VKRP Executive Summary

Excerpted from the VKRP Annual Report for the Chairmen of House Appropriations and Senate Finance Committees

Report for the 2021-2022 School Year

UNIVERSITY of VIRGINIA | **SCHOOL of EDUCATION and HUMAN DEVELOPMENT**
CASTL

> A child's readiness for kindergarten includes both academic and social-emotional skills developed at home, school, and in their community.

Executive Summary

In this October 2022 data report[1] of the Virginia Kindergarten Readiness Program (VKRP) to the General Assembly, we report the fall and spring data collected during the 2021-2022 academic year on students in statewide kindergarten and four-year-old pre-kindergarten publicly funded programs, update the current progress on the development and piloting of the VKRP pre-kindergarten three-year-old mathematics measure, and share future goals and enhancements of the VKRP system for the 2022-2023 year and beyond. The 2021-2022 data and trends in the data over recent years can be used to reduce disparities and respond to COVID-related concerns.

VKRP empowers Virginia's teachers and education leaders by providing a comprehensive assessment system that shines a spotlight on pre-kindergarten and kindergarten students' learning and growth. VKRP is a Virginia standards-aligned, multi-year early learning assessment system that produces actionable information to guide decisions at the student, classroom, school, and division level from the beginning of pre-kindergarten through the end of kindergarten to support student learning. VKRP provides assessments of mathematics, self-regulation, and social skills to complement Virginia's longstanding literacy screeners. The 2021-2022 literacy data gathered from the PALS-K and PALS Pre-K measures come directly from the Virginia Literacy

Partnerships (VLP), formerly known as the PALS office. Additional information on the literacy screeners can be found on the VLP website.

From 2014 through 2018, the Center for Advanced Study of Teaching and Learning (CASTL) at the University of Virginia implemented VKRP through a voluntary roll-out where, each year, an increasing number of divisions elected to administer VKRP. Virginia began statewide, mandatory kindergarten administration of the VKRP in the 2019-2020 school year.

The VKRP team has been developing a four-year-old pre-kindergarten extension of VKRP since 2018. In the 2021-2022 school year, VKRP was available to all publicly funded preschool programs to assess four-year-old children's skills in fall 2021 and spring 2022. Additionally, the VKRP team is working to expand VKRP to three-year-old children in publicly funded pre-kindergarten classrooms in the 2022-2023 school year.

Defining readiness for summative data purposes

Virginia defines school readiness as, "the capabilities of children, their families, schools, and communities that best promote student success in kindergarten and beyond." For summative purposes, kindergarten students are categorized as *ready* or *meeting the benchmark* (fall) and *meeting the benchmark* (spring) if they demonstrate minimally expected skills for the fall or the spring (depending upon the data timepoint) of kindergarten for literacy, mathematics, self-regulation, **and** social skills. If a kindergarten student does **not** demonstrate the minimally expected skill **in one or more** areas at the respective timepoint (fall or spring), they are categorized as *not ready* or *below the benchmark* (fall) and *below the benchmark* (spring). VKRP does not currently publish benchmarks for pre-kindergarten children.

---

[1] This report is submitted to satisfy the requirement that "the Department shall submit such findings using data from the prior year's fall assessment to the Chairmen of House Appropriations and Senate Finance Committees no later than October 1 each year."

VKRP during the COVID-19 pandemic

The worldwide COVID-19 pandemic caused sudden and long-lasting changes to children's lives, starting in March of 2020. During the 2020-2021 school year, many schools shifted between in-person, online, and remote formats due to changing levels of risk in their communities. At the start of the 2021-2022 school year, most children returned to in-person learning, but there were still challenges due to teacher and student absences related to quarantines and illness, nationwide teacher shortages, teacher turnover, a lack of substitute teachers, and transportation difficulties.

However, in terms of the VKRP assessments, nearly all kindergarten students statewide were assessed using VKRP in the fall of 2021 and spring of 2022, and many pre-kindergarten children in publicly funded settings were also assessed using VKRP. VKRP continues to respond to the impacts of the pandemic by using a set of items to assess students' mental health well-being.

