

The Creative Curriculum[®]
Implementation and
Ecosystem Engagement
(CCIEE) Study Shows
Significant Effects on
Child Outcomes in
Both Public and
Private Settings



Independent Randomized Controlled Trial

This brief summarizes findings from *The Creative Curriculum*® Implementation and Ecosystem Engagement (CCIEE) study, a randomized controlled trial independently conducted by the National Institute for Early Education Research (NIEER).ⁱ

Executive Summary

The CCIEE study examined whether implementing *The Creative Curriculum*® within a fully connected *Teaching Strategies*® ecosystem—including structured, synchronous (live) and asynchronous (on-demand) professional development and coaching—produces measurable improvements in classroom practice and children’s development.

The NIEER evaluation reported the following findings.

- Children in treatment classrooms demonstrated significantly more growth than children in control classrooms across every developmental domain measured by *GOLD*®, including social-emotional, cognitive, language, literacy, and math. *GOLD*® is the most widely used observational assessment in early childhood education.
- Children in treatment classrooms with teachers who received higher amounts (dosages) of virtual, live professional development (PD) also demonstrated significantly higher outcomes on the external literacy and math assessments.
- Children in classrooms whose teachers demonstrated higher levels of platform engagement showed significantly stronger outcomes on an external assessment of executive function.
- Children in classrooms where teachers were retained demonstrated significantly stronger outcomes on external assessments of executive function and peer play skills.

These findings suggest that using a curriculum that is an integrated part of a connected ecosystem with synchronous and asynchronous ongoing virtual professional learning produces measurable child development gains.

What is the CCIEE Study?

The CCIEE study used a cluster-randomized design across two New Jersey state-funded preschool districts that included both public and private programs.

Coaches and teachers were randomly assigned to a treatment or control group.

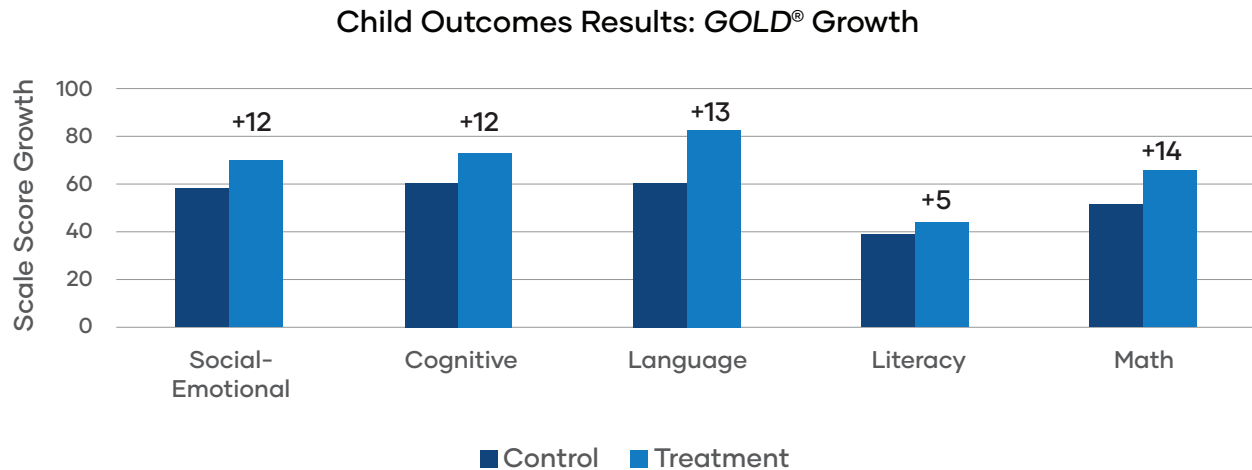
- **Treatment:** Teachers implementing *The Creative Curriculum*® and using the full *Teaching Strategies*® ecosystem including synchronous (live) virtual and asynchronous (on-demand) professional development aligned with the *Teaching Strategies*® ecosystem, plus ongoing coaching supports, and the *GOLD*® assessment system.
- **Control:** The control group had business-as-usual access to *The Creative Curriculum*® and may or may not have had access to or used the digital tools. All the control group users also used *GOLD*® as the assessment tool.ⁱⁱ

Teacher retention was tracked across the 3-year study period, and child outcomes were measured via growth (*GOLD*®) and via pre-post external assessments in year 3 (Fall 2023–Spring 2024).

