September 25, 2020

The Honorable Luke E. Torian
Chairman, House Appropriations Committee
Virginia General Assembly
4222 Fortuna Plaza, Suite 659
Dumfries, Virginia 22025

The Honorable Janet D. Howell
Chair, Senate Finance Committee
Virginia General Assembly
P.O. Box 2608
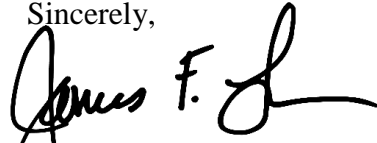Reston, Virginia 20195-0608

Dear Sir and Madam:

I am pleased to submit the enclosed report that provides a status update on the Virginia
Kindergarten Program (VKRP) and summarizes VKRP data for fall 2019.

Item 128h (a-d) directs the Department of Education and the University of Virginia's Center for
Advanced Study of Teaching and Learning to 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 and submit such
findings to the Chairmen of House Appropriations and Senate Finance Committees.

If you have any questions or require additional information, please do not hesitate to contact
Jenna Conway, Chief School Readiness Officer, at (804) 225-3717 or
Jenna.Conway@governor.virginia.gov.

The Honorable Luke E. Torian
The Honorable Janet D. Howell
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September 25, 2020

Sincerely,

James F. Lane, Ed.D.
Superintendent of Public Instruction

JFL/JC/lh

Enclosure

c: The Honorable Atif Qarni,
        Secretary of Education

VKRP Status Report for the Chairmen of House Appropriations and Senate Finance Committees

VKRP Status Report for the Chairmen of House Appropriations and Senate Finance Committees

Executive Summary

More than 90,000 children enter kindergarten each year in Virginia. All of these children, regardless of background or zip code, enter through school doors, often with new backpacks and supplies, excited to learn, interact with teachers, and make new friends. All are capable of entering kindergarten ready, yet too many do not know their letters, numbers, nor how to successfully interact in a classroom setting.

The Virginia Kindergarten Readiness Program (VKRP) builds a more comprehensive understanding of school readiness and success in Virginia. As an assessment system of children's early learning skills, VKRP adds screening measures of mathematics, self-regulation, and social skills to complement Virginia's statewide assessment of literacy skills through PALS. VKRP is designed to provide detailed, actionable information to guide decisions at various levels before and after kindergarten entry to support student learning.

How Statewide Readiness Data Can be Used in Virginia
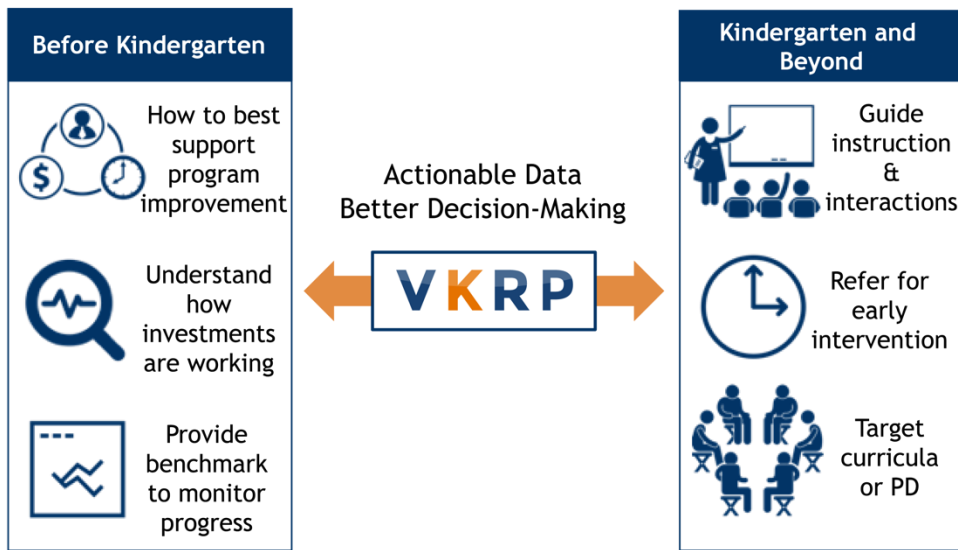
This report provides a status update on VKRP and summarizes the VKRP data from the fall of 2019. The fall 2019 assessment term was the first time statewide kindergarten readiness data was collected from all school divisions in the Commonwealth of Virginia per legislation in Chapter 854, Budget Item of the General Assembly. Readiness data in fall 2019 was gathered from 132 divisions—1,106 schools, 5,021 classrooms, and 91,943 kindergarten students throughout the Commonwealth of Virginia.

Due to the COVID-19 pandemic and the resulting closures of Virginia schools, teachers were unable to assess students in the spring of 2020. Therefore, spring VKRP data were not collected.

Key Findings

- In the fall of 2019, statewide data indicate that 44% (37,587) of Virginia students entered kindergarten behind in one or more key readiness areas of literacy, math, self-regulation, and/or social skills. There is tremendous variability across divisions and across subgroups in readiness rates for kindergarten students.

- For students from economically disadvantaged backgrounds, the numbers are even more concerning; 56% entered kindergarten lacking important skills in one or more key readiness areas, meaning they started well behind their more advantaged peers.

- Children from economically disadvantaged backgrounds who participated in the Virginia Preschool Initiative (VPI) were more likely to arrive to kindergarten prepared (53% "ready") compared to children lacking any preschool experience (32% "not ready").
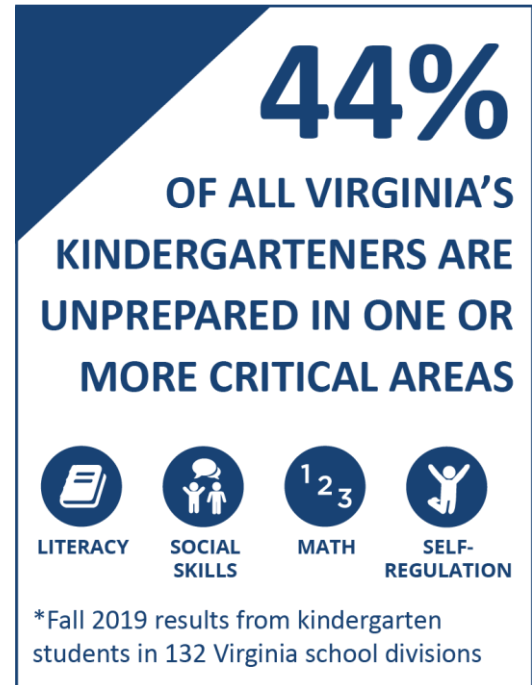
44% OF ALL VIRGINIA'S KINDERGARTENERS ARE UNPREPARED IN ONE OR MORE CRITICAL AREAS

LITERACY   SOCIAL SKILLS   MATH   SELF-REGULATION

*Fall 2019 results from kindergarten students in 132 Virginia school divisions

- There was significant variability in the readiness rates across ethnic groups and race. Hispanic, Black, and American Indian/Alaska Native students evidenced lower readiness skills at kindergarten entry (58% "not ready", 53% "not ready", and 49% "not ready", respectively) compared to their White peers (37% "not ready").

