



2019 ANNUAL REPORT



Lastinger Center for Learning
UNIVERSITY of FLORIDA



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Contents

2	Mission
3	Director's Message
5	Lastinger Center Overview
7	Highlighted Accomplishments for 2019
9	Early Learning Florida
11	Literacy Matrix
13	Algebra Nation
15	Strategic Partners and Resources
16	Testimonials

Mission

The UF Lastinger Center's mission is to **create equitable educational systems where every child and educator, regardless of circumstances, experiences high quality learning every day to support the achievement of critical milestones in children's trajectories through school that are predictive of success in life.**

The UF Lastinger Center's work has made a strong and lasting impact on education throughout the state of Florida. In more recent years, the UF Lastinger Center has expanded and deepened efforts to advance education across the nation and globally. Our work focuses on the intersect of research, practice, and policy to improve teaching and learning experiences. We promote teacher and student learning that is:

Competency-based, leading to the demonstration of new knowledge and skills

Technology-enhanced, including personalized and adaptive learning opportunities

Research-informed and validated, informing the ongoing design and implementation of solutions

Based in public-private partnerships, leveraging catalytic philanthropic investments toward sustainable public support

Among the many innovations developed by the Center, those that blend cutting-edge technology, content, and practice, such as **Early Learning Florida**, the **Literacy Matrix**, and **Algebra Nation** have been most integral to success. The demand nationally for high-quality, impactful, and scalable innovations in education continues to grow, creating increased opportunity for the UF Lastinger Center to support high quality learning experiences that lead to measurable outcomes. Currently, our innovations serve **more than 500,000 students** and **50,000 teachers** across ten states in the nation each year. This is done by maximizing and leveraging private-public partnerships to build products and services that address the real-world needs of learners and educators with private investments and state appropriations that support the delivery of these services to students and educators.

EARLY LEARNING
— FLORIDA —
Empowering Professionals. Championing Children.

 **LITERACY
MATRIX**

 **ALGEBRA
NATION**

Director's Message

As one decade sunsets to give rise to another, the Lastinger Center has also ushered in a new chapter in its history.



We took the past year to intentionally practice what we preach regarding reflective professional development. The goal of this exercise in adaptive change was straightforward: preserve the essence of the Center's success while evolving to meet new circumstances and ensuring our ability to thrive as an impactful organization in the future. As a result, the Center reorganized itself internally into functional teams around the principle of responsive innovation.

Given the Center's growing reach and impact, this new structure will allow the Center to better actualize our mission to achieve impact at scale. The fruits of this labor have been bountiful. Along with the many accomplishments highlighted in this report,

- We hatched the Flamingo Learning system. In its first year, the platform has already successfully served 20,000 educators in early learning and literacy;
- We supported both Florida and California in the implementation of their landmark Preschool Development Grants from the federal government, initiating systems change efforts to improve the quality of early learning across the country;
- We qualified the Literacy Matrix as a pathway to the Florida Reading Endorsement, helping K-3 Florida reading teachers meet a legislative mandate and ensuring their students get evidence-based reading instruction; and
- We launched the first experiment of a personalized learning algorithm within Algebra Nation, paving the way for an adaptive version of the platform that can better guide students through learning experiences and optimize outcomes.

History has shown that significant advances in any area of human endeavor require increases in knowledge and technology. In this age, computer technology has made information more widely accessible than at any time in human history. We seek to go a step further, from making information accessible to democratizing knowledge. In this decade, we aim to harness technologies (more broadly defined to include both computer and human) to make this vision reality. We hope you'll join us in this journey.

Best,

A handwritten signature in black ink, appearing to read 'Phil Poekert'.

Phil Poekert, Ph. D.



Our non-traditional team of more than fifty educators, entrepreneurs, inventors, designers and researchers collaborates to design, build, and refine programs proven to significantly impact teacher and child outcomes.

Lastinger Center Overview

Established in 2002 by Allen and Delores Lastinger, the University of Florida (UF) Lastinger Center is a responsive innovation hub dedicated to transforming educational systems and structures by engaging in translational research to drive decision making, inform policy and improve systems within Florida and across the nation. The Lastinger Center is a unique asset to Florida, serving as the only applied early learning to postsecondary education innovation center in a state university. UF Lastinger Center associates are educators with content and practice expertise, enabling us to deliver research-based instruction to students

and educators. The UF Lastinger Center capitalizes on the high caliber of university faculty by working across disciplines and colleges to bring a further depth of expertise to innovations that support talent development and to grow the knowledge base on successful educational interventions through applied research.