What Did the CCIEE Study Find?

Key Finding: Children in treatment classrooms demonstrated significantly more growth over time than children in control classrooms in all areas of development and learning, including literacy and math.

Figure 1.



GOLD® analysis conducted by Teaching Strategies' psychometrician

In growth analyses, children in treatment classrooms showed stronger gains across all *GOLD*® domains relative to comparison control classrooms (see Figure 1). *GOLD*® is embedded in daily instructional practice and directly aligned with *The Creative Curriculum*®. These gains indicate that instructional shifts were occurring in ways directly connected to what children were learning each day.

On externally administered assessments (social–emotional, executive function, creativity, language, literacy, and mathematics),ⁱⁱⁱ the intervention did not produce statistically significant *main effects*. However, retention effects were found. Children in classrooms where teachers were retained demonstrated significantly higher scores on measures of executive function and peer play behaviors. In addition, children in classrooms where teachers received a higher dosage of virtually delivered, synchronous professional learning had stronger literacy and math outcomes on external measures, alongside even stronger gains across all *GOLD*® domains. Children in treatment classrooms where teachers engaged more with the *SmartTeach*™ platform also demonstrated stronger executive function outcomes on an external measure, alongside even stronger gains in the *GOLD*® cognitive, literacy, and math domains.

These findings suggest that child development gains were most clearly visible in ongoing assessments embedded within daily activities. While external, single point-in-time assessments were less sensitive to children's growth over time, some were still sensitive enough to detect effects of teacher stability, professional learning, and platform engagement.

Understanding the External Assessments in the Study

The CCIEE study included several externally administered standardized assessments designed to measure vocabulary, literacy, mathematics, executive function, and creativity. These tools are widely used in education research, often in pre-K–12 settings, because they allow comparisons across classrooms, programs, and age groups.

Children in both treatment and control classrooms demonstrated developmental growth on the externally administered assessments. This means vocabulary, early literacy, early math, and executive function improved. However, the study did not detect statistically significant differences in growth between the two groups. In other words, children were learning in both settings, but the external measures did not detect overall differences between groups that were visible on the curriculum-aligned *GOLD*[®] assessment.

Why the Two Types of Assessments Showed Different Results

The difference between the *GOLD*[®] results and the externally administered assessments can be explained by how these tools measure early childhood development. Several factors help explain why curriculum-aligned measures detected differences between groups while external standardized assessments did not.

Floor effect

In this study, many children began the year scoring at or near the lowest measurable score on some external tests. When large portions of a group start at the bottom of a scoring scale, the assessment has limited room to show small gains, even when development is occurring—a phenomenon known as a floor effect. A floor effect also compresses the range of scores between children, which makes it harder for statistical analyses to detect differences between groups.

Measurement sensitivity

Young children's skills often emerge gradually and unevenly. Development may appear in small steps during everyday learning activities before it becomes visible on broader academic assessments. *GOLD*[®] is embedded in everyday classroom instruction, enabling teachers to measure children's development through ongoing observations across the full instructional year. Because it is aligned with the curriculum and designed to capture early stages of skill development, it can detect incremental changes that occur during daily learning experiences.

Testing context

External assessments capture children's abilities in a structured testing environment administered by an unfamiliar evaluator. Young children's performance can vary depending on their comfort with the assessment setting, the person administering the assessment, and how closely the tasks resemble what they experience in daily classroom learning.

In summary, external standardized assessments serve an important purpose by providing independent measures of children's broader academic skills. However, they may be less sensitive to short-term instructional changes, especially when many children begin near the lowest measurable score. As a result, different types of measures often detect growth differently in early childhood education studies. In this study, the divergence in findings between *GOLD*[®] and the externally administered standardized assessments is best understood as a consequence of the differences between the measurement tools, not a contradiction in the data.

For program leaders, the key takeaway is straightforward: how growth appears depends in part on how it is measured. Curriculum-aligned assessments may detect early instructional gains sooner, while broader standardized measures often become more sensitive as children progress further along the developmental continuum.

How Workforce Stability Connects to Instructional Outcomes

The CCIEE findings on teacher retention, described in [this brief](#), provide important context for interpreting instructional outcomes. The CCIEE study found that structured professional learning significantly increased teacher stability and that retention was associated with improvements in children’s social–emotional development. When reviewing classroom quality and child outcome results, it is important to consider that stability may function as a foundation for sustained instructional change. In experienced systems, shifts in educator continuity and professional confidence may precede observable movement in traditional quality measures.