- There were significant differences in the readiness rates of students with disabilities (SWD, 66% "not ready") and English Language Learners (ELL, 64% "not ready") students when compared to kindergarten students without these designations (42% "not ready" and 41% "not ready", respectively).

- Male students are more likely to be categorized as "not ready" (50%) than female students (37%) both overall and within each of the separate learning areas.

- Younger students were more likely to be categorized as "not ready" compared to older students (53% "not ready" in the youngest quartile of students versus 37% "not ready" for the oldest quartile).

A prekindergarten version of VKRP was developed and piloted in the fall of 2019 with participation from 147 classrooms spread across 45 programs within 20 divisions who volunteered to participate. Preschool teachers administered the math assessment to 1,041 prekindergarten children and assessed 2,246 children on their self-regulation and social skills.

For the 2020-21 school year, VDOE and UVA-CASTL are providing additional guidance and support to school divisions to complete fall and spring VKRP assessments, considering the various and shifting scenarios of instruction (e.g., in person, virtual including synchronous and asynchronous, hybrid, etc.) occurring this year given the COVID-19 pandemic. It remains a requirement for divisions to ensure that kindergarten students are

assessed using VKRP and no waivers are being granted at the division level. However, it is anticipated that fewer kindergarten students will be assessed across all learning domains (math, literacy via PALS, self-regulation, and social skills) this year. For example, the math assessment is an in-person assessment for which some students will be exempted (i.e. parents are unable to bring student in for in-person assessment or divisions not conducting any in-person assessments of students). However, readiness data is critical, especially this year, to understand the pandemic's impact on Virginia kindergarteners. In order to gather additional data on the impact of COVID-19 on our kindergarten students' well-being, items have been added to the self-regulation and social skills portion of the VKRP assessment system to better understand students' social-emotional well-being during the COVID-19 pandemic.

The VKRP team is also expanding access to the newly developed VKRP prekindergarten assessment system with 5 additional school divisions requesting to use these assessments, bringing the total to 13 divisions participating in all of the assessments of the preschool version of VKRP during the academic 2020-2021 school year (math, self-regulation, social skills, and literacy via PALS). Additionally, 23 VPI programs will be participating in the *Child Behavior Rating Scale* (CBRS) only portions of preschool VKRP to better assess the social-emotional functioning of their preschool students. In total, 36 preschool programs will assess the social-emotional functioning of their prekindergarten students.

Overview

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 Chapter 854, Budget Item 128h (a-d):

> 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 during the school year using the multi-dimensional kindergarten readiness assessment model no later than by the end of the school year 2018-2019, and annually thereafter. All school divisions shall be required to have their kindergarten students assessed with such model.
>
> Further, out of this appropriation, $100,000 the first year and $100,000 the second year 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 in order 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 to the Chairmen of House Appropriations and Senate Finance Committees no later than October 1, 2019, and annually thereafter.

Full Report

Introduction

Virginia defines school readiness as "the capabilities of children, their families, schools, and communities that best promote student success in kindergarten and beyond. Each component – children, families, schools and communities – plays an essential role in the development of school readiness. For Virginia's youngest citizens, a "ready" child is prepared socially, personally, physically, and intellectually in the areas of literacy, mathematics, science, history and social science, physical and motor development, and personal and social development."[1]

The Virginia Kindergarten Readiness Program (VKRP) is an initiative focused on building a more comprehensive understanding of children's school readiness and success in Virginia. As an assessment system of children's early learning skills, VKRP adds screening measures of mathematics, self-regulation, and social skills to complement Virginia's statewide assessment of literacy skills using the Phonological Awareness Literacy Screening (PALS, https://pals.virginia.edu/). Although not fully comprehensive of all the skills children need to thrive in school and life, VKRP provides reliable and valid data across indicators known to predict school success in the short and long term (literacy, mathematics, social skills and self-regulation) – and a purposeful and equal emphasis on academics, self-regulation, and social skills. Children develop school readiness skills through their early experiences at home, school, and in the community. VKRP is not a measure of a school's or community's readiness.

More than 90,000 children enter kindergarten each year in Virginia. All of these children, regardless of background or zip code, enter through school doors, often with new backpacks and supplies, excited to learn, interact with teachers, and make new friends. All are capable of entering kindergarten ready, and yet too many do not know their letters, numbers, nor how to successfully interact in a classroom setting.

Analysis of the fall 2019 statewide sample found that 44% of kindergarten students in Virginia entered school lacking important foundational skills in one or more key readiness areas of literacy, math, self-regulation and/or social skills. The proportion of students "not ready" for kindergarten was significantly higher amongst students from economically disadvantaged backgrounds (56%), students with disabilities (66%), and English language learners (64%), meaning these students start school well behind their more advantaged peers. Kindergarten readiness also varied by preschool experience, race and ethnicity, and gender. Students with no preschool experience (68%), Hispanic (58%), Black (53%), and American Indian/Alaska Native (49%) students, and male (50%) students were more likely to be categorized as "not ready" than their peers.

All students are capable of developing and demonstrating the skills they need to be successful in kindergarten. A child's demographic characteristics should not predetermine the kindergarten readiness of a student. The discrepancies in the VKRP data, particularly with respect to race and ethnicity, illustrate the results of systematic racism, systems in place that create and maintain inequality, that occurs in our society and early care and education settings even before students enter kindergarten. The years leading up to kindergarten matter--children who are Black or Hispanic are less likely to experience high quality early childhood education compared to their white peers. Similarly, children who come from low-income backgrounds, who are significantly more likely to be children of color, are less likely to experience high-quality early childhood education compared to their economically advantaged peers. Early childhood teachers in private and family settings, where many children of color are served, often make below the minimum wage. Policies do not ensure that educators are adequately trained and compensated for their work, or that our most at-risk

students have access to *high quality* early childhood experiences in settings where they can thrive. These and other gaps in opportunities for high quality early educational experiences and learning perpetuate educational inequities across students before and after kindergarten.

VKRP enables Virginia to establish a more comprehensive, consistent statewide estimate of student's school readiness skills in kindergarten. VKRP is designed to provide detailed, actionable information to guide decisions at various levels before and after kindergarten entry to support student learning.

