



Photography by Blanca Velazquez-Martin

## The Art of Early Childhood Education

*Arts integration shows promise for school readiness, emotion regulation, and stress reduction in the youngest, most vulnerable students.*

**Eleanor D. Brown**

Rafael sat on the side of the room with his knees pulled up to his chin and arms wrapped around them. He rocked back and forth, seemingly numb to his surroundings. Rafael and his mother, a Spanish-speaking Mexican immigrant, had been living with his uncle for the past year since Rafael's father died of a heart attack the year before. They had already been struggling to find stability when Rafael's uncle was shot and killed on a street corner at the start of the school year. Laden with grief and anger and threatened with homelessness, Rafael's family was now in chaos. Each day, the teachers looked into Rafael's glazed-over eyes and pulled for words that did not come.

One day, as the teacher invited the children one by one to come and say their name as their hands beat the big djembe drum, Rafael stood and joined the circle. He waited for his turn and then said his name as his hands drummed the beats. Rafael had started preschool a month

before, but you might say he showed up for the first time that day. Gradually, Rafael began to participate in all of the class activities. But his engagement and expression remained highest in music, dance, and visual arts.<sup>1</sup>

This case study illustrates the potential importance of the arts for young children at risk for problematic educational outcomes. To some extent, early childhood educators integrate the arts as standard practice.<sup>2</sup> But music, dance, and visual arts are typically limited there. Lee Nardo and colleagues' 2006 study of teachers in preschools accredited by the National Association for the Education of Young Children (NAEYC) revealed that arts components such as music were typically used for a small amount of time each day and primarily to enrich the classroom environment. For example, early childhood teachers might use songs to teach days of the week or to ease transitions from one activity to another. Full integration of the arts is rare, particularly

in programs that serve children at risk for educational difficulties. Yet arts integrated learning may hold the potential to address key challenges facing our nation's youngest learners, especially those with developmental delays and emotional challenges and those from diverse cultures and backgrounds.

Human beings learn best when their entire bodies are engaged and events are registered by multiple senses.<sup>3</sup> The multiple modes of learning provided by the arts may be particularly important for children with developmental delays, including but not limited to those related to poverty. Children of different developmental levels must receive opportunities to engage meaningfully in their education and experience success if learning is to be truly accessible to all students. There is evidence to suggest that music, creative movement, and visual arts instruction can provide these opportunities.<sup>4</sup> In particular, a combination of verbal and nonverbal means for expressing and realizing knowledge can make the classroom more accessible to students with poverty-related language delays and propel the development of language skills.<sup>5</sup>

The combination of verbal and nonverbal channels provided by the arts can offer valuable opportunities not only for students with language delays but also for English language learners. More generally, arts enrichment may help to bridge the gap that often separates home and school for children from racial and ethnic minority backgrounds. The arts hold a central position in most cultural traditions. Including the arts in education provides opportunities for bringing varied cultural traditions into the classroom and promoting a sense of belonging and pride for students from diverse backgrounds.<sup>6</sup> Arts integration enables children to build on previous cultural knowledge, while also providing a comfortable environment for expressing their individuality.

Poverty, racism, and high levels of instability and chaos in children's lives present emotional challenges for young children. Art forms such as music, creative movement, visual arts, and dramatic play give children appropriate means for expressing emotions in school and teach important emotion regulation strategies. For example, in music, children might learn that various songs elicit different emotions and thus can be used to change the way you feel. In

creative movement, children might learn that creative movement can help to release bodily tension. Emotional benefits of the arts include increases in motivation and self-esteem.<sup>7</sup>

Additionally, research suggests that participation in the arts has the potential to increase sociability and interpersonal skills and decrease behavioral and emotional problems.<sup>8</sup> Researchers Yovanka Lobo and Adam Winsler randomly assigned preschool children from a large Head Start program to either an experimental dance or attention control group. Parents and teachers, who did not know children's group assignments, deemed the preschoolers who participated in the experimental dance program as showing the most gains in social competence and internalizing (e.g., anxiety and sadness) and externalizing (e.g., aggression and acting out) behavior problems. Although the design did not distinguish between possible mechanisms, such as the enhancement of self-esteem that experiencing success provides or social-emotional expression facilitated by creative movement, the results provide a compelling case for using arts education with low-income children at risk for the types of social-emotional problems that undermine academic success.