How statewide VKRP data can be used in Virginia

VKRP highlights the strengths of Virginia's pre-kindergarten children and kindergarten students, and also brings attention to areas where students need support to maximize their learning. For teachers and school per-

sonnel, VKRP data can help drive day-to-day instruction, guide conversations with families, and inform decisions about educators' professional development needs. At the state level, VKRP data informs policy decisions and helps identify schools/programs, divisions, and regions that may need more support or can serve as exemplars.
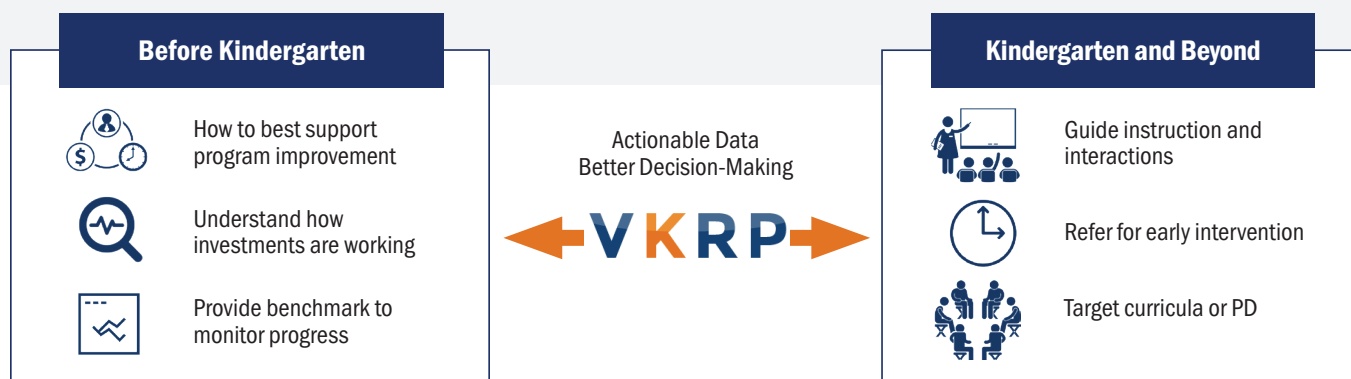
VKRP should be used by various stakeholders to better understand and support students' academic and social-emotional learning and development, as well as their mental health well-being.

2021-2022 kindergarten students assessed with VKRP

Fall 2021 VKRP kindergarten data

In the fall of 2021, teachers assessed approximately 99% of eligible kindergarteners on the PALS-K literacy screener and 97% of eligible kindergarteners on the Early Mathematics Assessment System (EMAS) mathematics assessment. Approximately 97% of eligible kindergarteners were rated by teachers on self-regulation and social skills on the Child Behavior Rating Scale (CBRS) and mental health well-being items. Statewide, 95% of kindergarten students had complete VKRP data on all four measures – literacy (PALS-K), mathematics (EMAS), self-regulation, and social skills assessments (CBRS) – in the fall of 2021.

FIGURE 1: How Statewide Data Can Be Used in Virginia

Before Kindergarten

How to best support program improvement

Understand how investments are working

Provide benchmark to monitor progress

Actionable Data
Better Decision-Making

VKRP

Kindergarten and Beyond

Guide instruction and interactions

Refer for early intervention

Target curricula or PD

Spring 2022 VKRP kindergarten data

In the spring of 2022, approximately 99% of eligible kindergarteners were assessed on the PALS-K literacy screener, 98% were assessed on the EMAS mathematics assessment, and 97% were rated by teachers on self-regulation and social skills using the CBRS and mental health well-being items. Statewide, 96% of kindergarten students enrolled in the spring of 2022 had complete VKRP data on the four assessments.

2021-2022 VKRP kindergarten key findings

Over 79,000 kindergarten students were assessed in both the fall of 2021 and the spring of 2022 in all four domains of literacy, mathematics, self-regulation, and social skills.

### Fall 2021 and Spring 2022 VKRP kindergarten data

In fall of 2021, approximately 58% of kindergarten students met the benchmark or minimum competency level in literacy, mathematics, social skills, and self-regulation. This means that **42% of Virginia's kindergarteners began the school year still needing to build skills in literacy, mathematics, self-regulation, and/or social skills (Figure 2)**.