For example, kindergarten teachers can use the data to tailor their instruction to a student's current skill level and provide the right scaffolding to get him/her to the next level, refer a student for additional assessment or support, and have conversations with families to support their student's learning at home. Principals and school leaders can use the data to answer questions to better understand each incoming cohort of students, inform decisions for deploying existing resources, and procure additional supports. Division leaders can use the data to look for variability within and across divisions, individualize professional development to teachers, and align preschool, kindergarten, and elementary programming. State leaders, advocates, and policy makers can use the data to identify statewide readiness gaps, align support for early childhood program supports, examine how services prior to kindergarten promote improved readiness, and examine data over time to identify patterns and trends across the state.

It is appropriate and prudent to use VKRP data and other sources of early childhood education information to identify readiness gaps, track system-level trends, and inform effective allocation of education resources. However, VKRP was not designed to be reliable within a high-stakes accountability environment, and therefore, is not suited for use as a specific consequence to students, teachers, or programs. Rather, VKRP data are primed to help key players in classrooms, schools, divisions, and government make data-informed decisions about how to best meet the needs of Virginia's youngest students and invest strategically in early childhood initiatives.

VKRP History

The *Virginia Kindergarten Readiness Program* (VKRP) was originally conceived of and advocated for by Elevate Early Education (E3), a statewide issue advocacy group focused on early childhood education, as a way to define the state of readiness in Virginia and therefore, advocate for a stronger investment in high quality early childhood education in Virginia. Phase 1 (2013-14) consisted of piloting potential measures to be used as part of VKRP. In Phase 2 (2014-15), the goal was to provide an estimate of the readiness gap in Virginia using a small but representative sample of students. A battery of assessments was used to provide a more comprehensive estimate of readiness in the state, revealing a larger proportion of students who arrived at kindergarten without key readiness skills than had previously been estimated using the literacy data alone.[2]

VKRP chose a set of **coordinated assessments**. Literacy (leveraging the state adopted literacy assessment, PALS), mathematics, self-regulation, and social skills assessments were combined to provide teachers with a more comprehensive picture of students' readiness skills. This set of assessments places a purposeful and equal emphasis on children's academic (literacy and mathematics) and social-emotional (self-regulation and social skills) measures, all described in detail on p. 10:

- The *Phonological Awareness Literacy Screening (PALS)* is the state adopted literacy assessment used from preschool through third grade and this data is pulled into the VKRP system to assess students' literacy skills. It is a teacher-administered direct assessment.
- The *Early Mathematics Assessment System (EMAS)* is a teacher-administered direct assessment used to assess students' mathematics skills.[3]
- The *Child Behavior Rating Scale (CBRS)* is a teacher report measure used to assess students' self-regulation and social skills.[4]

In addition to establishing a statewide estimate of readiness in Virginia, the report to the Virginia General Assembly made several recommendations for the statewide roll-out of a more comprehensive readiness assessment system.[5] This included building off of Virginia's state literacy assessment in order to provide teachers, administrators, and policymakers with a more streamlined experience and useful data across multiple readiness skills, providing comprehensive training and support to educators and leaders on how to administer the new assessments, interpret, and use the new data coming from VKRP, and providing instructional resources tied to the assessment data for teachers.[6] In the next section, we provide a more detailed description of the VKRP assessment system and the individual measures.

From Voluntary to Statewide Implementation of VKRP (2014 to present)

From 2014 through 2018, CASTL implemented VKRP through a voluntary rollout where, each year, an increasing number of divisions elected to implement VKRP. During this pilot period, CASTL utilized an iterative design approach to regularly gather feedback from teachers, divisions, and VDOE, and used it to revise and improve the assessment system, online application, reports, and resources. For example, instructional strategies were linked directly to data reports for easy teacher access. In addition, teachers and division leaders repeatedly asked for a spring assessment to measure growth, which CASTL created. Thus, VKRP has been continually revised to improve the feasibility and utility of the data for kindergarten teachers, school and division administrators, and policymakers.

Based on preliminary data, statewide implementation of VKRP was a key recommendation made in the 2017 Joint Legislative Audit and Review Commission (JLARC) report, *Improving Virginia's Early Childhood*

Development Programs.[7] This allowed Virginia, for the first time, to have a comprehensive understanding of children's school readiness upon entering kindergarten. **Item 1** summarizes the uptake of VKRP.

Item 1. VKRP Expansion 2014-2019

Year	2014	2015	2016	2017	2018	2019
Total number of estimated *classrooms*	5,212	5,055	5,047	5,059	5,055	5,074
Total of VKRP *classrooms*	100	533	661	1,200	1,660	5,021
% of total	1.9	10.5	13.1	21.6	34.2	99*

Year	2014	2015	2016	2017	2018	2019
Total number of estimated *students*	93,807	90,991	90,850	91,053	91,002	92,407
Total of VKRP *students*	2,036	9,809	11,899	20,039	30,666	91,943
% of total	2.2	10.8	13.1	22.0	34.2	99*

Statewide Kindergarten Implementation

VKRP began statewide kindergarten implementation in the 2019-20 school year. 132 school divisions completed the VKRP assessments in the fall of the kindergarten school year. In the early fall of 2019, to prepare staff throughout Virginia, the VKRP team conducted 28 train-the-trainer workshops and 66 in-person division trainings. **Due to the coronavirus pandemic, the spring window for VKRP was suspended and therefore, only fall 2019 data is reported.**

Statewide implementation began in **Fall 2019**
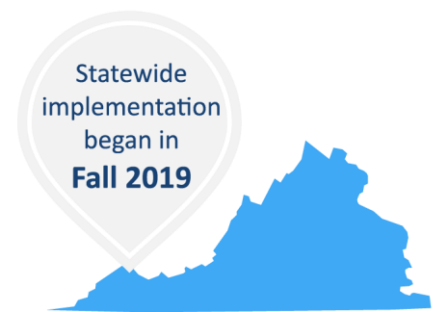
In order to understand how experiences prior to kindergarten are linked to children's school readiness data, including how children's experience in the Virginia Preschool Initiative (VPI) connects to their kindergarten readiness, more data collection and data integration has been needed. Toward this end, all VPI programs are now participating in the Advancing Effective Interactions and Instruction (AEII) Initiative (Virginia Acts of Assembly - Chapter 854, Item 128, J-K [June 30, 2019]) which provided additional insights into the quality of teacher-child interactions in every VPI classroom this past year, as well as additional guidance in the use of comprehensive preschool curriculum and professional development. In 2019-2020 and in future years, these interactions and other data are being analyzed to have a better understanding of how the quality of children's preschool experience in VPI is connected to their readiness skills as assessed by VKRP.

Description of the VKRP Assessment System

In addition to being a **system of coordinated assessments**, VKRP is also a **reporting system** that provides detailed information about students' skills at the student, classroom, school, division, and state levels. It provides a snapshot of students' skills in the fall and spring as well as information about growth in students' skills across the year.

VKRP also provides **resources** that support teachers and administrators. In-person and online training modules were designed to enhance teachers' and administrators' understanding of the history of VKRP, how to administer assessments, and how to interpret reports and access instructional resources.

