



HOUSE FINANCE COMMITTEE
OHIO HOUSE of REPRESENTATIVES

Monday, May 6, 2019
Sub. H.B. 166, Biennial Operating Budget 2020-2021

Annalies Corbin, PhD
President and Chief Executive Officer, PAST Foundation

Chairman Oelslager, Vice Chairman Scherer, Ranking Member Cera and members of the House Finance Committee, thank you for the opportunity to testify today. My name is Annalies Corbin, and I am President and Chief Executive Officer of the PAST Foundation. I am here to request your support of our amendment to Substitute House Bill 166.

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 I founded our organization in 2000 to improve education using transdisciplinary problem-based learning. These learning strategies challenge students to link learning to real-life through hands-on, student-centered activities and instruction. Problem-based learning is foundational to Ohio’s Dept of Ed’s Guidelines for STEM School designation. 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 19 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. Just last month Forbes magazine included the PAST Foundation along with Khan Academy and the Super School Project as three national education innovations changing the future of workforce.

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 faster than 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 inherent in all PAST programs. 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 in order to address the gaps in Ohio’s workforce pipeline. An initial step toward connecting business and industry with the future workforce in local schools is 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 and the House Finance Committee 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 Substitute 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 a minimum of 10,000 students in Ohio each year.

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 10,000 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 receive

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

professional development that combines online sessions with a workshop focused on learning through a specific content lens, along with continuing support as teachers implement in the classroom. This professional development uses an Adaptive Curriculum Development approach helping teachers learn how to blend activities and technologies to address real-world issues and drive deeper student learning.

Emerging workforce PreK-12 and teachers face unique challenges, as the pace of change driven by new technologies accelerates. Learning how to use hands-on activities to strengthen skills that can be applied to solving any problem is critical. 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.

We have sent many letters of support from business and industry to your offices; I have attached them to my testimony for you to review.

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

ANNALIES CORBIN, PHD.

President & CEO PAST Foundation

1003 Kinnear Road

Columbus, Ohio 43212

Follow Me: @AnnaliesCorbin #learningunboxed

614.340.1208 | www.pastfoundation.org

The Honorable Scott Oelslager
Ohio House of Representatives
77 South High Street, 13th Floor
Columbus, OH 43215

The Honorable Jack Cera
Ohio House of Representatives
77 South High Street, 10th Floor
Columbus, OH 43215

Dear Chairman Oelslager and Ranking Member Cera,

I am reaching out in support of an amendment that has been offered to H.B. 166, the state operating budget, for \$150,000 in each fiscal year for PAST Foundation from the Educator Preparation appropriation item (GRF line item 200448). The funding will support 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.

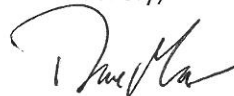
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As an industry partner of PAST's, we can attest to the skills gap we are facing as an employer in the STEM field. We are committed to interacting with the K-12 education system to help address the gaps in Ohio's workforce pipeline, and we partner with PAST to work to address this challenge. PAST helps us make connections with the emerging workforce in a meaningful way, and we encourage the state to fund this budget amendment request so that other businesses can do so, as well. Our teachers need to be able to prepare the emerging workforce 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 STEM. 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.

Thank you for your consideration. Please do not hesitate to reach out to me with questions.

Sincerely,



Dan T. Moore III





The Honorable Scott Oelslager
Ohio House of Representatives
77 South High Street, 13th Floor
Columbus, OH 43215

The Honorable Jack Cera
Ohio House of Representatives
77 South High Street, 10th Floor
Columbus, OH 43215

April 18, 2019

Dear Chairman Oelslager and Ranking Member Cera,

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Thank you for your consideration. Please do not hesitate to reach out to me with questions.

Sincerely,

A handwritten signature in black ink that reads "Jeanne Gogolski".

Jeanne Gogolski
CEO, EducationProjects.org



We Manufacture Innovation

1250 Arthur E. Adams Drive, Columbus, Ohio 43221
614.688.5000 • ewi.org

April 18, 2019

The Honorable Scott Oelslager
Ohio House of Representatives
77 South High Street, 13th Floor
Columbus, OH 43215

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Thank you for your consideration. Please do not hesitate to reach out to me with questions.

