Classroom Quality, Interactions, and K-Readiness
Spring 2020

Learning begins long before a child steps into a kindergarten classroom. The early years are a critical time for learning and development. The opportunity to attend a high-quality early learning program in the first five years prepares children academically and socially. Research consistently shows that investing in early education benefits all children, families, and society.

The New E3 School Model

Almost six years ago, the doors opened at The New E3 School (TNE3S), a state-of-the-art mixed-income model for children ages 1-5. The school is a catalyst for policy change. UVA's Center for Advanced Study of Teaching and Learning (CASTL) developed the STREAMin[3] curriculum with the school with funding from E3: Elevate Early Education. In 2020, prior to the COVID-19 health crisis, all four-year-old children **exceeded kindergarten-readiness benchmarks** in math and self-regulation regardless of their socioeconomic background. And most children met or exceeded the benchmarks for literacy and social skills. Every classroom met or **exceeded the benchmarks** in the CLASS domains measuring quality.

The STREAMin[3] Curriculum Model (www.streamin3.org), is an innovative, interactions-based, comprehensive package that seamlessly blends academic and social-emotional learning. It includes:

Daily activities, routines, & games that maximize the moment-to-moment teacher-child and peer interactions.	**Individualized coaching & professional development** to support the implementation of the curriculum and improve teaching & learning.	**Observations tools & assessments** to inform teaching, assess children's skills, and improve quality.

The Impact on Virginia's Early Learning Programs

TNE3S model was designed to be replicated and scaled to improve teaching and learning in programs across Virginia. Through strong advocacy from E3, public and private support allowed CASTL to pilot the STREAMin[3] curriculum model in over 100 faith-based, Head Start, private, and Virginia Preschool Initiative (VPI) programs across Virginia.

The preliminary findings of the Pilot Study:

♦ Programs implemented with a moderate-to-high degree of fidelity.
♦ Teachers and leaders reported improvements in the quality of teacher-child interactions and instruction.
♦ COVID-19 prevented the collection of observational classroom and school readiness direct assessment data.
♦ Classroom and school-readiness data collection is planned in the spring of 2021 in participating classrooms.

The results provide evidence that it is feasible for public, private, and faith-based programs in Virginia to adopt this curriculum model. Unfortunately, the COVID-19 health crisis disrupted the support and training provided to these programs and the collection of crucial data. Through private funding and resources from the Obici Healthcare Foundation, the Alleghany Foundation, donors, and UVA, 82 classrooms will continue data collection in the 2020-2021 school year.

How Do Our Classrooms Measure Up?

When teachers have emotionally sensitive and responsive interactions with children and the quality of instruction is strong, the gaps in school readiness skills diminish. In the spring of 2020, an external observer assessed the quality of teacher-child interactions using the Classroom Assessment Scoring System™ (CLASS™)[1]. The CLASS™ is an observational tool that measures the quality of teacher-child interactions across critical domains of teaching that link to student achievement and development.

The Impact of COVID-19

The COVID-19 health crisis required modification to the classroom observations. With the restrictions in class size, many children not in attendance and a few teachers unable to teach, the classroom and program routines were adjusted to meet the Center for Disease Control (CDC) and Virginia Department of Social Services state guidelines.

The Classroom Quality Data
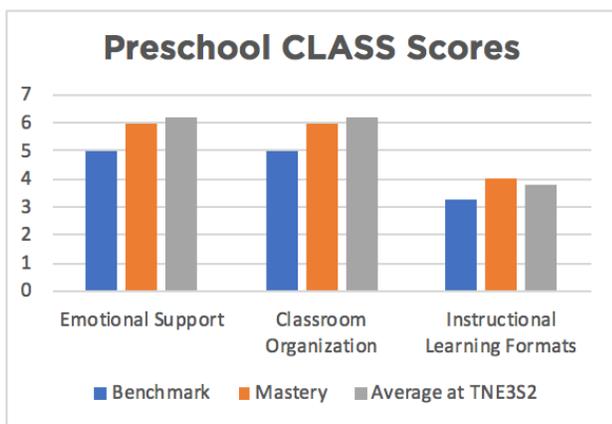
♦ All 3 preschool classrooms at TNE3S **met or exceeded** the benchmarks for quality across both domains.