## Outcomes from Preschool Arts Integration

The Kaleidoscope Preschool Arts Enrichment Program offered at Philadelphia-based Settlement Music School provides a window into the possibilities for early childhood arts integration and also suggests the importance of further exploration of arts integration in elementary school and beyond. Launched in 1990, the program was designed to promote school readiness for vulnerable young children via integrated arts enrichment. The founders hoped that integrated arts experiences would develop artistic intelligence and provide varied channels for acquiring school readiness skills. In particular, the founders expected that children from diverse racial/ethnic minority backgrounds might benefit from a culturally relevant arts education and that those showing poverty-related developmental difficulties might benefit from multiple modes of learning. Since its start, Kaleidoscope has offered a daily schedule of early learning classes taught by credentialed early childhood educators, as

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well as multiple music, creative movement, and visual arts classes, structured to advance artistic and academic skills for school readiness.

Kaleidoscope has served as a Head Start site since the mid-1990s and has received NAEYC accreditation. The arts integration process has been standardized in order to meet Head Start performance goals. Early learning themes and traditional early learning domain outcomes guided curriculum development. For example, during instruction on “groups and change,” teachers use an “experimentation” strategy in the classroom. One week, children experiment with sound through echo imitation in the stairwell and explore the different sounds musical instruments make. Then they experiment with grouping voice and instrumental sounds by pitch and other categories. In dance, children experiment with ways a particular body part can move and then categorize the movements along dimensions such as speed and emotion. In visual arts, they experiment with print making using natural materials. They take a nature walk to collect materials and group them by categories such as texture.

In all of these classes, children build not only science skills related to experimentation but also language, literacy, mathematics, and social-cultural learning competencies.

The Early Childhood Cognition and Emotions Lab at West Chester University has partnered with the preschool for more than a decade to study program outcomes. The lab’s experimental and quasi-experimental investigations suggest that this model of high-quality, intensive arts integration offers advantages in school readiness, ability to regulate emotions, and stress reduction.<sup>9</sup>

**School readiness.** In an initial two-part study, my colleagues and I examined growth in school readiness skills. Part 1 examined growth in children attending Settlement’s Kaleidoscope Preschool. Using Kaleidoscope’s curriculum-based checklists, we found no evidence of the achievement gap that is often found, even for children attending other Head Start programs, and we found a possible advantage for children with developmental delays.<sup>10</sup> Part 2 compared children at Kaleidoscope and those at a matched comparison preschool that was not fully arts integrated. The matched program was also a Head Start site and NAEYC accredited,

it required the same teacher-to-child ratios and teacher education and credentials as Kaleidoscope, and it served demographically similar and geographically proximate neighborhoods. Both used the Creative Curriculum, which prescribes some integration of the arts into regular homeroom classes. In Settlement’s program, however, children also received multiple music, dance, and visual arts classes daily.

We used the Peabody Picture Vocabulary Test, a widely recognized predictor of school success, to measure growth in receptive vocabulary, and we found a striking advantage for students from Kaleidoscope. After controlling for demographic variables, children at Kaleidoscope showed three times the growth in receptive vocabulary over the course of the year as their peers attending the typical Head Start.

