

THE IMPACT OF ARTS AND CULTURE

AGENDA:

PRE-K

greater
philadelphia cultural
ALLIANCE

SUMMARY

From our earliest ages, we learn through movement, sound and color.

What and how we learn as young children extends through elementary school and into adulthood, affecting even health and socioeconomic status. As policymakers focus on expanding quality Pre-K, it is increasingly apparent – through both academic study and experience in the field – that arts integration in Pre-K is key to its success.

Agenda: Pre-K is the first in a series of new advocacy tools that outline the impact of arts and culture not only on the economy but also on the issues that most affect our daily lives: education, wellness, social justice and more.

The Agenda series highlights existing research and resources that demonstrate the relevance and impact of arts and culture in Greater Philadelphia, throughout the Commonwealth and across the country.

IMPACT: PHYSICAL

The innate “fight or flight” response in all humans exists even in early childhood. Successful Pre-K programming teaches children how to react to stressors, but what happens when the stress felt by young students goes beyond what can be solved in the classroom?

Of the three types of stress (positive, tolerable and toxic), toxic stress—the result of sustained and aggressive activation of the body’s internal stress management systems—is the most threatening in both the short and long terms. Toxic stress often begins in early childhood. The same toxic stress that has detrimental effects on young children carries through adulthood, resulting in chronic problems with behavior, learning, and mental and physical health.

Toxic stress is literally toxic: diabetes, high blood pressure, heart disease, incarceration, unemployment, poverty, and disability are all consequences of sustained high levels of cortisol in children.

Stress can be positive when children have the supportive presence of adult caregivers and the capacity to return to “baseline” status when the stress has been mastered. Philadelphia’s Settlement Music School and its Kaleidoscope Preschool Arts Enrichment Program for Head Start-qualifying families integrate daily music, dance and visual arts education into each day’s classes. Kaleidoscope, whose on-staff nutritionist ensures that each child receives 2/3 of his or her daily calories at school, also provides regular classroom time, neighborhood trips and outdoor play.

In a 2016 study by Dr. Eleanor Brown of West Chester University, students at Kaleidoscope, were found to have decreased levels of cortisol, the chemical that spikes when a child is exposed to toxic stress. Toxic stress can later lead to diabetes, high blood pressure, heart disease, incarceration, unemployment, poverty and disability.

“Just as exercise builds physical fitness, music can ‘tone’ young brains and bodies.”

Source: Wolf, D., Why Making Music Matters: Singing, Playing, Moving, and Sharing in the Early Years.

In combating high cortisol levels and improving children’s abilities to regulate stress, the Kaleidoscope program proves that the arts positively impact physical health in the Pre-K years and beyond.



WHAT CAUSES TOXIC STRESS IN PRE-K STUDENTS?

- Extreme poverty and continuous family chaos
- Recurring physical or emotional abuse
- Persistent substance abuse by parents
- Severe and enduring maternal depression
- Repeated exposure to violence in the community or within the family
- Chronic neglect



IMPACT: SOCIAL & EMOTIONAL

Students at Mi Casita, a Spanish Immersion preschool in Philadelphia's Fairmount neighborhood, don't make crafts: they create art, curate galleries, and even "peer review" each other's projects throughout the creative process, receiving constructive critiques and revising drafts as early as age two.

Mi Casita practices project-based learning and integrates multimodal art education seamlessly into its Pre-K curriculum. A recent project pivoted from teaching art to developing artists, as these young Philadelphians took trips to the city's art museums, made their own individual art projects, and hosted a gallery opening for the community. Each student created several pieces of art, increased their literacy by writing invitations for parents and guests, studied music by curating a jazz playlist for the pop-up gallery, and explored the culinary arts by creating a menu of cubed cheese and grape juice.

Multimodal art education and multiyear Pre-K carry benefits above and beyond the standard single-day approach to art that most often begins in kindergarten:

- Full-day participation in Pre-K directly links to increased school readiness and reduced chronic absenteeism in Pre-K students.³
- Engaging in two or more art forms (music and dance, painting and sculpture) more often gives children more developed social and emotional skills.¹
- Attending an arts-integrated program for two years rather than just one year gives low-income children a leg up, producing higher achievements in language, literacy, science and math--regardless of racial, ethnic or developmental differences.²
- Taking just one year of arts-integrated Pre-K expands children's vocabulary up to three times faster than their peers in non-arts Pre-K programs.²

Photograph courtesy of Please Touch Museum



Pre-K arts students experience 60% more positive emotions:

**INTEREST
HAPPINESS**

+ PRIDE

that have a long-term impact on the child's ability to learn.

