

Tulsa's Impact in STEM Education

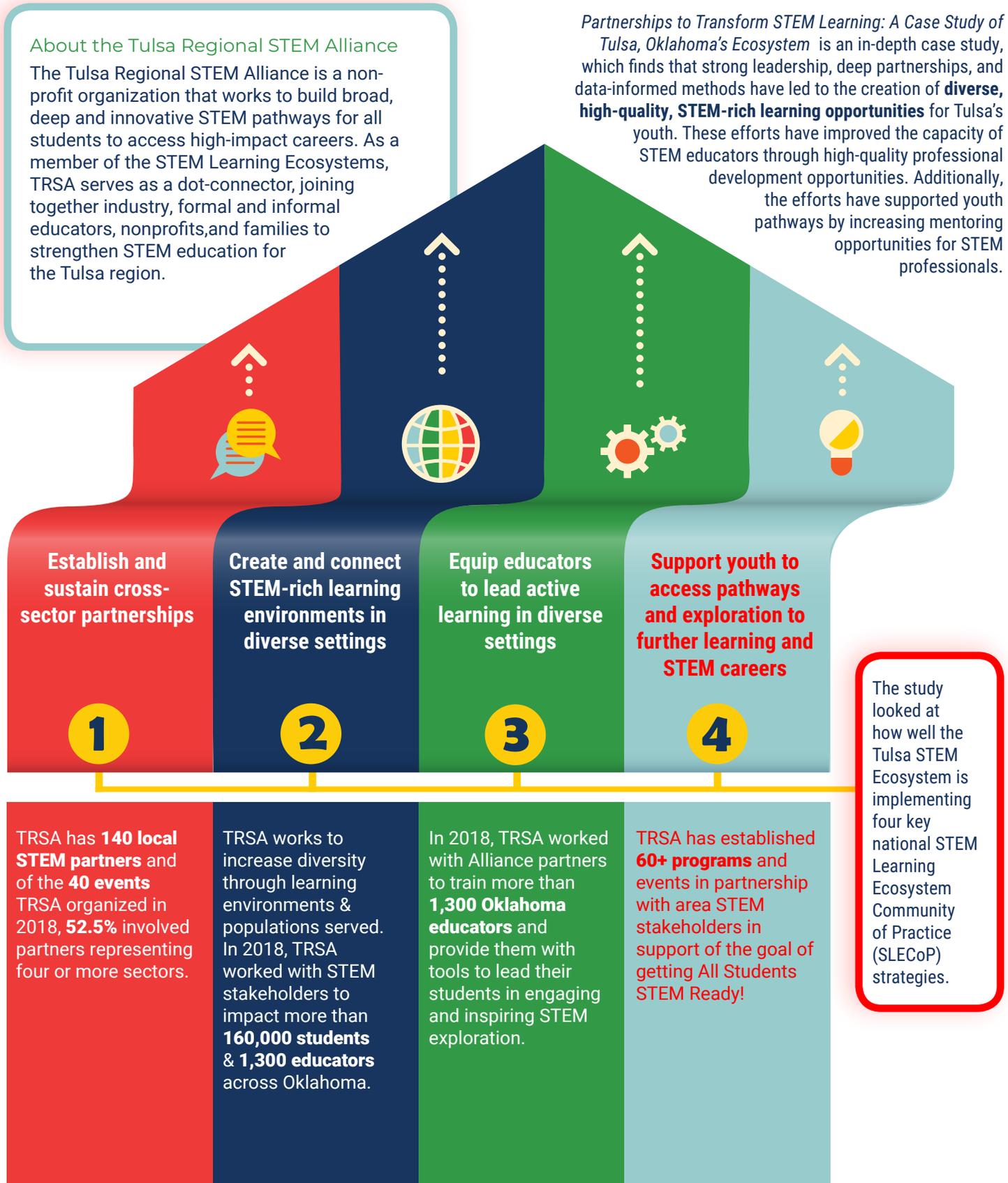
A National Case Study

The PEAR Institute: Partnerships in Education and Resilience at McLean Hospital and Harvard Medical School conducted a year-long study of the Tulsa Regional STEM Alliance (TRSA). Funded by the Overdeck Family Foundation, STEM Next Opportunity Fund, and the Charles and Lynn Schusterman Family Foundation, this study is the first of its kind among 68 national and international STEM Ecosystems.