♦ All 3 preschool classrooms **met or exceeded** the mastery level for 2 out of the 3 domains.
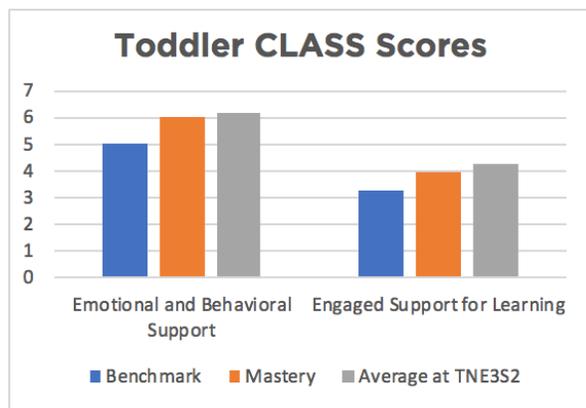
♦ All 5 toddler classrooms at TNE3S **met or exceeded** the benchmarks for quality across both domains.

♦ 4 of the 5 toddler classrooms **met or exceeded** the mastery level in at least 1 of the 2 domains, with 3 classes reaching this level across both domains.

Key Findings:

The scores indicate that even amid COVID-19 program and classroom disruptions, teachers and children are engaging in high-quality interactions.

- ♦ All classrooms met or exceeded the threshold for quality across all domains.
- ♦ Many classroom teaching teams reached the mastery level in at least one domain.
- ♦ There is room to grow in Instructional Support/Engaged Support for Learning. This data is similar to the national trends. There needs to be more support for children in the areas of: the quality of the feedback provided, support for language development, active, engaged learning, and higher-order thinking.

Are Children Ready?

The Virginia Kindergarten Readiness Program (VKRP) is a partnership between the E3, University of Virginia, the Virginia Department of Education, and all school divisions across the Commonwealth. It provides a comprehensive understanding of how kindergarten students are entering elementary school in terms of key readiness skills through assessments of essential skills in the domains of literacy, math, social skills, and self-regulation. In 2019, **44% of Virginia children started kindergarten unprepared in at least one of these domains.**

The Impact of COVID-19

Due to the COVID-19 crisis, there were disruptions across all classrooms, program routines, and data collection. Six of the children heading off to kindergarten were not in attendance during the assessment window. Two teachers in a preschool classroom were unable to teach due to COVID-19 related issues. This put us in the unique circumstance of having teachers who only interacted with children before the health crisis and teachers who taught them **during** the crisis. The leadership was interested in effects or changes to children's skills, so UVA modified to include **both** sets of the teacher rating scale on social and regulation skills.

The Readiness Data

In Spring 2020, teachers assessed the four-year-old children using the preschool versions of the VKRP measures. Benchmarks are set based on research suggesting the levels of skills expected in these areas for children at this age.

	Benchmark	Class Average	Children Met or Exceeded Benchmark
Math (number sense, operations, shape, space, and pattern) [2]	15	28.6	10 out of 10 (Scores ranged from 23-31 out of 35)
Literacy (name writing, alphabet, sounds, print and word, rhymes) [3]	There are 8 sections. Each has its own benchmark.		9 out of 10 children met or exceeded the benchmark in all 8 sections. 1 child met or exceeded the benchmark in 6 out of the 8 sections.