Teachers increasingly are expected to use data to inform their instruction. However, it is not always clear how to transform data into usable information. VKRP provides support in this process by linking results from the VKRP assessments to a set of instructional resources in the areas of mathematics, self-regulation, and social skills. Instructional resources include skills and strategy guides and instructional activities that teachers can use to support students' learning. The instructional resources were developed by researchers at CASTL with expertise in teacher-child interactions and in the development of children's mathematical, self-regulation, and social skills.

Prior to the COVID-19 pandemic, VKRP also offered in-person data use sessions for divisions and provided individualized scaffolding on how to interpret and use data provided in the VKRP reports. Together, the components of the VKRP assessment system are designed to provide detailed and actionable information to assist teachers, leaders, stakeholders, and other individuals at all levels (classroom, school, division, state) in delivering the support needed for student learning. The data can be shared with families to help connect classroom and home learning. In addition, VKRP helps school and division leaders better support teachers with targeted professional development and policymakers to make sound decisions about educational needs and funding across the Commonwealth.

Description of the VKRP Measures

The mathematics, self-regulation, and social skills screening measures were identified to be used to complement the state's literacy assessment, PALS. Below, we provide a detailed description of the measures used, in addition to PALS, that make up VKRP:

Phonological Awareness Literacy Screening (PALS). PALS provides a comprehensive assessment of young children's knowledge of the important literacy fundamentals that are predictive of future reading success. PALS is the state-provided screening tool for Virginia's Early Intervention Reading Initiative (EIRI) and is used by 99% of school divisions in the state on a voluntary basis. PALS consists of three instruments, PALS-PreK (for preschool students), PALS-K (for kindergartners), and PALS 1-3 (for students in grades 1-3). PALS assessments are designed to identify students in need of additional reading instruction beyond that provided to typically developing readers. The PALS-K assessment measures rhyme awareness, beginning sound awareness, spelling, letter knowledge, letter sound knowledge, and concept of word. PALS informs teachers' instruction by providing them with explicit information about their students' knowledge of literacy fundamentals. Mid-year assessment and PALS Quick Checks allow for ongoing student progress monitoring throughout the year.

Early Mathematics Assessment System (EMAS). The EMAS is a reliable and valid research-based assessment of early mathematical thinking that draws on modern cognitive science as well as developmental and educational

research.[8] Created by Dr. Herb Ginsburg and colleagues at Teachers College, Columbia University, and expanded and adapted by researchers at CASTL, the EMAS is designed to measure a broad range of mathematical content in the areas of numeracy, computation, geometry, and patterning. It is aligned with the Virginia Foundation Blocks (2013), Virginia Standards of Learning (2016), and Clements and Sarama's Mathematics Learning Trajectories.[9][10][11]

Teachers administer the EMAS to students individually using a flip book and manipulatives. It takes approximately 20-25 minutes per student to administer in the fall and spring. Items are designed to capture a wide range and variety of early math skills. Students are not expected to get all items correct.

The EMAS was designed with three purposes in mind. First, it has applications as a formative assessment, meaning that teachers can use EMAS data to provide students with differentiated, appropriate instruction tailored to their individual needs. Second, it can be used to broadly evaluate programs or assess needs across a large group of classrooms; for example, EMAS data could help identify school divisions in need of additional support around early math. Third, it can be used as a screening tool to identify students at risk for difficulties in math.

In order to give an accurate and comprehensive picture of a kindergarten student's growth during preschool and kindergarten, the UVA team developed ~200 additional items capturing numeracy, computation, geometry, and patterning to enable the EMAS assessment to be used to measure growth across four time points from the fall of preschool through the spring of kindergarten. The VKRP research team consulted with early childhood math experts, including Herb Ginsburg, the original author of the EMAS, and colleagues at the Virginia Department of Education. The VKRP team cross-walked each item with Clements' and Sarama's (2009) learning trajectories, the Virginia Foundation Blocks early learning standards, and the 2016 Virginia Kindergarten Math Standards of Learning.[12] Then the team pilot-tested each new item with approximately 275 children, ranging in age from 4 to 7 years old. Based on an analysis of each item, the research team constructed the spring Kindergarten EMAS. Items were selected to represent a range of skills across the four math subdomains (geometry, patterning, numeracy, and computation) and to target an appropriate average level of difficulty. The research team also deliberately selected some easier and some more challenging items so that teachers can gauge which students need extra support and which may be exceeding grade-level expectations. Benchmarks for the spring assessment form were established based on input from early childhood math experts, Clements' and Samara's mathematics learning trajectories, and the Virginia Kindergarten Math Standards. The new EMAS scores were converted into growth scores so that teachers and schools can track students' math growth over time.

Child Behavior Rating Scale (CBRS). The Child Behavior Rating Scale measures two areas of students' social-emotional skills: self-regulation and social skills. Self-regulation includes the skills to control one's own attention, emotions, and behaviors to cope with the demands of the school environment.[13] Examples include being able to listen to teachers, following rules and multi-step directions, and staying focused on tasks. Social skills include the skills to navigate interactions and relationships with peers and adults successfully. Examples include cooperating in a group, expressing emotions, and resolving conflicts in a positive way.

The CBRS is a short rating scale that teachers complete outside of instructional time. It includes a set of 17 items that are assessed with a rating scale from 1 to 5 to determine the frequency of certain behaviors. It takes approximately 1 to 3 minutes to complete per student using the online system. It is completed twice during the school year, in the fall and in the spring.

VKRP uses the CBRS because it is reliable and valid across culturally diverse contexts. Additionally, studies have repeatedly identified the significant association between children's scores on the CBRS and their development of a wide range of outcomes. For example, CBRS scores have been associated with children's overall cognitive achievement, math, vocabulary, and literacy outcomes.[14][15][16][17] Studies have also identified the relationship between children's CBRS scores and other important domains of school readiness, including attentional and inhibitory control.[18][19]

The self-regulation and social skills assessment (CBRS) has been validated for use with children ages three to ten years, with most studies focusing on those in preschool or kindergarten. Therefore, it was not necessary to make changes to the CBRS items for the spring of kindergarten. However, the VKRP team did need to establish new benchmarks for this timepoint. To do this, the VKRP team sent a survey to pre-kindergarten and kindergarten teachers, instructional coaches, and national experts in children's social-emotional development. The team asked participants to indicate what skills they would expect a child at the end of kindergarten to exhibit. Based on these data, as well as students' scores on the CBRS across the Commonwealth over the last five years, theoretically and empirically derived benchmarks were established for the spring CBRS social-skills and self-regulation measures.

How VKRP Defines Readiness for Summative Purposes

For summative purposes, VKRP defines **readiness** as having foundational skills in literacy, mathematics, self-regulation, and social skills. Students are considered "not ready" if they lack foundational skills in one or more of the areas that VKRP assesses.