What It All Means for Program Leaders

- **Alignment drives impact.** Access to curriculum and digital tools alone is not enough. When curriculum, assessment, professional learning, and coaching operate as a connected system, measurable child development gains are more likely to emerge.
- **Gains may appear first in aligned instructional measures.** Statistically significant improvements were observed more consistently with curriculum-aligned assessment than with external assessment. In experienced systems, these aligned measures may detect change earlier than broad observational or standardized assessments.
- **Workforce stability strengthens outcomes.** Teacher retention increased significantly in the treatment group. Retention was directly associated with gains in executive function and peer play skills, underscoring the importance of educator continuity.
- **Professional learning intensity and coherence matter.** Higher amounts of virtual, live professional development were associated with even stronger curriculum-aligned child gains and with improved literacy outcomes on an external measure. What makes a difference is not just providing tools and training, but ensuring that teachers receive consistent, aligned support over time.

Disclosure

This brief presents selected findings from the published NIEER CCIEE working paper and introduces one new analysis by Teaching Strategies.

Study at a Glance

Design – Independent evaluation with an embedded cluster randomized controlled trial (RCT)

Study period – Three full program years, spanning Fall 2021 through Spring 2024

Intervention

- Treatment classrooms: Access to Teaching Strategies' digital ecosystem (*Creative Curriculum Cloud, GOLD, Professional Development Teacher Membership (PDTM)*), current print curriculum kits, additional synchronous professional development opportunities and enhanced coaching
- Control classrooms: Access to Teaching Strategies' digital ecosystem without additional synchronous PD/coaching opportunities; some classrooms had older versions of print curriculum.

Context

- NJ state-funded preschool programs with consistent, relatively high levels of structural quality
- Preschool classrooms (ages 3–5 years) in public schools and private provider child care centers
- Diverse population of children and families served by the districts in the study

Sample*

- Treatment/intervention arm
 - 2 districts
 - 14 sites
 - 62 classrooms
 - 240 children
- Control arm
 - 2 districts (same as treatment districts)
 - 12 sites
 - 63 classrooms
 - 237 children
- Child characteristics
 - Age
 - 43% age 3
 - 57% age 4
 - Race/Ethnicity
 - 39% Black
 - 53% Hispanic
 - 8% Asian, white, or other race/ethnicity
 - 43% Multilingual learners (majority bilingual English–Spanish)
 - 6% have an IEP

Measures

- Teacher
 - Retention
 - Well-being/burnout
 - SmartTeach platform engagement
 - PD attendance
- Classroom
 - Quality
 - Curriculum fidelity
- Child
 - Social-Emotional
 - Executive Function
 - Creativity
 - Cognitive
 - Language
 - Literacy
 - Mathematics

*Count with follow-up measurements

Endnotes

- i Nores, M., E. Harmeyer & W.S. Barnett (2026). *Teaching Strategies' Creative Curriculum Implementation and Ecosystem Engagement Study (CCIEE)*. Research Report. New Brunswick, NJ: National Institute for Early Education Research.
- ii The study used a clustered randomized controlled trial (RCT) design. In practical terms, this means that groups of educators (in this case, coaches and the teachers they supported) were randomly assigned to either receive enhanced professional learning supports (treatment) or continue with existing practices (control). Random assignment helps ensure that differences observed between groups are attributable to the intervention rather than pre-existing differences. Because assignment occurred at the coach level rather than the individual teacher level, the design is referred to as "clustered." This approach reflects how professional development is typically delivered in real-world district settings and strengthens confidence in the credibility of the findings.
- iii In addition to externally administered assessments, the study examined child development outcomes using *GOLD*[®], an observational assessment system embedded in daily classroom practice and aligned with *The Creative Curriculum*[®]. *GOLD*[®] measures children's progress across multiple developmental domains—including social-emotional, language, literacy, mathematics, and cognitive development—based on ongoing teacher observations and documentation. Teacher retention was also associated with improvements in children's executive function and peer play skills as measured by an external assessment.

Explore More Results

To view more results from *The Creative Curriculum*[®] Implementation and Ecosystem Engagement (CCIEE) Study visit [this link](#) or scan the QR code below.

