



FINANCE SUBCOMMITTEE ON PRIMARY AND SECONDARY EDUCATION
OHIO HOUSE of REPRESENTATIVES

Wednesday, April 10, 2019
H.B. 166, Biennial Operating Budget 2020-2021

Kimberly L. Faulk, MA
Chief Operations Officer, PAST Foundation

Co-Chairmen Cupp and Patterson, and members of the Finance Subcommittee on Primary and Secondary Education, thank you for the opportunity to testify today. My name is Kim Faulk, and I am Chief Operations Officer of the PAST Foundation. I am here to inform you about the work of the PAST Foundation in Ohio, and to request your support of PAST's budget amendment.

PAST Foundation is a non-profit provider of STEM (science, technology, engineering, and mathematics) education, curriculum design and workforce development. PAST stands for "Partnering Anthropology with Science and Technology," and was formed in 2000 to improve education using transdisciplinary problem-based learning. This type of problem-based learning challenges students to link learning to real-life through hands-on, student-centered activities and instruction. PAST Foundation works with school districts across Ohio to deliver hands-on, real-life problem-solving STEM education, and helps catalyze the expansion of STEM education toward workforce development. In close collaboration with industry partners, PAST helps communities design curriculum, internship programs, and mentoring opportunities that have **given over 244,000 students in 18 years the ability to develop skills necessary for a successful career in a high-demand STEM field.**

We have received national recognition for our work in this field. In 2016, PAST Foundation was recognized by the U.S. Department of Education for its Excellence in Innovation in the *STEM 2026* vision report. PAST was the only educational entity in Ohio to be included in this publication. In 2015, PAST was recognized by the White House as a Next Generation High School Collaborator for our work with teachers and schools to empower students to seize opportunities in today's economy and expand access to STEM teaching and learning.

As a national leader in STEM professional development and evidence-based research, PAST works closely with national and state organizations in defining the emerging educational landscape of this century. We know that over the past 10 years, growth in STEM jobs was six times as fast as growth in non-STEM jobs. STEM jobs make up 20% of all jobs today and the top

10 bachelor-degree majors with the highest earnings are in STEM fields.¹ The U.S. Bureau of Labor Statistics projects that employment in occupations related to STEM will grow to over 9 million positions by 2022, with almost all of the 30 fastest-growing jobs requiring STEM skills.² And yet, currently one-third of all U.S. students who intend to pursue engineering change their major before graduating, and the proportion of American STEM students is already lower than that of our international peers.³ In addition, of the one million high school freshmen who declared an interest in STEM education, 57 percent lost that interest by the time they graduated and began looking toward college or full-time work.⁴ This is partially due to the traditional methods often used to teach STEM subjects throughout a student’s education—blackboard and textbook-heavy methods that fail to actively engage students in creative problem solving. As the educational landscape evolves, new tools for teachers to use in designing and delivering robust STEM learning are critical.

The PAST Design Thinking regional cohort model for educator preparation is helping to address this challenge. Design Thinking, seated in culturally relevant, problem-based learning that is delivered through projects, is the foundational instructional strategy of PAST. Projects and activities that are aligned to educational standard concepts are used as the delivery strategy, helping students gain knowledge and skills through immersive, hands-on experience to drive deeper learning. PAST works closely with our business and industry partners who are actively seeking ways to interact with the K-12 education system to help address the gaps in Ohio’s workforce pipeline. An initial step toward meaningfully connecting business and industry with the future workforce in its local schools can be made through educator preparation via the PAST Design Thinking regional cohort model. Our request of the legislature addresses this issue.

PAST Foundation applauds the DeWine administration for increasing the Educator Preparation appropriation item (GRF line item 200448 – Educator Preparation) and recognizing the need for investment in our teachers. **PAST requests a state investment of \$150,000 in each fiscal year for PAST Foundation from the Educator Preparation appropriation item in H.B. 166, for the scale-up of the PAST Design Thinking regional cohort model that will implement the educator preparation program statewide.** This funding will impact over 10,000 students.

Our first cohort, launched in Central Ohio in partnership with Battelle, focused on preparing teachers to deliver problem-based instruction and innovations in teaching. The cohort impacted 17 school districts, including 27 schools, and over 1000 students have now benefited from this instructional strategy. We have waiting lists from educators in school districts around the state who are requesting additional regional cohorts. The cohorts involve a year-long professional development program that is a combination online and workshop course focused

¹ STEM Jobs: 2017 Update, U.S. Department of Commerce, <http://www.esa.doc.gov/sites/default/files/stem-jobs-2017-update.pdf>

² U.S. Bureau of Labor Statistics Occupational Outlook Quarterly Spring 2014, STEM 101: Intro to Tomorrow’s Jobs

³ New England Board of Higher Education 2011 study, <http://www.nebhe.org/wp-content/uploads/IAJC-ASEE-2011-Paper.pdf>

⁴ myCollegeOptions and STEMconnector, Where Are the STEM Students?, USA, 2013

on learning through a specific content lens. The course uses an adaptive curriculum development approach blending select activities, and technologies to address real-world issues.

The emerging workforce and teachers of PreK-12 students face unique challenges, as the pace of change driven by new technologies accelerates. To prepare for the future, the emerging workforce must develop an agile mindset with skills in science, technology, engineering, and math. Teachers must understand and be confident in facilitating learning around these skills. The state can support this effort by investing in the scale-up of the PAST Design Thinking regional cohort model for STEM professional development for PreK-12 educators to prepare and deliver problem-based learning opportunities for the emerging workforce.

Thank you for your consideration of our budget request. I am happy to address any questions you may have.

KIMBERLY L. FAULK, MA »

Chief Operations Officer

Savvy Captain

1003 Kinnear Road

Columbus, Ohio 43212

614.340.1208 x1210 | www.pastfoundation.org

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