The assessment tools in VKRP measure students' skills along a developmental continuum. However, it is common practice to establish benchmarks, often called thresholds or cut-points, to help determine where students fall related to a standard. For VKRP, a benchmark at the fall and spring of kindergarten were established to estimate students' school readiness in each area.

Benchmarks for the mathematics (EMAS), self-regulation, and social skills (CBRS) assessments were established using developmental expectations in conjunction with students' scores across the Commonwealth over the last four years. Students scoring below the benchmark on a specific assessment are most likely not demonstrating the level of skills one would expect for a kindergarten student in the fall or spring of kindergarten. The benchmarks vary from the fall to the spring based on increased skill level expectations.

> **A Note on Using Benchmarks:**
> Benchmarks can provide a quick, first-pass means of interpreting a student's scores. For instance, a student who scores well above the benchmark in a given early learning area likely possesses a high level of skill and could benefit from additional challenge. For students whose scores are falling well below the established benchmark for a given early learning area, additional support may be needed to help the student's skill development. Similarly, teachers will likely need to provide additional scaffolding to students whose scores are falling close to the benchmark, including those who are slightly above it.
> Although derived theoretically, it is important to recognize that imposing a benchmark on a measure that assesses students' skills provides only a rough, imprecise estimate, which can be particularly problematic for students who score just above or below a particular threshold. For these reasons, it is not recommended to use whether or not a student is above or below the benchmark as the sole criterion for understanding his or her skills within an early learning domain. For all students, continual progress monitoring is critical as students develop skills at different rates and respond differently to instruction and scaffolding.

Fall 2019 VKRP Readiness Data

Below, we present summary data from the implementation of the fall 2019 VKRP assessments. We provide prior years' assessment data as relevant for comparison. Please note that the fall of 2019 data are representative of the entire state of Virginia for the first time. In previous years, the data were comprised of those divisions who voluntarily participated in the pilot. Therefore, the information from fall 2019 is representative of the state whereas prior years are not.

In the fall of 2019, 132 of 134 school divisions participated in VKRP. The two divisions not included in the data were the Virginia School for the Deaf and Blind, which did not have any enrolled kindergarten students, and James City County schools, whose data was merged in with Williamsburg city's VKRP data. Of those, 1,106 Virginia schools implemented VKRP in the fall resulting in data from 5,021 classrooms and 91,943 students (99% of the state's population of public kindergarten students).

A list of participating divisions and their level of participation is provided in Appendix Item 1. Please note that 9 divisions did not complete the required VKRP assessments in the fall of 2019. During the fall 2019 assessment term, VKRP extended the deadline to allow several divisions more time to complete assessments. After the fall assessment term, the completion rates per division were reviewed. VKRP worked with VDOE to plan tiered messaging to divisions regarding implementation: Divisions completing 95-100% (n= 109) received a letter from Superintendent Lane and email from VKRP, thanking them for their high completion and requesting they share tips to help other divisions with implementation; divisions below expectation for completion on one assessment (n=14) received a letter from Superintendent Lane and required meeting with VKRP to develop plans for improved spring assessment completion (all participated); and divisions below expectations on both assessments (n=8) received a letter from Superintendent Lane with a template for creating a *VKRP Implementation and Improvement Plan* (VIIP) and were directed to review the plan with VKRP prior to submission to VDOE.

All 8 divisions met with VKRP and submitted VIIP plans. VKRP developed a spring communication schedule to include automated reminders via Mailchimp for prompting Division Contacts to monitor and to encourage assessment completion within their division's progress towards meeting a 100% completion rate in all assessments. Prior to the March school closures, webinars addressing the spring assessment term and completion had occurred with division contacts in 6 of the 8 superintendent regions with one being recorded and made available to all divisions. Follow-up with the 8 divisions preparing for spring implementation of VIIP plans was in progress when schools closed in March.

Because school division participation in VKRP was required by the General Assembly, the fall kindergarten readiness data are now representative of Virginia's public-school kindergarten student population. Descriptive information on Fall 2019 sample of schools and students is provided in Item 2.

Item 2. VKRP Demographics for the Fall 2018 and Fall 2019

			2018 Mean (SD) or N (%)	2019 Mean (SD) or N (%)
Demographics	Age	In months on September 1	65.7 (4.5)	65.6 (4.1)
	Gender	Female	14,899 (48.6%)	44,889 (48.4%)
		Male	15,746 (51.4%)	47,854 (51.6%)
	Race	American Indian or Alaska Native	207 (0.7%)	268 (0.3%)
		Asian	935 (3.1%)	6,388 (6.9%)
		Black, not of Hispanic origin	8,304 (27.1%)	19,133 (20.6%)
		Hispanic	4,036 (13.2%)	16,116 (17.4%)
		White, not of Hispanic origin	15,539 (50.7%)	44,233 (47.7%)
		Native Hawaiian or Pacific Islander	86 (0.3%)	151 (0.2%)
		Non-Hispanic, two or more races	1,538 (5.0%)	6,454 (7.0%)
	Socio-Economic Status	Disadvantaged=Y[a]	14,102 (45.4%)	35,323 (38.1%)
	Preschool Experience	Public Preschool	12,878 (42.0%)	32,399 (34.9%)
		No Preschool	7,057 (23.0%)	21,021 (22.7%)
	Disability	Disabled=Y[b]	1,830 (6.0%)	8,969 (9.7%)
	English Learner	ELL=Y[c]	2,876 (9.3%)	13,798 (14.9%)
Domain Scores	Literacy	PALS Total Score	56.26 (25.35)	57.35 (25.83)
	Math	Birthday Party[d]	31.84 (8.83)	-
		EMAS Scaled Score[d]	-	588.51 (69.69)
	Self-Regulation	CBRS Self-Regulation	3.65 (0.88)	3.55 (0.85)
	Social Skills	CBRS Social Skills	4.19 (0.72)	4.13 (0.72)

Note:
[a]Students identified as disadvantaged 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]Students identified as disabled if any VDOE Disability Code is present *except* Otherwise Qualified Handicapped under Sec. 504.
[c]Students identified as ELL if VODE EL 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.
[d]The Birthday Party math assessment was administered in fall 2018, the EMAS was administered in fall 2019.

Item 3: Enrollment in VKRP has increased over time, as has the proportion of students identified as "not ready." The statewide fall 2019 sample indicates a substantial number of children (44%) enter kindergarten lacking important foundational skills (literacy, mathematics, self-regulation, and/or social skills). However, samples from previous years were based on those divisions who volunteered to participate in the VKRP pilot, and therefore, the fall 2019 data are indicative of the readiness rates of kindergarten students in Virginia due to the large and comprehensive sample size of all divisions within the Commonwealth of Virginia. Readiness estimates by division are provided in Appendix Item 1.