Since its founding, the UF Lastinger Center has blended cutting-edge academic research with practice, making meaningful improvements in education and student learning. Historically, the organization has championed the effort to track academic success via critical developmental milestones, including kindergarten readiness, 3rd-grade reading proficiency,

and mastery of algebra skills. Dedication and innovative responsiveness to these key milestones rapidly moved the UF Lastinger Center from a lean start-up to a state and national education innovator. 2019 has been a year of continued growth, impact, and meaningful opportunities to support educators and learners.



We align with UF's mission of enabling students to lead and influence the next generation and beyond for economic, cultural and societal benefit by focusing on critical milestones for student achievement.



Our Reach

FLORIDA

- Early Learning Florida
- Literacy Matrix
- Florida Campaign for Grade Level Reading
- Algebra and Math Nation
- K-12 Instructional Leadership Development
- Virtual Learning Lab

GEORGIA

- Early Learning Communities of Practice

SOUTH CAROLINA

- Early Learning South Carolina
- Trident United Way Reading By Third
- Charleston Comprehensive Literacy Initiative
- Algebra Nation

CALIFORNIA

- Early Learning Coaching and Communities of Practice

ARIZONA

- Instructional Leadership Development

LOUISIANA

- Early Learning Louisiana

NEW YORK CITY

- Algebra Nation

MICHIGAN

- Algebra Nation

ALABAMA

- Algebra Nation

MISSISSIPPI

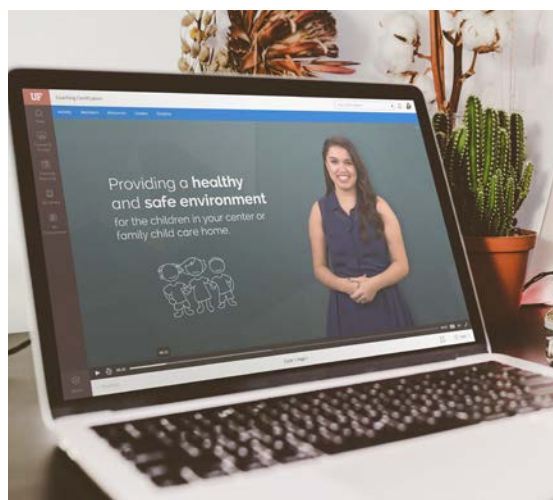
- Algebra Nation

Highlighted Accomplishments for 2019



■ Transforming education through the science of learning and technology by launching **Flamingo Learning** – a custom-built, proprietary software that serves as the professional learning management system that undergirds the delivery of teacher learning, collaboration, and coaching opportunities within the Early Learning Florida, Literacy

Matrix, and other professional learning initiatives. The system was built through philanthropic support such as the Lastinger Family Foundation and has already served more than 20,000 educators since its launch this year. The platform provides the ability to take highly engaging, video-based online courses, access relevant resources within an online community of practice, and receive virtual coaching through a video annotation tool.



■ Continuing development of cutting edge learning sciences with funding from the Helios Education Foundation to enhance Flamingo Learning with **artificial intelligence** that will revolutionize professional development through automating professional learning recommendations for classroom practitioners that are personalized and adaptive in order to target key growth areas and optimize engagement.

■ Leading the science and discovery of international best practices in education innovations by co-hosting the **Leadership for Professional Learning Symposium** with the University of Cambridge in England.

■ Leveraging public funding with external support to optimize sustainability through diverse funding streams. This has resulted in a tremendous ability to maximize resources. Currently, **for every dollar invested by the state of Florida, the Lastinger Center raised more than \$3.21 in other external funding.**



EARLY LEARNING FLORIDA

Empowering Professionals. Championing Children.