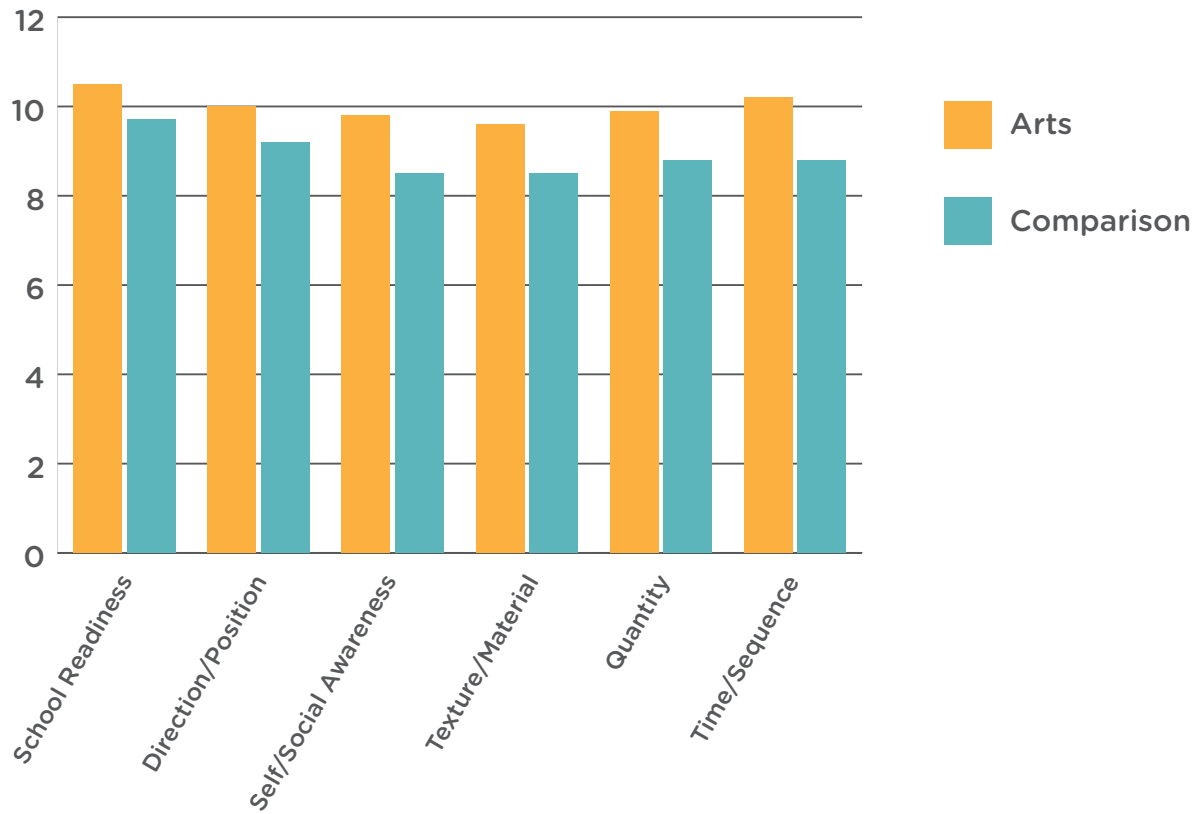
In a subsequent investigation of growth school readiness skills, we used a broader, nationally normed, and validated measure—the Bracken Basic Concepts Scale, which comprises 10 subtests.<sup>11</sup> The first five—letters, numbers, shapes, sizes, and colors—constitute a School Readiness Composite. The next five cover direction/position, self/social awareness, texture/material, quantity, and time/sequence.

Again, we compared growth across the year for Kaleidoscope children and those attending a matched comparison site. Children at Kaleidoscope showed a statistically significant advantage in overall school readiness as well as in self- and social awareness and understanding of texture and material (figure 1).