Item 3. VKRP Kindergarten Readiness Estimates Over Time (2014-2019)
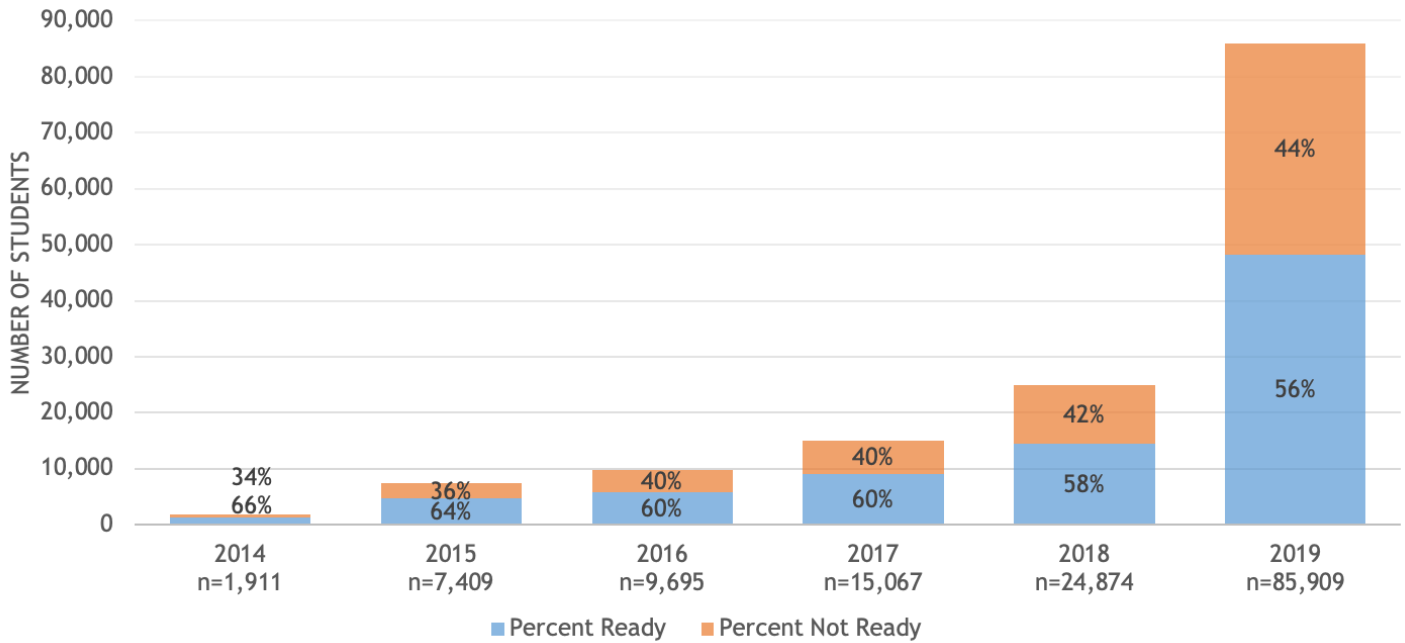
Note: Students missing one or more of the readiness assessments were not included.

In order to provide a view of how all of the state of Virginia's kindergarteners enter into school, the remainder of this report will exclusively focus on the fall 2019 data.

Item 4: Readiness results from fall 2019 are presented separately for each learning area. In the fall of 2019 18.1% of students were below benchmark in literacy, 21.5% in math, 20.0% in self-regulation, and 22.5% in social skills.

Item 4. Fall 2019 Readiness Results Within Each Domain Area
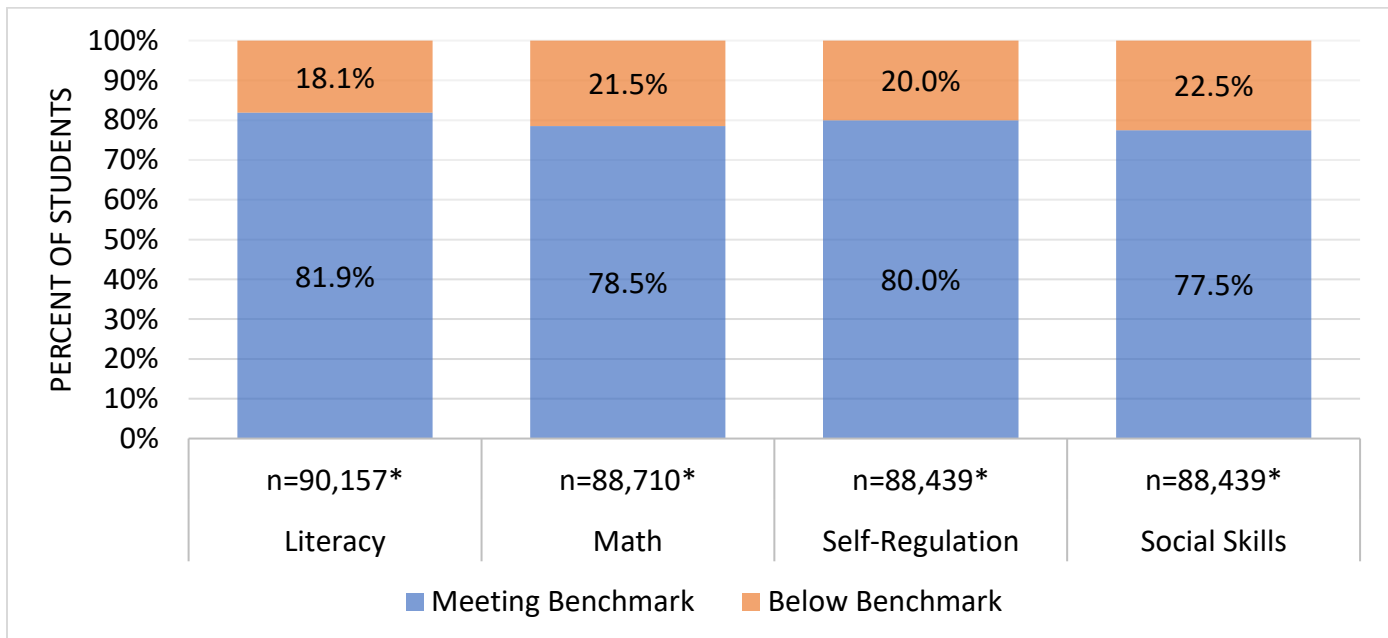
Note: All students who had data on each individual measure were included to obtain these estimates.

Item 5: The table below shows the breakdown of readiness results as a function of the number of areas in which a student is categorized as "not ready" or "ready" in the fall of 2019. Of the 43.8% of students identified as "not ready" overall, 20.6%, fell below benchmark in a single learning area, 13.8% were below benchmark in two areas, 6.2% were below benchmark in three areas, and 3.2% were below benchmark in all four areas.