In the spring of 2022, approximately 56% of kindergarten students met the benchmark or minimum competency level in literacy, mathematics, social skills, and self-regulation. This means that **44% of Virginia's kindergarteners ended the school year below expected levels in literacy, mathematics, self-regulation, and/or social skills. These results indicate a small, 2%, increase in the percentage of kindergarten students not meeting the overall VKRP benchmark from fall 2021 to spring 2022.**

2021-2022 VKRP kindergarten benchmark estimates across demographics

Students falling below the VKRP benchmark at the beginning and end of kindergarten were disproportionately students from low-income backgrounds, students with a disability, students who are English language/multilingual learners (EL), and students from historically marginalized racial/ethnic groups. These differential patterns in skill development illustrate the stark disparities in opportunities and access to high-quality educational experiences available to students and their families. These results elevate concerns that disparities in opportunity and access were likely exacerbated following mandated school closures in Virginia during the spring of 2020 and beyond.

FIGURE 2: Fall 2021 and Spring 2022 Kindergarten Overall and Domain Benchmark Estimates$^\diamond$
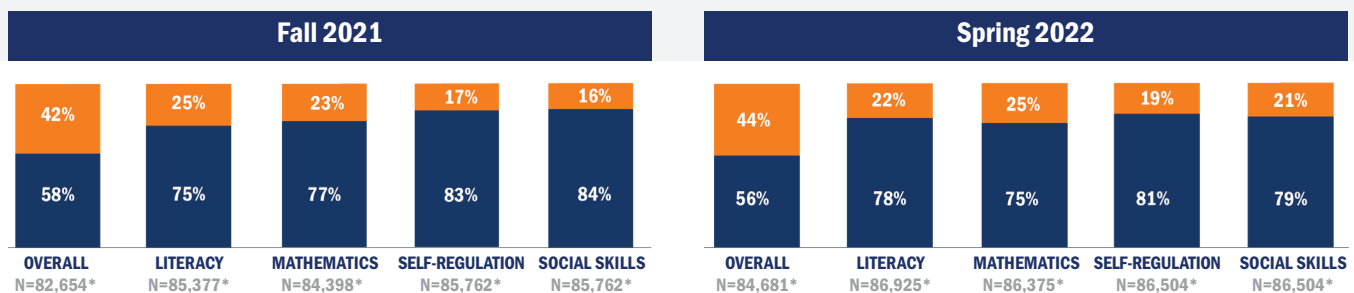
Students who completed data on each individual measure were included to obtain these estimates.

☐ Did not meet benchmark   ☐ Met benchmark

$^\diamond$ If a kindergarten student does not demonstrate the minimally expected skill in one or more areas at the respective timepoint (fall or spring), they are categorized as *not ready* or *below the benchmark* (fall) or *below the benchmark (*spring).

> "Teacher concerns about a student's mental health well-being is an important indicator that the student may need early, comprehensive, and intensive supports to be successful in school."

TABLE 1: 2021-2022 Kindergarten Demographics and Below Benchmark Percentages

Kindergarten Student Demographic Characteristics	Percent Below the Overall Benchmark	
	Fall 2021	**Spring 2022**
From Low-Income Background[a]	56%	57%
Has a Disability[b]	64%	69%
Is an English Language/ Multilingual Learner[c]	67%	62%
Student Race		
American Indian or Alaska Native	39%	38%
Asian	29%	30%
Black or African American	52%	57%
Hispanic/Latino of Any Race	60%	57%
White	34%	36%
Native Hawaiian or Pacific Islander	38%	38%
Non-Hispanic/Latino of any race, two or more races	38%	40%

[a] Source: SRC Disadvantaged Status Flag. Students are identified as having a low-income background if, at any point during the school year, the student: 1) is eligible for Free/Reduced Meals, 2) receives TANF, or 3) is eligible for Medicaid.