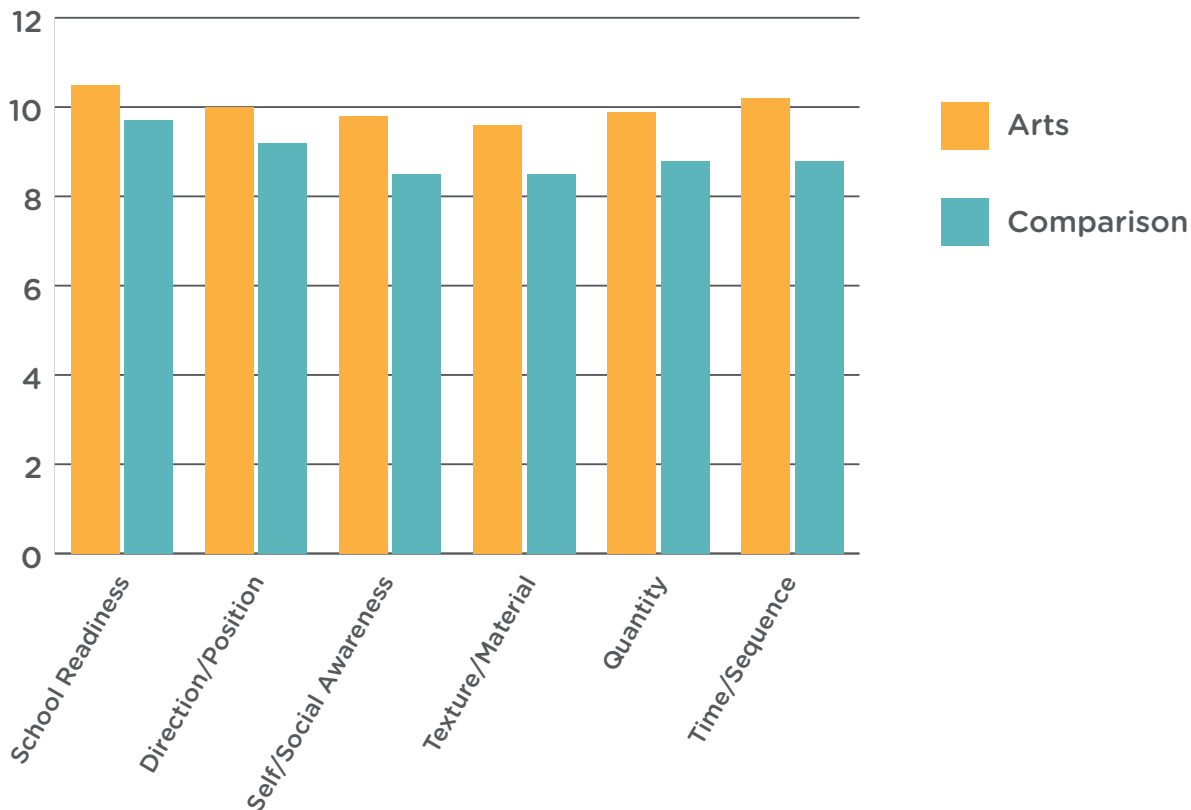
**Emotion regulation.** Using a system called Affex, Kacey Sax and I observed children’s emotion expression at Kaleidoscope and found that children showed more interest, happiness, and pride during their arts classes as compared with typical early learning or homeroom preschool classes.<sup>12</sup> We also compared emotions between Settlement’s Kaleidoscope Preschool and the matched Head Start program that was not fully arts-integrated. We used a well-validated measure called the Emotion Regulation Checklist to capture children’s emotion regulation over the course of the year.

Children at Kaleidoscope showed 60 percent more positive emotions than their peers at the preschool that was not fully arts integrated (figure 2). They improved their positive emotion regulation skills (such as responding positively

**Figure 1. Growth in School Readiness in Preschool Arts Enrichment Program and a Matched Program** (change in standardized scores, where 10 is average based on national norms)



**Figure 2. Growth in Emotion Regulation Skills and Functioning**



*Note: For emotion expression, the figure shows the average incidence of positive emotions, and for the emotion regulation variables, it is a difference score representing improvement across the year.*

**The arts are a useful mechanism for fostering emotion regulation.**

to friendly overtures by peers) across the year, whereas children at the comparison site did not. Children at both preschools showed improvement with regard to negative emotion regulation problems (such as having angry outbursts or tantrums easily), but the improvement was five times greater at Kaleidoscope. We wondered whether we could document these powerful effects at a physiological level.