Sincerely,

A handwritten signature in black ink that reads "Chris Kiminas". The signature is written in a cursive, flowing style.

Chris Kiminas
President, EWI Ohio



The Honorable Scott Oelslager
Ohio House of Representatives
77 South High Street, 13th Floor
Columbus, OH 43215

The Honorable Jack Cera
Ohio House of Representatives
77 South High Street, 10th Floor
Columbus, OH 43215

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To prepare for the future, the emerging workforce must develop an agile mindset with skills in STEM. 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.

Thank you for your consideration. Please do not hesitate to reach out to me with questions.

Sincerely,

Michael D. Trebilcock

April 18, 2019

The Honorable Scott Oelslager
Ohio House of Representatives
77 South High Street, 13th Floor
Columbus, OH 43215

The Honorable Jack Cera
Ohio House of Representatives
77 South High Street, 10th Floor
Columbus, OH 43215

Dear Chairman Oelslager and Ranking Member Cera,

I am reaching out in support of an amendment that has been offered to H.B. 166, the state operating budget, for \$150,000 in each fiscal year for PAST Foundation from the Educator Preparation appropriation item (GRF line item 200448). The funding will support 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.

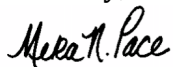
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As an educational partner of PAST, we can attest to the skills gap our industry partners are facing. As a K-12 educational partner we are committed to working collaboratively with PAST to help address the gaps in Ohio’s workforce pipeline. PAST helps us make connections with the emerging workforce in a meaningful way, and we encourage the state to fund this budget amendment request so that other businesses can do so, as well. Our teachers need to be able to prepare the emerging workforce 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 STEM. 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.

Thank you for your consideration. Please do not hesitate to reach out to me with questions.

Sincerely,



Superintendent
Metro Early College High School



April 30, 2019

The Honorable Scott Oelslager
Ohio House of Representatives
77 South High Street, 13th Floor
Columbus, OH 43215

The Honorable Jack Cera
Ohio House of Representatives
77 South High Street, 10th Floor
Columbus, OH 43215

Dear Chairman Oelslager and Ranking Member Cera,

I hope this letter finds you both well. I am writing this letter of support to enthusiastically support an amendment that has been offered to H.B. 166, the state biennium budget, for \$150,000 in each fiscal year for PAST Foundation from the Educator Preparation appropriation item (GRF line item 200448). This funding will specifically support the scale-up of the PAST Design Thinking regional cohort model for STEM training for PreK-12 teachers to prepare and deliver hands-on problem-based learning (PBL) experiences for the emerging Ohio workforce.

VAZA Consulting is an industry partner and collaborator of PAST's, which positions us well to share about the urgent skills gap we are facing employers in STEM fields. In one shape or form, we have partnered and collaborated with PAST for nearly a decade and are committed to engaging with PAST to help K-12 schools and teachers address the gaps in Ohio's workforce pipeline. Through our partnership, VAZA is strongly positioned to make connections with teachers and positively impact the emerging workforce in a measurable way. We highly encourage and urge the General Assembly to fund this budget amendment request, so that businesses and other stakeholders can act in a similar fashion. Ohio's teachers and schools need to be positioned to prepare the next generation who are entering the Ohio workforce with ever-changing technologies and demands.

PAST stands for "Partnering Anthropology with Science and Technology," and was formed in 2000 to improve education using transdisciplinary problem-based learning. The PAST Foundation is an Ohio-based non-profit provider of STEM (science, technology, engineering, and math) education, curriculum design and workforce development. PAST Foundation has extensive expertise working with Ohio schools and elsewhere, to deliver hands-on, real-life problem-solving STEM education, and helps catalyze the expansion of STEM education toward workforce development.

To prepare for Ohio's future, the emerging workforce must develop an agile mindset with skills in STEM disciplines and career fields. Ohio teachers must understand and be confident in



facilitating learning around these skills. The Ohio General Assembly can support this effort by investing in the scale-up of the PAST Design Thinking regional cohort model for STEM professional development and training.

Thank you for your consideration. Please do not hesitate to reach out to me with questions.

Sincerely,

A handwritten signature in black ink that reads 'Dustin A. Pyles'. The signature is written in a cursive style with a horizontal line underneath it.

Dustin A. Pyles, MPA, MBA
CEO/Managing Consultant