[b] Source: SRC Primary Disability Code. Students are identified as having a disability if any code is present except, *"Qualified Individual under Section 504."*

[c] Source: Student Record Collection (SRC) Limited English Proficiency (LEP) Status Code. Students are identified as English learners (EL) if code is, "Identified as EL and receives EL services," *"Identified as EL but has refused EL services,"* or *"Identified as formerly EL for each of the four years after exiting EL services."*

2021-2022 VKRP kindergarten mental health well-being data

In fall of 2021, VKRP added items to measure students' mental health and well-being. Teachers continue to report concern for mental health well-being into year three of the pandemic. Teachers reported being moderately, very, or extremely concerned about mental health and social-emotional well-being for about 13% of kindergarten students in both fall 2021 and spring 2022.

Additionally, in both fall of 2021 and spring of 2022, students whose teachers were concerned for their mental health well-being were much more likely to not meet the overall benchmark, and to be below the benchmark academically and social-emotionally when compared to students whose teachers did not report mental health well-being concerns. These results indicate teacher concern is an important indicator of which students likely need comprehensive and intensive supports to be successful in school.

FIGURE 3: Mental Health Well-Being Concerns and Benchmark Status

Students whose teachers reported having significant mental health well-being concerns were much more likely to:

- Not meet the overall readiness benchmark
- Be below benchmarks academically, in Literacy and Math
- Be below benchmarks in Self-regulation and Social Skills

2021-2022 VKRP kindergarten growth data

This is the first year that VKRP kindergarten data examined progress and growth from fall to spring timepoints. In terms of benchmark status, 46% of kindergarten students met the benchmark for both fall 2021 and spring 2022 while 31% did not meet the

benchmark in either fall 2021 or spring 2022. Smaller percentages of students shifted in their benchmark status across the 2021-22 school year—either meeting the benchmark in fall 2021 and not meeting in spring 2022 (12%) or not meeting the benchmark in fall 2021 and meeting in spring 2022 (11%). Regarding the individual learning domains (literacy, mathematics, self-regulation, and social skills), most students met the benchmark in both fall 2021 and spring 2022 (69%, 69%, 76%, and 74% respectively) while relatively small percentages of students did not meet the benchmark in fall 2021 and spring 2022 (14%, 15%, 10%, and 10% respectively).

We examined trends in student growth[2] from fall 2021 to spring 2022 in mathematics, self-regulation, and social skills. Kindergarten students tended to display strong growth in mathematics skills and modest growth in self-regulation and social skills. There was variation in students' growth across all domains with some students making robust gains, while a small percentage
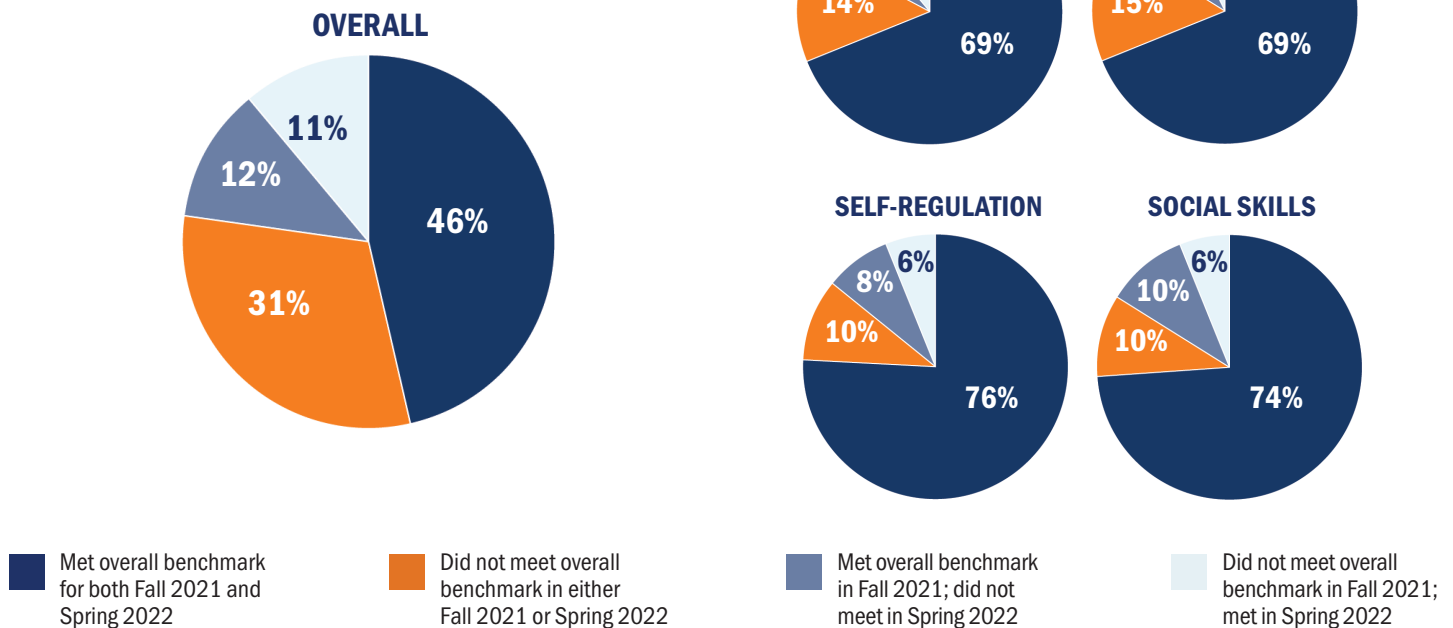
of students lost ground from fall to spring. Student characteristics were associated with growth in mathematics, self-regulation, and social skills, although the size of these associations tended to be small.