25%
TEACHER IMPACT

Average gain in CLASS® PreK
Instructional Support domain

23%
CHILD IMPACT

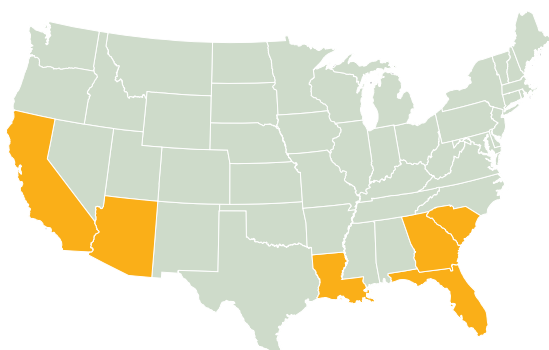
Average increase in child growth
on Teaching Strategies GOLD child
assessment tool

Early Learning Florida

High-quality experiences during the first five years of life are the strongest predictors of whether children will enter school ready to learn and whether they will achieve future success in school, career, and life. However, nationally, **4 out of every 10 children enter kindergarten inadequately prepared**. Young children learn through the context of relationships and the quality of adult-child interactions is a robust predictor of child outcomes.

Early Learning Florida, is an early childhood professional learning system built in partnership with the Florida Office of Early Learning with support from numerous private philanthropies including the Helios Foundation, the Jim Moran Foundation, and the Vinik Family Foundation. It is a dynamic statewide professional learning system for early childhood educators that is transforming teacher practice and improving child outcomes. Early Learning Florida is proven to build educators' knowledge and skills to support young children's development and improve kindergarten readiness.

This competency-based professional development platform incorporates cutting-edge technology with research-based strategies and practices to provide innovative, high-impact, and accessible learning opportunities to Florida's early learning practitioners. Early Learning Florida offers access to online courses and high-quality resources, as well as in-person supports, including coaching and communities of practice, to ensure that educators gain the skills and knowledge they need to care for and educate young children.



■ We have delivered over **900,000 hours of training** to greater than **66,000 learners** since 2015.

■ It is currently implemented in every county in Florida and has expanded to serve early learning professionals in South Carolina, Georgia, Arizona, Louisiana and California.

■ We offer **32 research-based, online and mobile-friendly professional development courses** supported by a live instructor and a peer network.

■ **Courses and coaching significantly improve quality** with 96% of teachers achieving course mastery, a 25% average gain in validated measures of instructional support of learners, and a 23% higher growth rate of children with teachers receiving combined supports.



30%
TEACHER
IMPACT

Knowledge of
phonological
awareness

49%
TEACHER
IMPACT

Knowledge of
Decoding

65%
CHILD
IMPACT

Increase in
Phonological
Awareness

86%
CHILD
IMPACT

Increase in
Decoding



Literacy Matrix

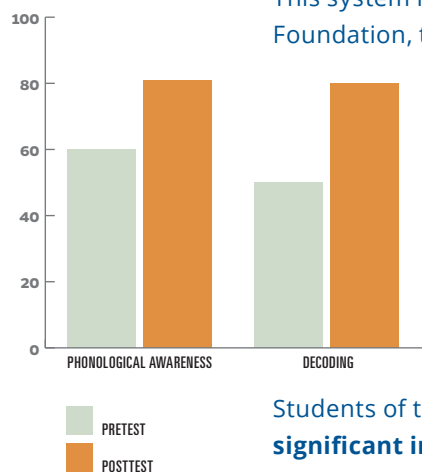
Third grade reading proficiency has been connected to almost every quality of life indicator imaginable, from college and career readiness to lifetime earnings. The 2019 release of the National Assessment of Education Progress reading proficiency scores, with only **34% of fourth-grade students reading on grade-level**, reflects the urgent need to prioritize K-3 reading instruction.

Launched in 2018, the **Literacy Matrix** is a literacy-focused, online professional development system that builds K-3 educators' knowledge on how to implement evidence-based reading instruction, with support for struggling readers, including those with dyslexia. While the initial launch focused on piloting the system, as the system is scaled, additional support will be offered through virtual learning communities and coaching opportunities to further enhance teacher knowledge around evidence-based reading instruction practices. This is accomplished through a competency-based system that requires teachers to implement strategies and demonstrate understanding to achieve mastery.

This system has been built with initial investments from the Florida Education Foundation, the James Patterson Family Foundation, and the Helios Education Foundation. The James Patterson Family Foundation has recently pledged an additional \$4.5M for continued system development.