Source: Brown, E. D., & Sax, K. L., *Arts Enrichment and Preschool Emotions for Low-Income Children at Risk*.

1 Menzer, M., *The Arts in Early Childhood: Social and Emotional Benefits of Arts Participation*.

2 Brown, E. D., Benedett, B., & Armistead, M. E., *Arts Enrichment and School Readiness for Children at Risk*.

3 Carolan, M., *Supporting Quality Across Preschool Programs: Balancing Quality and Access*.



IMPACT: COGNITIVE

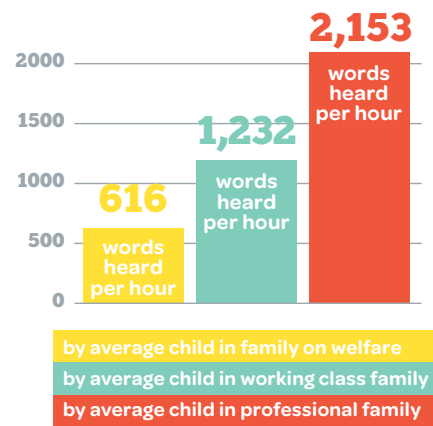
Art provides boundless opportunities to teach young minds the critical thinking and problem-solving skills needed for success later in life. It also promotes math and geometric concepts and encourages literacy and language skills.

William D. Kelley Head Start in Strawberry Mansion and Porter's Day Care in Logan are part of the Delaware Wolf Trap program, which educates teachers in effective arts-integrated curriculum and provides quality performing arts experiences. Wolf Trap classrooms develop STEM skills and expand the received vocabulary necessary for success in elementary school.

Memory, problem solving and communication skills are improved through structured arts activities; cognitive abilities, including non-verbal IQ, numeracy, sequencing and pattern recognition, are improved through music and dance. **And the arts add up: after one year in a Wolf Trap arts-integrated classroom, students gained the equivalent of 1.3 months of STEM knowledge.** After two years, students gained an additional 1.7 months of STEM knowledge.

CLOSING THE WORD GAP

Music and songs help develop language and literacy skills and are vital to bridging the word gap that is often the key to later success in school.

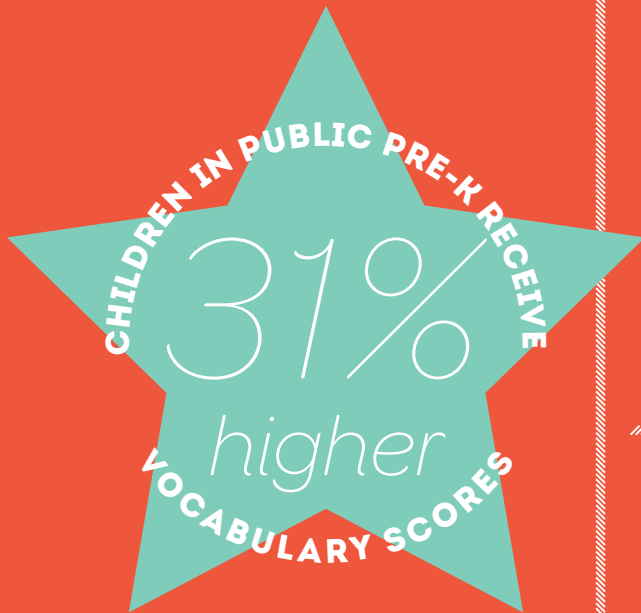


Source: Wolf, D., *Why Making Music Matters: Singing, Playing, Moving, and Sharing in the Early Years.*



RESEARCH

PRE-K MAKES THE DIFFERENCE:



THAT'S THE
EQUIVALENT OF
4 MONTHS OF
EXTRA CLASS TIME



PRINT AWARENESS AND
LITERACY* INCREASE BY

85%

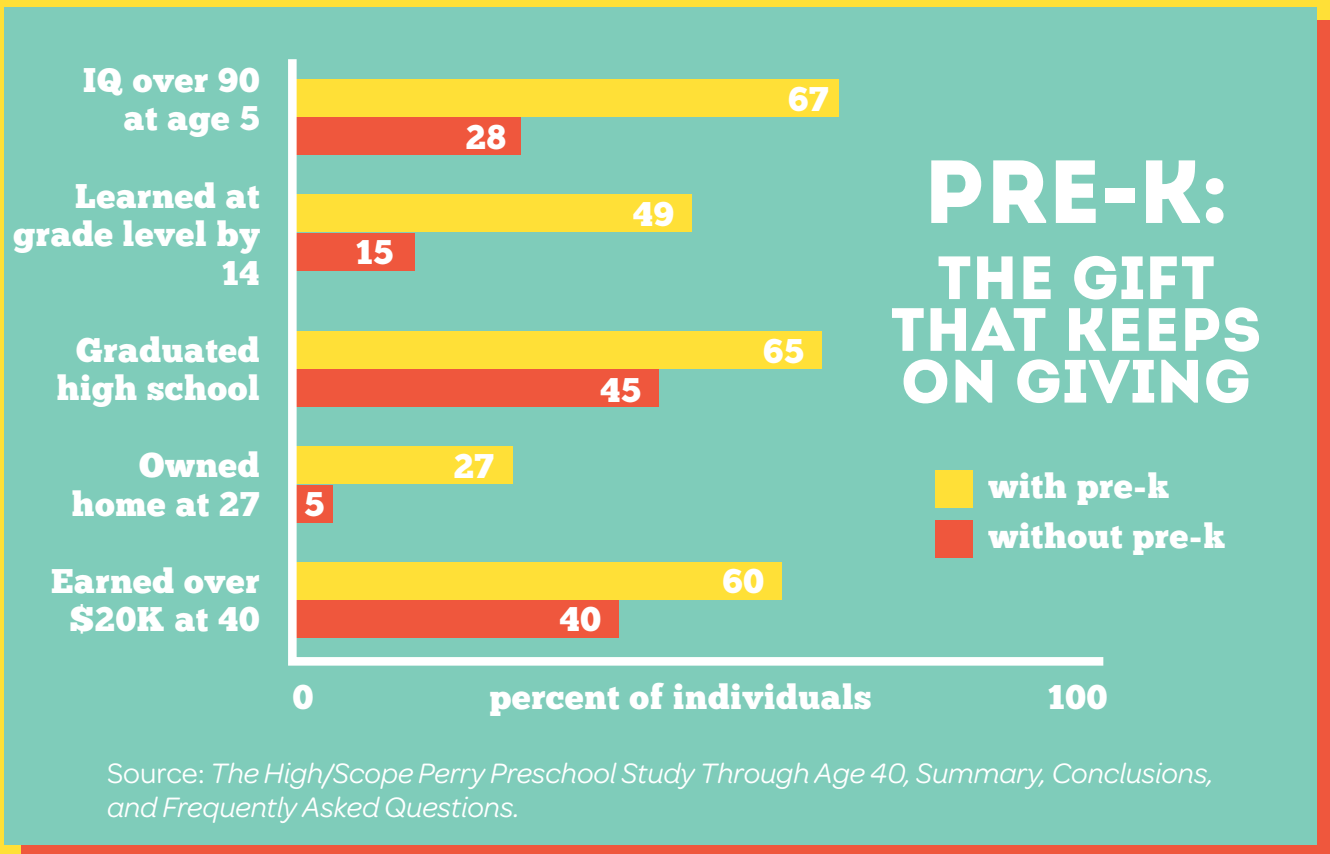
* These are key predictors of reading
success in elementary school

**PUBLIC PRE-K STUDENTS
SEE 44% MORE GROWTH
IN IMPORTANT STEM
SKILLS SUCH AS NUMBER
CONCEPTS + ADDITION
AND SUBTRACTION**

Source: Barnett, W. S., Lamy, C., & Jung, K., *The Effects of State Prekindergarten Programs on Young Children's School Readiness in Five States*.