One consistent finding across all learning domains was that kindergarten students who are English language/multilingual learners (EL) tended to make greater skill gains compared to their monolingual peers.

In addition, although students with no pre-kindergarten experience were likely to enter kindergarten below the overall readiness benchmark in the fall, they made greater skill gains during kindergarten. This finding was strongest for mathematics.

These findings illustrate the importance of kindergarten for students who start kindergarten with fewer school readiness skills due to factors such as limited English language or without preschool experience.

FIGURE 4: Kindergarten Benchmark Status for Fall 2021 and Spring 2022

Legend:
- Met overall benchmark for both Fall 2021 and Spring 2022
- Did not meet overall benchmark in either Fall 2021 or Spring 2022
- Met overall benchmark in Fall 2021; did not meet in Spring 2022
- Did not meet overall benchmark in Fall 2021; met in Spring 2022

[2] The current literacy screener does not measure growth from fall to spring, but the revised literacy screener will measure growth across time.

## 2019-2022 VKRP kindergarten trends across time key findings

Overall readiness estimates remained relatively stable from fall 2019 (pre-pandemic) through fall 2021.

FIGURE 5: Fall Overall Kindergarten Readiness Estimates 2019-2022

OVERALL

Fall Readiness Estimates

- Meeting Benchmark
- Below Benchmark
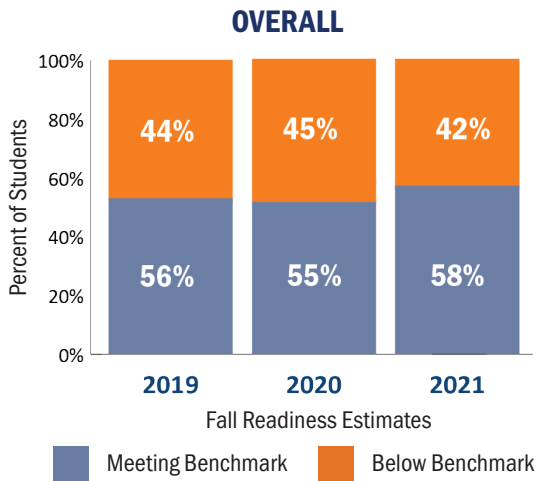
Significantly more students were meeting the spring 2022 overall benchmark compared to spring 2021.
Spring data was not a part of VKRP prior to the 2019-20 school year and the spring assessment was not administered in 2020 due to the onset of the COVID-19 pandemic and universal mandated public-school closures. Spring data is compared between spring 2021 and spring 2022.