Item 5. Breakdown of Readiness Estimates

Readiness	2019-20	
	Frequency	Percent
"Not ready" in at least 1 domain	37,605	43.8
"Not ready" in 1 domain	17,657	20.6
"Not ready" in 2 domains	11,892	13.8
"Not ready" in 3 domains	5,342	6.2
"Not ready" in 4 domains	2,714	3.2
"Ready" in all domains	48,304	56.2
Sub Total	85,909	100.0
Missing[a]	8,005	-
Total[b]	**93,914**	-

Note:
[a]Missing category includes the number of students missing one or more assessment in 2019.
[b]Total is the number of students enrolled in the 2019 sample.

Item 6: The table below displays the overall readiness categorization broken down by individual learning domains for children categorized as "not ready" (43.8%, orange rows) and "ready" (56.2%, bottom row) in fall 2019.

Item 6. Fall 2019 Readiness by Learning Domain

Ready or Not Ready	Literacy	Math	Self-Regulation	Social Skills	n	%
Not Ready	✗	✗	✗	✗	2,714	3.16
	✗	✗	✗	✓	2,195	2.56
	✗	✗	✓	✗	663	0.77
	✗	✗	✓	✓	4,253	4.95
	✗	✓	✗	✗	760	0.88
	✗	✓	✗	✓	553	0.64
	✗	✓	✓	✗	474	0.55
	✗	✓	✓	✓	3,243	3.77
	✓	✗	✗	✗	1,724	2.01
	✓	✗	✗	✓	1,223	1.42
	✓	✗	✓	✗	773	0.90
	✓	✗	✓	✓	4,491	5.23
	✓	✓	✗	✗	4,616	5.37
	✓	✓	✗	✓	2,795	3.25
	✓	✓	✓	✗	7,128	8.30
Ready	✓	✓	✓	✓	48,304	56.22
				Total Sample	85,909*	100.0

Note: ✓ = "Ready" in learning domain ✗ = "Not ready" in learning domain
* = Students missing one or more of the readiness assessments were not included.

Readiness and Economic Disadvantage. We examined students' readiness scores based upon whether or not they came from economically disadvantaged backgrounds. We identified students as coming from economically disadvantaged backgrounds according to the VDOE Disadvantaged Status Flag entered in the Student Record Collection (SRC) and described in Appendix Item 2.

Item 7: Student's from economically disadvantaged backgrounds assessed in the fall of 2019 were significantly more likely to be categorized as "not ready" (55.5%) than their non-disadvantaged peers (36.7%).

Item 7. Fall 2019 Overall Readiness Estimates for Students from Economically Disadvantaged Backgrounds
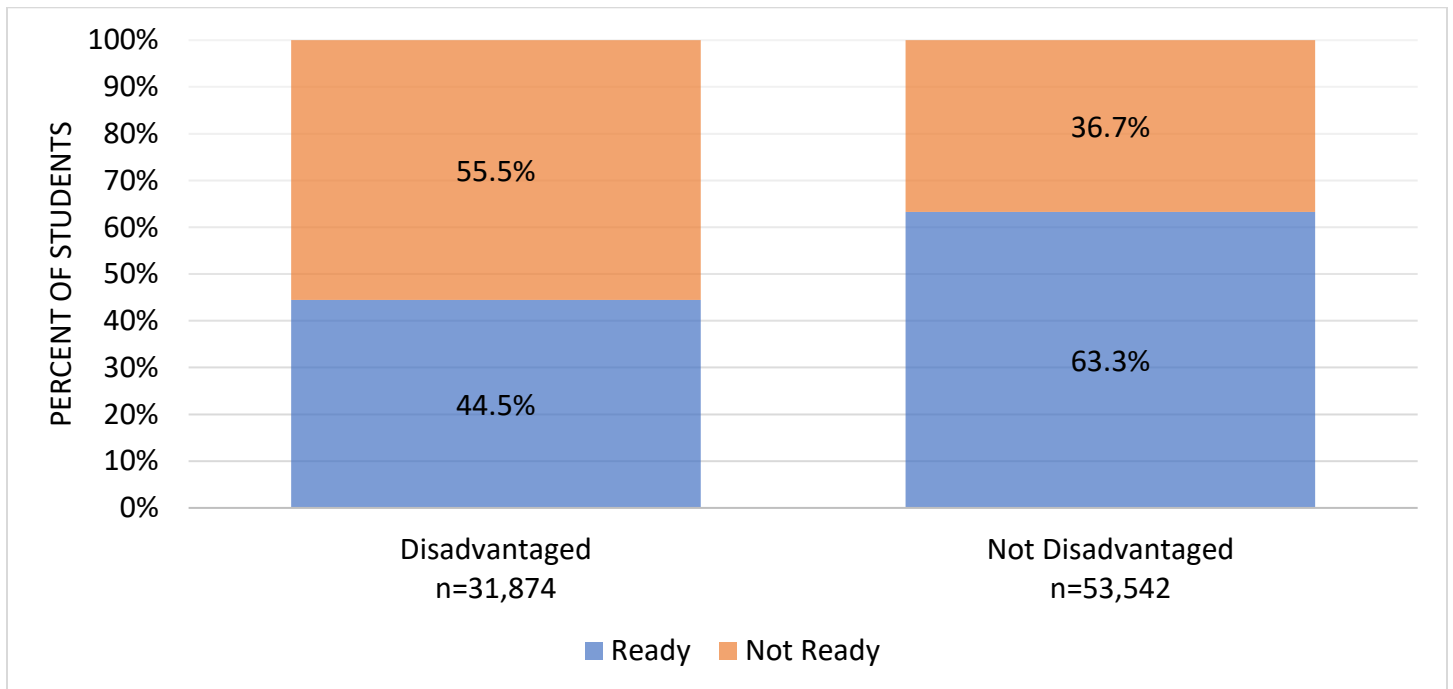
Note: Students missing one or more of the readiness assessments were not included.

Item 8: Students from economically disadvantaged backgrounds assessed in the fall of 2019 were also significantly more likely than students who were not considered to be economically disadvantaged to be categorized as "not ready" (orange) in each of the four separate learning domains.