**Stress physiology.** In a subsequent investigation funded by the National Endowment for the Arts, children at Kaleidoscope were randomly assigned by preschool class to different schedules of arts and homeroom classes on different days of the week. We measured salivary cortisol at morning baseline and after arts and homeroom classes. Levels of the stress hormone cortisol tend to be elevated for children facing poverty-related stress, which hinders brain activity involved in learning, memory, self-regulation, and executive functioning. Children in our study showed lower levels of cortisol after arts classes compared with levels after homeroom.<sup>13</sup> The results were similar for music,

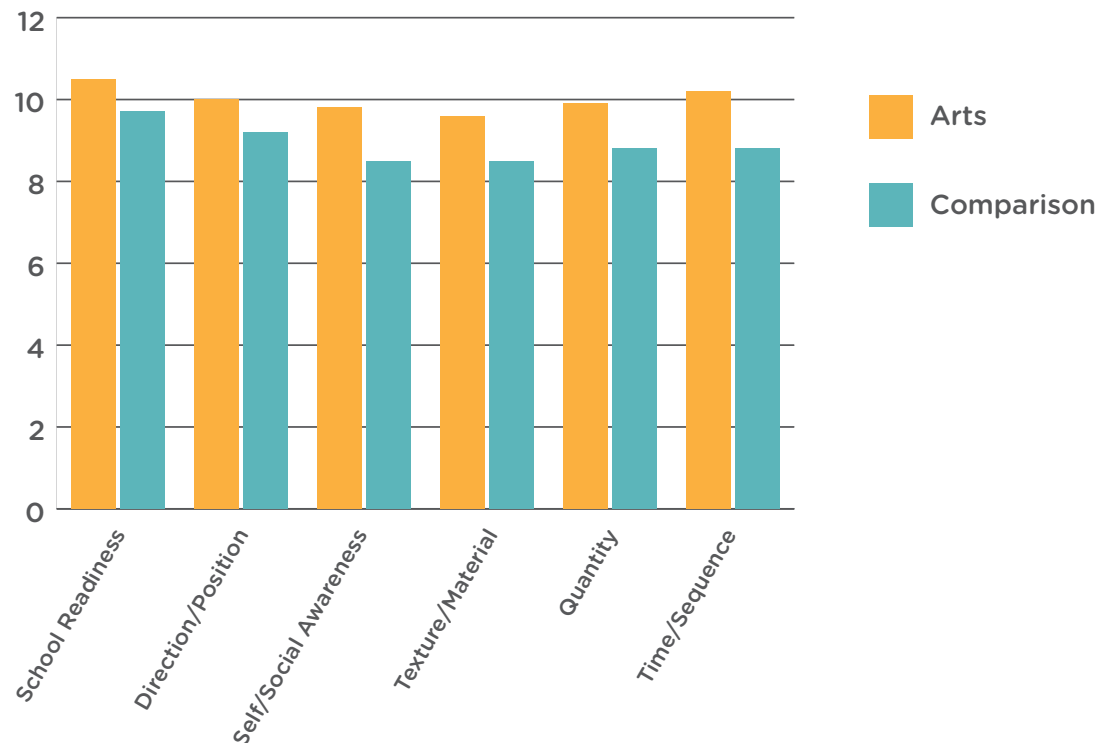
dance, and visual arts. The stress reduction associated with participation in arts classes was not apparent at the start of the year but was at midyear and maintained at year’s end, raising the possibility that perhaps children need to acquire particular artistic skills or arts-based emotion regulation tools before they can realize the cortisol-reduction benefits (figure 3).

**Implications**

Our work thus far leads us to conclude that the arts are not only an important object of learning but also a useful mechanism for fostering emotion regulation. And the arts can “get under the skin,” perhaps changing the imprint of poverty on physiological stress response systems, with implications for cognitive, emotional, and physical health functioning.

Our research on the Settlement Music School model suggests the possibility that intensive, high-quality arts integration can provide important benefits for vulnerable children. Intensive arts integration may help children experience positive emotions that facilitate

**Figure 3. Levels of Cortisol after Preschool Music, Dance, And Visual Arts Classes Compared with Homeroom (log cortisol in micrograms per deciliter)**



learning, promote the development of emotion regulation skills, and reduce high stress levels associated with stressful, chaotic life circumstances. By using music, dance, and visual arts to teach skills in academic domains such as language, literacy, mathematics, science, and social-cultural learning, children gain an overall advantage in school readiness.