MORE INFORMATION, CITATIONS + RESOURCES ▶ PHILACULTURE.ORG/PREK

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EARLY CHILDHOOD EDUCATION RESOURCES FOR EDUCATORS & PROVIDERS

Early Childhood Education traditionally includes birth through eight years; a number of the resources below, as well as some academic sources cited in this document, refer not only to Pre-K (3-4) but to children up to 4th grade.

Phillyfunguide Pre-K Resources (Pre-K and Early Childhood Events, Museums and Organizations to Visit and more)

<https://phillyfunguide.com/kids?tags=PRE-K>
<https://phillyfunguide.com/editorial/pre-k>

Mayor's Office of Education Quality Pre-K

<https://alpha.phila.gov/departments/mayors-office-of-education/quality-pre-k/>

Wolf Trap Education Professional Learning Community

<http://education.wolftrap.org/>

PNC Grow Up Great Lesson Center

<https://pnc.com/en/about-pnc/corporate-responsibility/grow-up-great/lesson-center.html>

Southeast Regional Key

<http://www.seregionalkey.org/site/index.php/about-us/mission>

Public Citizens for Children + Youth

<http://www.pccy.org/>

Teaching Our Youngest: A Guide for Preschool Teachers and Child Care and Family Providers

<https://www2.ed.gov/teachers/how/early/teachingouryoungest/teachingouryoungest.pdf>

Early Childhood Action Collective's Blog

<http://ecactioncollective.org/index.php/blog>

Delaware Valley Association for the Education of Young Children

<http://www.dvaeyc.org>

Child Care Licensing Guidelines in Philadelphia

<https://business.phila.gov/child-care-facility-license/>

Keystone STARS: Performance standards for child care programs

http://www.pakeys.org/pages/get.aspx?page=programs_stars

Philadelphia Facility Fund: Apply for ECE facility improvement grants

<http://philafacilityfund.org/>

Pre-K for PA Campaign

<http://www.prekforpa.org/>

Read by 4th Literacy Campaign

<http://readby4th.org/>

Education World's Early Childhood Page

http://www.educationworld.com/a_earlychildhood/

10 of the Very Best Online Resources for Early Childhood Teachers from We Are Teachers

<https://www.weareteachers.com/10-of-the-very-best-online-resources-for-early-childhood-teachers/>

Harvard University's The Science of Early Childhood Development

<http://developingchild.harvard.edu/resources/inbrief-science-of-eed/>

Teacher Tom Blog: Teaching and Learning from Preschoolers

<http://teachertombsblog.blogspot.com/>

Child Care Exchange

<https://www.childcareexchange.com/>

EARLY CHILDHOOD EDUCATION RESOURCES FOR PARENTS & CAREGIVERS

Early Childhood Education traditionally includes birth through eight years; a number of the resources below, as well as some academic sources cited in this document, refer not only to Pre-K (3-4) but to children up to 4th grade.

Phillyfunguide Pre-K Resources (Pre-K and Early Childhood Events, Museums and Organizations to Visit and more)

<https://phillyfunguide.com/kids?tags=PRE-K>
<https://phillyfunguide.com/editorial/pre-k>

Mayor's Office of Education Quality Pre-K

<https://alpha.phila.gov/departments/mayor/quality-pre-k/>

Early Childhood Action Blog

<http://ecactioncollective.org/index.php/blog>

Great Philly Schools Early Childhood Education (ECE): Find quality ECE programs near you

<http://ece.greatphillyschools.org/>

US Department of Education's Helping Your Preschool Child: With activities for children from infancy through age 5

<https://www2.ed.gov/parents/earlychild/ready/preschool/preschool.pdf>

Find Bright Futures & Head Start pre-K

<http://webgui.phila.k12.pa.us/offices/e/earlychild/forms>

Birth to 5: Watch Me Thrive – Families

<https://www.acf.hhs.gov/ecd/child-health-development/watch-me-thrive/families>

Child Care Information Services: Making child care & pre-K affordable

<http://www.philadelphiachildcare.org/>

Keystone STARS: Quality ratings for child care programs

http://www.pakeys.org/pages/get.aspx?page=programs_stars

Pennsylvania's Promise for Children: Why the first five years matter

<http://papromiseforchildren.com/why-the-first-five-years-matter/brain-development/>

NAEYC for Families

<http://families.naeyc.org/>

Register for Kindergarten in Philadelphia

<http://webgui.phila.k12.pa.us/offices/e/earlychild/kindergarten-registration>

Parent University: Skills training

<http://www.philasd-parentuniversity.org/>

ACADEMIC SOURCES

A number of the sources below refer to Early Childhood Education--not only Pre-K (3-4) but children up to 4th grade.