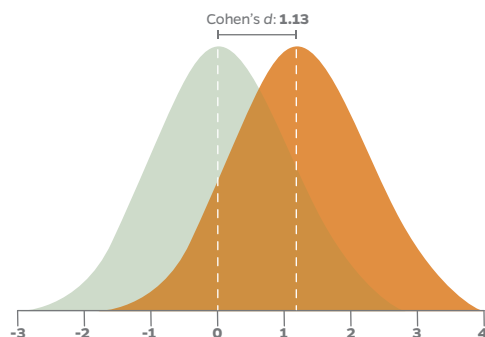
The initial pilot evaluation has demonstrated the Literacy Matrix's **impact on teacher knowledge and student reading outcomes:**

- 30% increase in teacher knowledge of phonological awareness
- 49% increase in teacher knowledge of decoding



Students of teachers who participated in the Literacy Matrix demonstrated **significant improvement in their reading skills** in phonological awareness and decoding.

- 65% improvement in students' phonological awareness skills
- 86% improvement in students' decoding skills



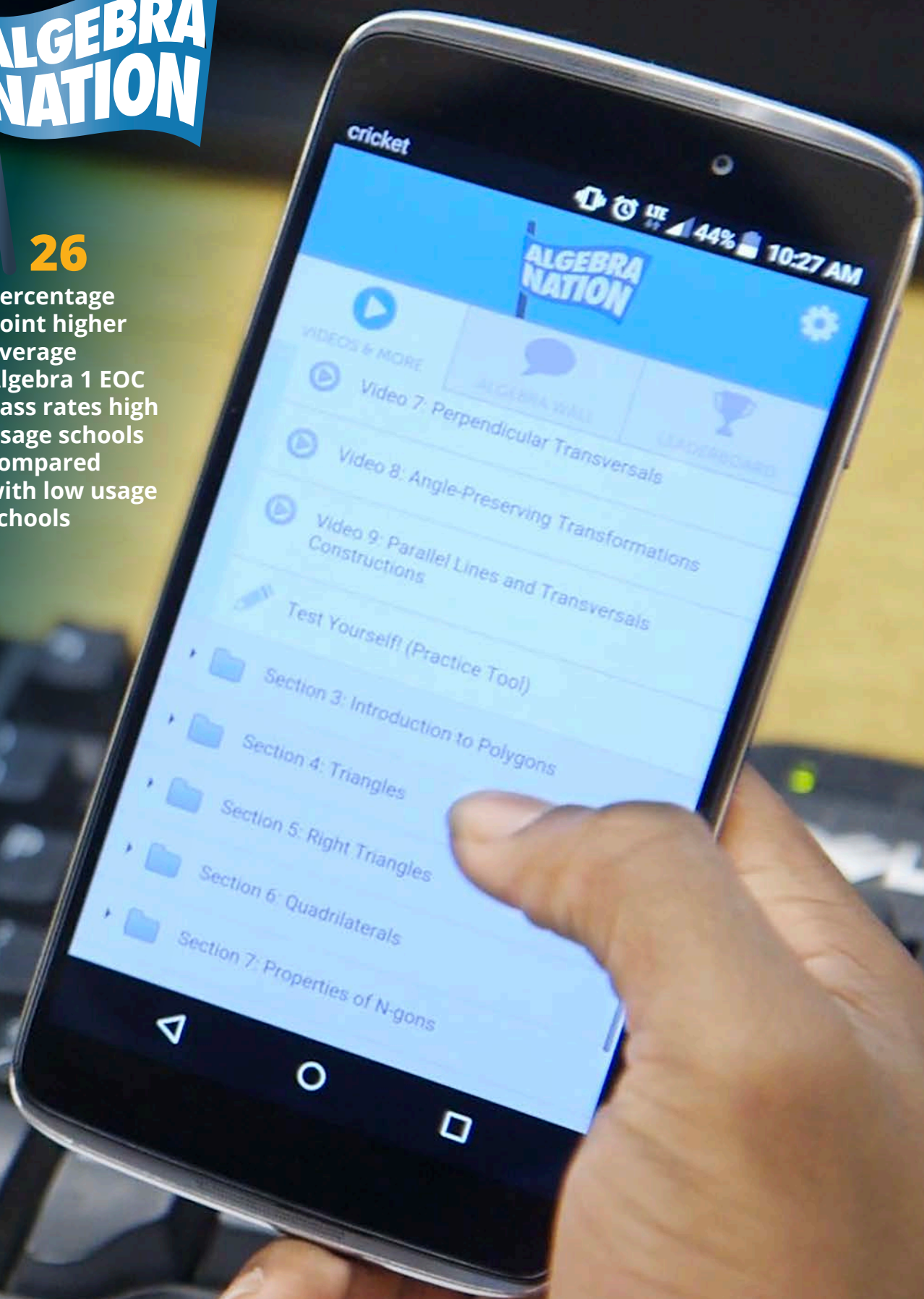
These gains equate to a large effect size of 1.13, which is a measure of the difference between two means and supports understanding of the degree to which a change is practically meaningful. An effect size of 1.13 means that 86% of students' post-test scores were above the average (mean) pre-test score.