About the Tulsa Regional STEM Alliance

The Tulsa Regional STEM Alliance is a non-profit organization that works to build broad, deep and innovative STEM pathways for all students to access high-impact careers. As a member of the STEM Learning Ecosystems, TRSA serves as a dot-connector, joining together industry, formal and informal educators, nonprofits, and families to strengthen STEM education for the Tulsa region.

Partnerships to Transform STEM Learning: A Case Study of Tulsa, Oklahoma's Ecosystem is an in-depth case study, which finds that strong leadership, deep partnerships, and data-informed methods have led to the creation of **diverse, high-quality, STEM-rich learning opportunities** for Tulsa's youth. These efforts have improved the capacity of STEM educators through high-quality professional development opportunities. Additionally, the efforts have supported youth pathways by increasing mentoring opportunities for STEM professionals.



Evidence of Tulsa's Bright Spots

Partnerships

- 188% increase in the number of ecosystem partners representing diverse community sectors since 2015

Funding

- 7,366% increase in TRSA's operating budget since forming in 2013, with increasingly diverse funding sources and record numbers of donations

STEM Engagement

- 1,800% growth of direct and indirect youth STEM participation in Tulsa since 2013
- Increasing numbers of educators participating in professional development opportunities and STEM professionals volunteering as mentors in K-12 schools

STEM Quality

- More than 80% of youth participating in TRSA-supported programming reported positive changes in STEM engagement, STEM career interest and knowledge, critical thinking, perseverance, relationships with peers, and relationships with adults in 2018
- 80% of TRSA-supported STEM programs observed to have reasonable to compelling evidence of STEM program quality in 2018

Evidence of Work to be Done

Partnerships

- Strengthen partnerships with schools and businesses
- Strategically find more ways to leverage partners in the community

Funding

- Diversify funding and assets

STEM Quality

- More professional development to facilitate activities that provide young people with more opportunities to reflect on learning, to connect content to everyday lives, and to practice skills used by STEM professionals in the real world
- Improve quality of activities inside and outside of schools
- Tackle STEM performance head-on

About The PEAR Institute

The PEAR Institute: Partnerships in Education and Resilience is a nonprofit organization created to promote innovation in education. Based on a belief that high-quality programming can build youth social-emotional resiliency and contribute to school and life success, Dr. Gil G. Noam founded the institute in 1999 as a collaboration between the Harvard Graduate School of Education and Harvard Medical School before relocating to McLean Hospital.

About the STEM Learning Ecosystems

Launched in Denver at the Clinton Global Initiative, the STEM Funders Network STEM Learning Ecosystems Initiative forms a National Community of Practice with expert coaching and support from leaders such as superintendents, scientists, industry and others. The 84 communities selected from across the world compose a global Community of Practice and have demonstrated cross-sector collaborations to deliver rigorous, effective preK-16 instruction in STEM learning.

Methodology

The PEAR Institute: Partnerships in Education and Resilience at McLean Hospital and Harvard Medical School conducted the study, which is the first of its kind among 68 national and international STEM ecosystems. This study is based in research through collection of data including: original design work by Teaching Institute for Excellence in STEM (TIES) and other foundational documents created under the leadership of the Oklahoma Innovation Institute, a stakeholder focus group; 15 individual key stakeholder interviews with 11 exit surveys; 37 STEM programming observations; over 7,000 youth surveys; and 30 educator surveys.

To read the full case study visit thepearinstitute.org/tulsa-case-study-full