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http://www.pewtrusts.org/~/media/legacy/uploadedfiles/wwwpewtrustsorg/reports/pre-k_education/finaloverallmultistatereportpdf.pdf

Bongiorno, L., *How Process Art Experiences Support Preschoolers.*

<http://www.naeyc.org/tyc/article/process-art-experiences>

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<https://static1.squarespace.com/static/5671b87357eb8d6141379ca0/t/5845b23b1b631ba4660ce509/1480962620434/ArtsEnrichmentandSchoolReadiness.pdf>

Brown, E. D., & Sax, K. L., *Arts Enrichment and Preschool Emotions for Low-Income Children at Risk.*

<https://static1.squarespace.com/static/5671b87357eb8d6141379ca0/t/5845b27929687fd7c337df56/1480962682353/SMS+ECRQ+Arts+Enrichment+and+Emotions+3-2013.pdf>

Brown, E. D., Garnett, M. L., Anderson, K. E., & Laurenceau, J., *Can the Arts Get Under the Skin? Arts and Cortisol for Economically Disadvantaged Children.*

[http://onlinelibrary.wiley.com/doi/10.1111/cdev.12652/abstract \(abstract access only\)](http://onlinelibrary.wiley.com/doi/10.1111/cdev.12652/abstract (abstract access only))

Carolan, M., *Supporting Quality Across Preschool Programs: Balancing Quality and Access.*

<http://www.ecactioncollective.org/images/ECAC-Supporting-Quality-Across-Preschool-Programs.pdf>

Charleroy, A., Frederiksen, J. A., Jensen, A., McKenna, S., & Thomas, A., *Child Development and Arts Education: A Review of Recent Research and Best Practices.*

<https://nccas.wikispaces.com/file/view/NCCAS+Child+Development+Report.pdf>

Child Action Inc., *The Importance of Play: Activities for Children.*

http://www.childaction.org/families/publications/docs/guidance/Handout13-The_Importance_of_Play.pdf

Goldberg, B., *Art & Early Childhood: Personal Narratives & Social Practices: Seeing Meaning.*

<https://www.bankstreet.edu/occasional-paper-series/31/part-i/seeing-meaning/>

Hanna, G., *The Arts and Human Development: Framing a National Research Agenda for the Arts, Lifelong Learning, and Individual Well-Being.*

<https://www.arts.gov/sites/default/files/TheArtsAndHumanDev.pdf>

The High/Scope Perry Preschool Study Through Age 40, Summary, Conclusions, and Frequently Asked Questions.

<https://highscope.org/>

Kemp, Z., *A National Collaborative Evaluation of Sistema-inspired Music Education.*
<http://wolfbrown.com/news/a-national-collaborative-evaluation-of-sistema-inspired-music-education>

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<https://www.arts.gov/sites/default/files/arts-in-early-childhood-dec2015-rev.pdf>

National Scientific Council on the Developing Child, The Science of Early Childhood Development: Closing the Gap Between What We Know and What We Do.
<http://developingchild.harvard.edu/resources/the-science-of-early-childhood-development-closing-the-gap-between-what-we-know-and-what-we-do/>

Raver, C., *Ready to Enter: What Research Tells Policymakers About Strategies to Promote Social and Emotional School Readiness Among Three- and Four-Year-Old Children.*
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<https://www.settlementmusic.org/news-blog/2016/12/6/the-real-impact-of-the-arts-shown-through-science>

Settlement Music School, The Relationship Between Arts Programs and Early Childhood Social/Emotional, Cognitive and Physiological Skills.
<https://www.settlementmusic.org/prek-and-after-school-care/>

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Wolf Trap Education Report, Impact of Arts on Early Learning.
<http://www.wolftrap.org/education/institute-for-early-learning-through-the-arts/impact.aspx>



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