styles, one of the evaluation questions in this study did focus on how different settings adapted the arts integration approach. Based on their relevance across disciplines and their integration of metacognitive and social-emotional dimensions of learning, the set of eight SHOM appear to provide a framework that both arts education program developers and evaluators could make central to their approach.

Our findings show that each school adapted arts integration by concentrating on different elements of creative engagement as a focus. They centered their design work on one strand and incorporated the others in response to the unique conditions of their school. In the two schools that adopted the SHOM most intensively as teachable and transferrable skills, the vernacular spread across content areas and even became part of the homeroom experience for students. In these schools, the SHOM emerged inductively from the collaborative teaching and learning experience as an optimal unifying framework. In fact, students came up with the definitions adopted by the school. As potentially critical factors that may moderate student achievement in the arts and academics, metacognitive and social-emotional skills should be considered in the designs of arts program evaluators. Importantly, evaluators can manage adaptation of programming if

there is a set of core strategies and techniques that encompass the various approaches that evolve.

Growing a Culture for Creative Learning

Metaphorically, the arts-based school change process that we described in this chapter mirrors the efforts to transform a besieged landscape into a thriving, self-sustaining garden. When you plant a garden to grow diverse fruits, vegetables, shrubs, and flowers, you undertake a design process that is inherently collaborative between the gardener, the plants, and nature's elements. Before you begin, you must first turn the soil, let it breathe, and discover what you are working with. This soil—the organizational culture of a school—will determine the health and longevity of the landscape you plant. As a landscape designer, you are both constrained and empowered by the attributes of the soil, the natural features of the site, and the seeds you will nurture—your students. The seeds you grow determine your decisions. As plants, some of the seeds may need an abundance of water, others may need shade, some will fix nitrogen to the soil, and others will demand it. In arts integration, we found that these decisions will drive the emphasis of your approach—social-emotional, metacognitive, or multidisciplinary integration.

In the garden, you envision a hybrid design with the hope to grow plants that support each other in a self-nurturing and evolving ecosystem. Your long-term aim is to develop the garden slowly and strategically so that, in time, it does most of the work for you. You develop the skill to practice integrative designs that will set up a diverse garden that mutually thrives as a symbiotic whole. Once planted, you plan for the ongoing care and support that will be needed at different stages of growth—leafing, rapid growth, rooting, blooming, fruiting, and drying. In arts integration, the water will be the nurturing of artistic skills and aesthetic awareness and the fertilizer will be boosts of metacognitive habits of mind and social-emotional skills for learning.

As the garden grows, the different zones must be planned in a cohesive way so that the soil remains healthy across the landscape. As a gardener you must observe thoroughly with all senses, taking note of what worked well and what you would change in the future. The more you harvest, the more you learn. In arts integration, performance assessments produce formative feedback, depicting what boosts in skills and awareness each learner needs. You watch in awe as small seeds turn into giant blossoms

and as the elements transform your design into a new interactive composition. You retest your soil and identify the next zone of your landscape to design and cultivate. The interactive cycle continues and a thriving landscape takes shape, where diverse plants feed back to boost the health of the soil.

Conclusion

Should evaluators measure implementation fidelity by a checklist of activities or by the behaviors, attitudes, and artifacts that result from those activities and are critical for uptake and sustainability? Do teacher beliefs perhaps play an outsized role in how the arts are perceived and applied as a teaching and learning tool? These are tough questions for arts program innovators and evaluators to wrestle with in developing, assessing, and improving models to become powerful forces of change in schools and communities. Developing a school into a thriving landscape of creative learning takes careful planning and nurturing. Rushing through a step early on, ignoring the state of the soil or the pressures of the surrounding elements, or failing to water the adult learners with arts learning opportunities can stunt growth and result in defeated efforts to build capacity. In fact, many efforts, as we learned, may not take root and instead be washed away by the torrent of initiatives—a common fate in school improvement efforts. On the other hand, when the right balance of attitude, adaptation, and alignment is present, student motivation thrives, thinking becomes visible, and the classroom buzzes with the flow of creative learning from teachers and students alike. School leaders shift priorities and teachers open up to unexplored possibilities in their craft, adapting new perspectives and practices.

Evaluators of arts programming in schools should consider what dimensions of school culture the programming may depend on for implementation to be successful and sustained and what influence the program may have on this school culture, in turn. Although implementation science suggests that programs focus on finding communities well-poised to make fundamental changes in their practices, some schools in most need of uplifting interventions, like arts integration, may not meet the minimum standards in that initial screening. In those schools, the infusion of the arts into the early stage of organizational culture development may need to be intense for the adults in order to pump the soil full of nutrients before planting the seeds for students. Indeed, in schools enduring mounting

pressures from test-based accountability and shrinking funding, a revolving door of leadership, and a constant demand for reform, the soil may need considerable turning and breathing, using the arts as a means to reflect, come together, create, and explore a shared future. Through this developmental study, we learned early on that the focus must begin first with a shared understanding of *why* the arts matter as a universal entry into learning rather than *how* it must be done. Then, as our results suggest, arts-based school change can move from programmatic to systemic, growing into a symbiotic landscape of creative possibility.

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