Further research is needed to determine the mechanisms through which art makes an impact and to explore the effects associated with different models of arts integration and for different groups of children, as well as to further explore nonarts factors that may contribute to the positive outcomes we have observed. Nonetheless, our research gives us confidence that the arts programming is associated with the positive

outcomes we have documented. We urge state boards of education, administrators, teachers, and others engaged in educational policy and practice to consider the multiple educational goals that might be accomplished via intensive arts integration and to invest in providing it more broadly. While this might seem challenging given budgetary constraints, our research suggests powerful outcomes across multiple domains—from vocabulary to emotion regulation—that promote school success for all children. Arts integration can advance educational equity for children from diverse backgrounds and with diverse needs—and do it early in life. ■

<sup>1</sup>Eleanor Brown, “Tapping the Arts to Teach R’s: Arts-Integrated Early Childhood Education,” in Lynn Cohen and Sandra Waite-Stupiansky, eds., *Advances in Early Education*



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and Care, vol. 17: *Learning across the Early Childhood Curriculum* (Derby, UK: Emerald Group, 2013).

<sup>2</sup>Rachel Lee Nardo et al., "Looking Back, Looking Forward: A Report on Early Childhood Music Education in Accredited American Preschools," *Journal of Research in Music Education* 54, no. 4 (2006): 278–92.

<sup>3</sup>Robert Sylwester, *A Celebration of Neurons: An Educator's Guide to the Human Brain* (Alexandria, VA: Association for Supervision and Curriculum Development, 1995).

<sup>4</sup>Jaye T. Darby and James S. Catterall, "The Fourth R: The Arts and Learning," *Teachers College Record* 96, no. 2 (1994): 299–328.

<sup>5</sup>Michelle Gregoire and Jude Lupinetti, "Supporting Diversity through the Arts," *Kappa Delta Pi Record* 41, no. 4 (2012): 159–62.

<sup>6</sup>Brenda Allen and A. Wade Boykin, "African American Children and the Educational Process: Alleviating Cultural Discontinuity through Perceptive Pedagogy," *School Psychology Review* 21, no. 4 (1992): 586–96.

<sup>7</sup>Jerry Trusty and Giacomo Oliva, "The Effects of Arts and Music Education on Students' Self-Concept," *Update: Applications of Research in Music Education* 13, no. 1 (1994): 23–28.

<sup>8</sup>Yovanka B. Lobo and Adam Winsler, "The Effects of a Creative Dance and Movement Program on the Social Competence of Head Start Preschoolers," *Social Development* 15, no. 3 (2006): 501–19; Robin Wright et al., "Community-Based Arts Program for Youth in Low-Income Communities: A Multi-Method Evaluation," *Child & Adolescent Social Work Journal* 23, no. 5 (2006): 635–52.

<sup>9</sup>Brown, "Tapping the Arts."

<sup>10</sup>Eleanor Brown et al., "Arts Enrichment and School

Readiness for Children at Risk," *Early Childhood Research Quarterly* 25, no. 1 (2010): 112–24.

<sup>11</sup>Eleanor Brown et al., "The Art of Head Start: Intensive Arts Integration Associated with Advantage in School Readiness for Economically Disadvantaged Children," *Early Childhood Research Quarterly* 45, no. 4 (2018): 201–14.

<sup>12</sup>Eleanor D. Brown and Kacey Sax, "Arts Enrichment and Preschool Emotions for Low-Income Children at Risk," *Early Childhood Research Quarterly* 28 (2013): 337–46.

<sup>13</sup>Eleanor Brown et al., "Can the Arts Get Under the Skin? Arts and Cortisol for Economically Disadvantaged Children," *Child Development* 88, no. 4 (2017): 1368–81.