FIGURE 6: Spring Overall Kindergarten Benchmark Estimates 2021-2022

OVERALL

Spring Benchmark Estimates

- Meeting Benchmark
- Below Benchmark
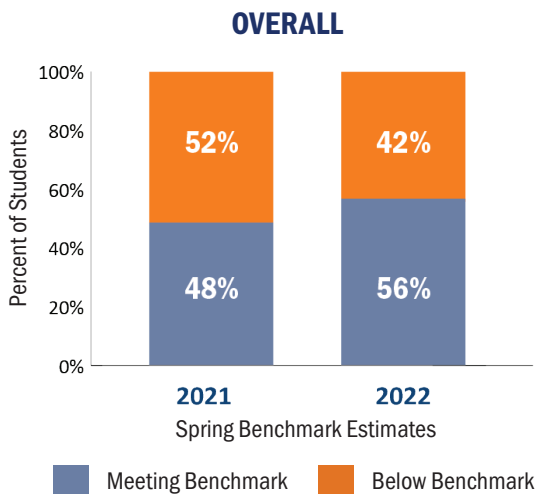
2021-2022 VKRP four-year-old pre-kindergarten key findings

The VKRP Pre-K 4 sample grew substantially in the year following the 2020-2021 pilot year. In the 2021-2022 school year, VKRP was available to all publicly funded pre-school programs to assess four-year-old children's skills in fall 2021 and spring 2022. Over 27,000 four-year-old pre-kindergarten children were assessed. Program types included Head Start, VPI and VPI+, Early Childhood Special Education (ECSE), Title I, and Virginia Early Childhood Foundation's (VECF) Mixed Delivery classrooms.

Fall 2021 and Spring 2022 four-year-old VKRP pre-kindergarten data

Benchmarks in kindergarten were established using developmental expectations in conjunction with data collected across the Commonwealth over the 2015-2019 pilot phase. For pre-kindergarten, we do not have established benchmarks for the 2021-2022 school year because data was still being collected to inform guidance for interpreting VKRP results.

Moving forward, VKRP, in partnership with VLP, is developing information to provide guidance to families, teachers, and administrators for pre-kindergarten children. Starting in fall 2022, pre-kindergarten reports will show skill development bands to help teachers and administrators contextualize children's scores across literacy (using the new Pre-K Language & Literacy Screener), mathematics, self-regulation, and social skills assessments.

Four-year-old pre-kindergarten children displayed a range of skills across mathematics, self-regulation, and social skills in fall 2021 and spring 2022.

In the fall of 2021, teachers reported being moderately, very, or extremely concerned about 20% of four-year-old children enrolled in VKRP. Elevated teacher concern for pre-kindergarten children decreased slightly in the spring of 2022 where teachers reported being moderately, very, or extremely concerned about 17% of children.

2021-2022 VKRP four-year-old pre-kindergarten growth data

On average, four-year-old pre-kindergarten children grew in their skills across mathematics, self-regulation, and social skills across the 2021-2022 school year.

Like kindergarten, pre-kindergarten children tended to display strong growth in mathematics skills and modest growth in self-regulation and social skills. There was variation in children's growth across all domains. Children's characteristics were associated with growth in mathematics, self-regulation, and social skills, although the size of these associations tended to be small.

In mathematics, younger children and children who were English language/multilingual learners (EL) made more growth compared with older children and monolingual learners.

For self-regulation and social skills, children from low-income backgrounds experienced slightly less growth than children who were not from low-income families.

Future directions

Virginia's youngest learners come to pre-kindergarten and kindergarten with unique experiences and varied exposure to early learning opportunities. Given the effects of the ongoing COVID-19 pandemic, these young learners continue to need tailored academic and social-emotional support across the school year to solidify and build new skills.

Like the two years prior, in 2022-2023, there will be a continued focus on accelerating student growth while attending to students' social-emotional needs. This will require divisions, schools, and programs to be proactive in determining educator and student needs and in providing quick and effective support for instruction and learning. Educators and administrators can use VKRP data, in combination with other formative and summative assessments, to help target individualized instruction, to identify teacher professional development needs, and, at the state level, to inform policy decisions to identify the regions and divisions in need of the most support.

In the 2022-2023 school year, VKRP will be:

- **Expanding.** VKRP will continue to be used in publicly funded four-year-old pre-kindergarten classrooms with continued implementation support for programs required to participate (e.g., VPI, ECSE, VECF Mixed Delivery), or who are voluntarily participating and targeted outreach to those who are not yet participating, but may choose to participate. Pre-kindergarten VKRP data will allow teachers to better understand the early foundational skills that young children bring to their classrooms and provide rich interactions and learning opportunities to support growth and development.