		Pre COVID–19 Crisis		During COVID–19 Crisis	
	Benchmark	Classroom Average	Children Met or Exceeded Benchmarks	Classroom Average	Children Met or Exceeded Benchmarks
Self–Regulation (control of own attention, emotions, behaviors) [4]	3.4	4.5	9 out of 9	3.5	6 out of 10
Social Skills (cooperating, positive expression of emotions, conflict resolution) [5]	3.8	4	6 out of 9	3.34	3 out of 10

Key Findings

♦ **All** preschool children **exceeded** the benchmark for math.

♦ 9 out of 10 **met or exceeded** all literacy benchmarks.

♦ **All** children **met or exceeded** the benchmarks for self-regulation (prior to COVID-19).

♦ All preschool children receiving scholarships **met or exceeded** the benchmarks in math, self-regulation, and social skills.

♦ Children need extra support to develop their social and self-regulation skills, especially during COVID-19.

Action Steps

The TNE3S, in partnership with UVA, uses this data to set and monitor program-wide goals to maintain and increase the quality of interactions and improve implementation of the model.

The data indicate that children at TNE3S are engaged in high-quality learning interactions. The vast majority of children were displaying the skills needed to enter kindergarten prior to the health crisis. Even before COVID-19, some children needed more support to demonstrate skills such as sharing, expressing their needs and wants positively (without verbal or physical hostility), taking turns, or complying with adult directions. As expected in times of change and crisis, children displayed lower social and self-regulation skills during COVID-19. Teachers and the management team must continue to provide high-quality learning while increasing the emphasis on supporting children's social-emotional skills.

The management team, UVA, and teachers will:
- Provide or engage in ongoing coaching, professional development (PD) to support social-emotional skills in children.
- Create goals based on classroom data for teaching teams.
- Integrate support for acceptance, respect, inclusion, and equity into curriculum activities and professional development.
- Include and build on the rich linguistic and cultural diversity that children and families bring to the classrooms and school.
- Pilot a newly-developed item related to equity on the STREAMin3 observational tool.

This progress report was jointly prepared by leadership at the University of Virginia, Center for Advanced Study of Teaching and Learning, and The New E3 School.

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[1]. **Teacher-child interaction quality** was measured using the CLASS in May of 2019. A trained data collector observed the classroom (using video segments) for 15-minute cycles and rated aspects of classroom quality on a scale from 1 to 7 (with scores between 1-2 being in the low range, 3-5 being in the mid-range, and 6-7 being in the high range). Higher scores indicate higher classroom quality.

[2]**Math skills:** The Early Mathematics Assessment System (EMAS). Assessors use a picture-flipbook and manipulatives to administer the EMAS while reading the script and entering data directly online. It is a direct assessment of number sense, operations, shape, space, and pattern. The EMAS measures strategies and conceptual understanding. The range is 0-35.

[3] **Early literacy skills:** Phonological Awareness Literacy Screening System (PALS)-Preschool Version. PALS is a separate assessment measure used in combination with VKRP measures. For this report, the preschool version is used, and expectations are presented as those expected at the end of preschool. Assessors use a manual, picture cards, and a short book to administer the assessment while recording data on paper forms. For this report, data is compared to expectations at the end of preschool. It is a direct assessment of a child's developing knowledge of phonological awareness and literacy (i.e., name writing, alphabet knowledge, beginning sound awareness, print and word awareness, rhyme, and nursery rhyme awareness).

[4]**Self-Regulation**: Self-Regulation subscales from the Child Behavior Rating Scale (CBRS). The CBRS is a short rating scale completed by the teacher that measures a student's approaches to learning, self-regulation skills, and social-emotional development. Teachers report on the child's ability to control his/her attention, emotions, and behaviors to cope with the demands of the environment. Items are assessed using a five-point scale (1= never, 5= always).

[5] **Social skills:** Social subscales from the Child Behavior Rating Scale (CBRS). The CBRS is a short rating scale completed by the teacher that measures a student's approaches to learning, self-regulation skills, and social-emotional development. Teachers report on the child's ability to navigate teacher and peer interactions successfully. Items are assessed using a five-point scale (1= never, 5= always).