Pullen, P. (2019). James Patterson Literacy Challenge Literacy Matrix Implementation Study Report. University of Florida.

ALGEBRA NATION

26

Percentage
point higher
average
Algebra 1 EOC
pass rates high
usage schools
compared
with low usage
schools

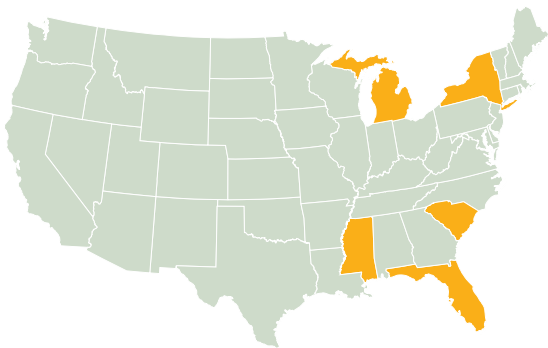


Algebra Nation

Mathematical thinking, including the ability to reason, problem-solve, and think critically, is essential for success in school and the modern workforce. Nationally, **only 33% of eight grade students are proficient in mathematics.**

Algebra Nation, is a custom-built online platform that is utilized by **more than 500,000 students and 20,000 teachers each year.** Through support from state funding, private philanthropy such as the Gates Foundation, corporate sponsorships such as Boeing, and federal grants through the Institute for Education Sciences, Algebra Nation has evolved into a multi-use digital system that personalizes mathematics instruction through video-based tutoring and real-world applications. This platform supports mathematical mastery for Algebra I, Geometry, and Algebra II with a critical focus on heightening student achievement of the critical milestone of algebra proficiency by ninth grade.

There has been a demand to provide mathematics support for earlier grades. As of 2019, Algebra Nation has been enhanced to include 6-8 grade mathematics offerings to help strengthen core foundational mathematics skills that further enhance algebraic and higher-level mathematics understanding by supporting states with implementation of mathematics standards via the Algebra Nation platform through standards-aligned content, video exemplars on effective implementation, and training to help teachers unpack the standards.



- Implemented in Florida, South Carolina, Mississippi, Michigan, and New York.

- Capitalizes on private/public partnerships and has leveraged over \$9M in private and federal funding to date.

- Differentiates instruction on core mathematics constructs and adapts to maintain alignment with state's mathematics standards.

- Positions districts to have ready access and supports to mathematics standards.

- Offers targeted support for increasing Algebra I End-of-Course exam pass rates, linked to high school graduation requirements. Schools with high usage of Algebra Nation saw 26% higher exam pass rates than schools with low usage.

Qiu, Y. (2018). Summary of Analysis of Algebra Nation Usage and Florida Algebra 1 EOC

- Supports struggling learners of mathematics: For students who failed the End-of-Course exam, higher usage rates of Algebra Nation were associated with higher scores when retaking the test as compared with those with low usage rates.