- **Extending.** Additional funding was appropriated to develop and pilot an upward extension of VKRP into first through third grades to "help teachers, parents and divisions identify students' strengths, deficiencies and support student growth longitudinally." In coordination with VLP, VKRP will partner with VDOE to develop measures of mathematics, social skills, and self-regulation that could be used in school divisions in grades one, two, and three to help teachers, families, and divisions identify students' strengths, areas of needed support, and to monitor student growth longitudinally in the early elementary grades. Current timeline estimates for this pilot extension are that the VKRP team will pilot initial item development in 2022-2023 and will refine items in the 2023-2024 school year.

- **Collaborating.** VKRP is closely collaborating with the Virginia Literacy Partnerships around the development and launch of VKRP and the new Pre-K Language & Literacy Screener in three-and four-year-old pre-kindergarten classrooms. The VKRP and VLP teams regularly work together on assessment development, technology system development and expansion, data integration, teacher and administrator training, and data usage and reporting. VKRP is also closely collaborating with the STREAMin[3] team to support STREAMin[3] teachers to administer the VKRP preschool assessments and use

data to improve their curriculum use and instruction in the classroom.

- **Integrating.** The VKRP team is working with the Virginia Literacy Partnerships and LinkB5 team to develop a coordinated Integrated Data System between the growing state data collection initiatives to maximize the impact and potential of these data systems. The goals of the Integrated Data System are to build a robust, coordinated system with enhanced hosting infrastructure and security features; shared data warehousing reflecting effective data governance; consistent, aligned, and integrated reporting; and a more streamlined user interface.

- **Supporting.** VKRP will continue to support pre-kindergarten and kindergarten teachers' implementation of VKRP by providing in-person, remote, and online training, resources, and information for teachers as well as school-level and division-level administrators. VKRP partners with programs, schools, and divisions on how to use their growth data to promote student skill development over time.

- **Listening and learning.** VKRP has completed a series of focus groups with families to learn more about what school readiness means to families and how to improve the VKRP family reports and resources. Families from a range of backgrounds, including families with children who are English language/multilingual learners (EL) and families with children who have educational disabilities, have been intentionally included in the focus groups.

To read the full report, go here.

Correspondence concerning this report should be addressed to Jenna Conway, Deputy Superintendent of Early Childhood Care and Education, VDOE. Jenna.Conway@doe.virginia.gov ♦

Summary of Appropriations language

The Virginia Department of Education and the University of Virginia's Center for Advanced Study of Teaching and Learning (CASTL) are providing this report to the Chairmen of House Appropriations and Senate Finance Committees to share the results of the Virginia Kindergarten Readiness Program in accordance with HB30 Item 137.H, as described below:

Out of this appropriation, $1,350,000 the first year (2020-2021) and $1,350,000 the second year (2021-2022) from the general fund is provided through the Department of Education to the University of Virginia to continue statewide implementation of the Virginia Kindergarten Readiness Program conducted in the fall, and to develop and implement a post-assessment upon the conclusion of the kindergarten year.

The Department of Education shall coordinate with the University of Virginia's Center for Advanced Study of Teaching and Learning to ensure that all school divisions shall be required to have their kindergarten students assessed annually during the school year using the multi-dimensional kindergarten readiness assessment model. All school divisions shall be required to have their kindergarten students assessed with such a model.

Further, out of this appropriation, $100,000 the first year (2020-2021) and $100,000 the second year (2021-2022) from the general fund shall be allocated to University of Virginia's Center for Advanced Study of Teaching and Learning to provide training to school divisions annually on how to effectively use Virginia Kindergarten Readiness Program data to improve instructional practices and student learning. Such teacher focused professional development and training shall be prioritized for the school divisions that would most benefit from state assistance to provide more time for classroom instruction and student learning.

The Department and the University of Virginia's Center for Advanced Study of Teaching and Learning shall use the results of the multi-dimensional Virginia Kindergarten Readiness Program assessments to determine how well the Virginia Preschool Initiative promotes readiness in all key developmental domains assessed. The Department shall submit such findings using data from the prior year's fall assessment to the Chairmen of House Appropriations and Senate Finance Committees no later than October 1 each year.