Leite, W. L. , Cetin-Berber, D. D., Huggins-Manley, A. C., Collier, Z. K., & Beal, C. R. (2019). The relationship between Algebra Nation usage and high-stakes test performance for struggling students. *Journal of Computer Assisted Learning*, 35(5). doi:10.1111/jcal.12360



Strategic Partners and Resources

The UF Lastinger Center has been able to expand rapidly and have a broad impact by forging mutually beneficial strategic partnerships and strategically leveraging funding. At the heart of the UF Lastinger Center's partnerships remain the State of Florida (including the Governor's Office, Legislature, Department of Education, and Office of Early Learning) as well as Study Edge and 42 Lines (the UF Lastinger Center's leading software development partners). These partnerships have led to a key role for the Center in education from birth through high school completion including both formal and informal roles through support and statutory requirements. Increasingly, the UF Lastinger Center's success has led it to create partnerships beyond Florida, most notably in the Southeast region, including South Carolina, Georgia, Louisiana, and Mississippi, and also further west in Arizona and California. Additionally, the UF Lastinger Center has recently attracted significant research and development investments in its work from the Institute of Education Sciences and the National Science Foundation.

Core relationships have been:

Implementation partners, learners and professionals in communities, committed to improving learning outcomes for all and bravely engaged in new methods of learning and growing.

Funding partners, such as the Lastinger Family Foundation, the James Patterson Family Foundation, Helios Education Foundation, the Jim Moran Foundation, the Vinik Family Foundation, the Stranahan Family Foundation, the Naples Children & Education Foundation, and the Bill and Melinda Gates Foundation.

Thought partners and critical friends, such as the Foundation for Excellence in Education, Florida Children's Council, Florida Children's Movement, SRI International, WestEd, and the Atlanta Speech School.

Networking partners: Leadership Florida, Consortium of Florida Education Foundations, the Tri-County Cradle to Career Collaborative (Charleston, SC), the University of Cambridge Faculty of Education, and the *Professional Development in Education* journal.

Multimedia and technology partners: Digital Worlds Institute, Dominion, Declara, and UF Health Lifelong Learning.

Testimonials

Algebra Nation is the very best resource for any teacher that wants to get their students prepared for the Algebra I, Geometry, and Algebra II end of course exams. The workbooks and videos not only help the students understand the topics, but are also related to real world problem solving. This program should be continually funded to help advance our students.
Sheri M.
Teacher, Miami, FL

The Literacy Matrix delivered the fundamentals of early reading instruction in a systematic and explicit way that allowed me to immediately turn around and deliver more impactful literacy instruction to my students. It remains, hands down, the most rewarding online professional development I have ever participated in. Not only did it positively impact my confidence as a teacher, it did the same for my classroom data.
Kelley Taksier
Teacher, Alachua County

I would gladly recommend these courses to anyone who, like me at the start of the year, felt like I needed to find a new job because this “director thing” was not for me at all. I’m so blessed to say that I’ve found a new passion for this job, for improving the quality of my preschool program, for reaching parents

and establishing a community, and for advocating for my staff and my students.
Arizona Early Childhood Director

The Literacy Matrix impacted me in a really meaningful way because it deepened my knowledge of how to teach literacy to the students. I teach kindergarten, it’s my responsibility to build a strong base for these students and after having participated in the pilot program, I had a higher level of comfort with the content, I felt more capable in my abilities. That made me a better teacher and helped me to give them a greater understanding of what they needed to go further.
Shauna Quirk
Teacher, Alachua County

Participating in the Literacy Matrix professional development has grown my skillset as a teacher, especially in the areas of intervention for struggling readers. Through the Matrix, I learned skills to provide early intervention in a systematic, research based way, instead of just making my best professional “guess” at what areas the student was struggling in. Prior to the Matrix, I often times would choose an area of intervention, based off of what I thought, but I had no data on specific skills to inform that decision, I now use the CORE phonics assessment in my classroom

to provide me with insight as to what specific area I need to intervene in. The Matrix also taught me about using blendable sounds, something that I never knew about prior to the course. This is so important in our instruction, especially with struggling readers and it is all too often mistaught. Additionally, the Matrix provided me the opportunity to plan and implement interventions in multiple areas in a way that I could get feedback on, without being overwhelming. I have been teaching for 10 years and through this Matrix and other training provided by the University of Florida, such as UFLI, I have learned more about reading instruction and intervention than ever before.
Morgan L. Douglas
Teacher, Alachua County

I can unequivocally state that the professional development and on-going “over the shoulder” coaching that I have received while implementing the CCLI instructional model during our Summer Reading Camp, ranks among the best that I have participated in during my almost 4 decades working in Title I schools in both Vermont and South Carolina.
Lori A.
Kindergarten Teacher
Charleston, South Carolina



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