Item 8. Fall 2019 Readiness by Domains for Students With and Without Economic Disadvantage

Readiness		Missing n	Missing %	Disadvantaged n	Disadvantaged %	Not Disadvantaged n	Not Disadvantaged %	Total n	Total %
Overall[a]	Not Ready	263	56.9	17,681	55.5	19,643	36.7	37,587	43.8
	Ready	199	43.1	14,193	44.5	33,899	63.3	48,291	56.2
Literacy[b]	Not Ready	136	29.4	8,144	25.6	6,568	12.3	14,848	17.3
	Ready	326	70.6	23,730	74.4	46,974	87.7	71,030	82.7
Math[c]	Not Ready	155	33.5	10,232	32.1	7,638	14.3	18,025	21.0
	Ready	307	66.5	21,642	67.9	45,904	85.7	67,853	79.0
Self-Regulation[d]	Not Ready	132	28.6	7,866	24.7	8,573	16.0	16,571	19.3
	Ready	330	71.4	24,008	75.3	44,969	84.0	69,307	80.7
Social Skills[e]	Not Ready	127	27.5	8,158	25.6	10,557	19.7	18,842	21.9
	Ready	335	72.5	23,716	74.4	42,985	80.3	67,036	78.1
Total		**462**	**100.0**	**31,874**	**100.0**	**53,542**	**100.0**	**85,878***	**100.0**

Note: * = Students missing one or more of the readiness assessments were not included.
All differences are significant (p <.001).

Item 9: Students from economically disadvantaged backgrounds with public preschool experience were *less likely* to be categorized as "not ready" (50.4%) compared to children from economically disadvantaged backgrounds without any preschool experience (67.5%).

Item 9. Fall 2019 Overall Readiness by Public Preschool Experience for Students from Economically Disadvantaged Backgrounds
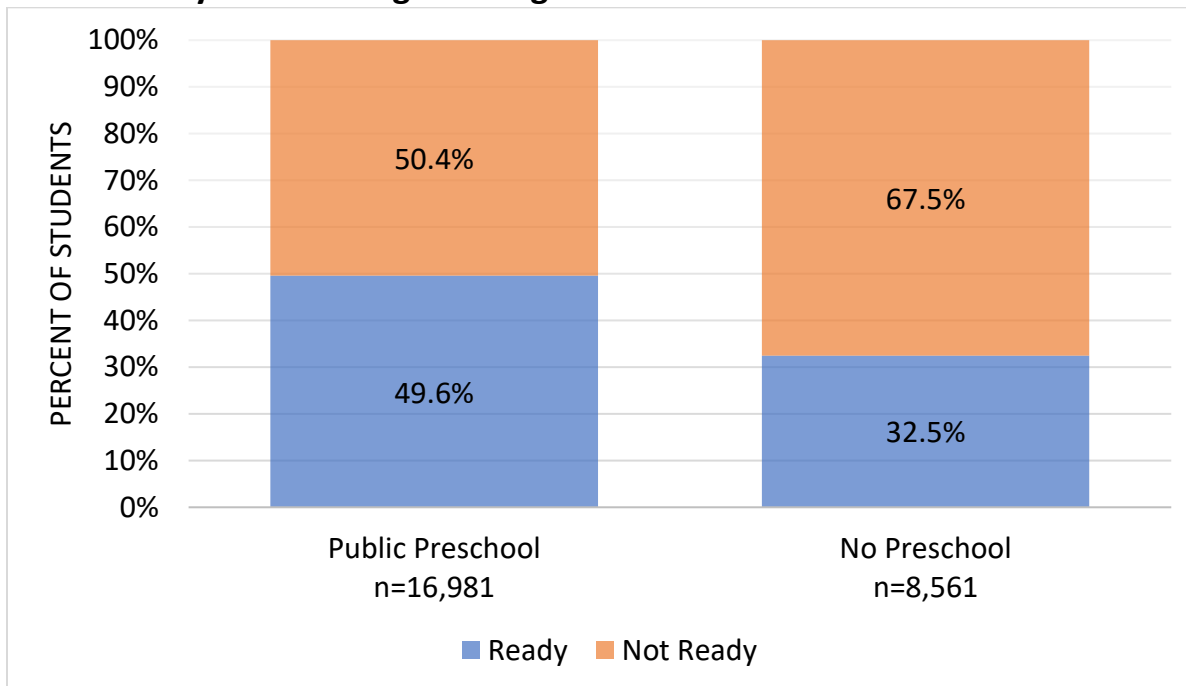
Note: Students with complete readiness assessment, Disadvantage Status=Y, and preschool experience data were included.

Item 10: Students from economically disadvantaged backgrounds with preschool experience were also significantly *less likely* to be categorized as "not ready" (orange) than students from economically disadvantaged backgrounds with no preschool experience in each of the four separate learning areas, except social skills.

Item 10. Fall 2019 Domain Areas by Public Preschool Experience for Students from Economically Disadvantaged Backgrounds

Readiness		Preschool Status				Total	
		Public Preschool		No preschool experience			
		n	%	n	%	n	%
Overall[a]	Not Ready	8,565	50.4	5,780	67.5	14,345	56.2
	Ready	8,416	49.6	2,781	32.5	11,197	43.8
Literacy[b]	Not Ready	2,947	17.4	3,841	44.9	6,788	26.6
	Ready	14,034	82.6	4,720	55.1	18,754	73.4
Math[c]	Not Ready	4,557	26.8	3,949	46.1	8,506	33.3
	Ready	12,424	73.2	4,612	53.9	17,036	66.7
Self-Regulation[d]	Not Ready	3,926	23.1	2,420	28.3	6,346	24.8
	Ready	13,055	76.9	6,141	71.7	19,196	75.2
Social Skills[e]	Not Ready	4,564	26.9	1,882	22.0	6,446	25.2
	Ready	12,417	73.1	6,679	78.0	19,096	74.8
Total		**16,981**	**100.0**	**8,561**	**100.0**	**25,542***	**100.0**

Note: * = Students with complete readiness assessment, Disadvantage Status=Y, and preschool experience data were included. All differences are significant (p <.001).

VKRP and Participation in VPI. As requested, below we provide information examining the associations between kindergarten readiness as defined in VKRP and participation in the Virginia Preschool Initiative (VPI). VPI is the largest public provider of pre-K education for children in Virginia. The legislative intent of the initiative is to establish a high-quality preschool education program for four-year-old students deemed at-risk of early academic failure and to thereby reduce disparities among young children upon formal school entry. VPI students must be from a family that meets the following requirements:

(i) family income at or below 200 percent of poverty,
(ii) homelessness,
(iii) student's parents or guardians are school dropouts, or
(iv) family income is less than 350 percent of federal poverty guidelines in the case of students with special needs or disabilities.

As part of the current legislation, the General Assembly requested that our research team use the VKRP results to determine how well the Virginia Preschool Initiative promotes readiness in all key developmental areas assessed. There are many limitations to being able to address this request. First, we do not have the data to be able to say that VPI promotes student's readiness skills. Evidence from strong experimental or quasi-experimental research designs are needed to make these kinds of causal statements. We can show comparisons between children who come from low income backgrounds who attended VPI compared to children from low income backgrounds who did not attend preschool. However, attendance in VPI is not

randomly decided. These two groups of students are likely different from each other on many factors (not measured) in addition to their preschool experience.

Second, these data do not consider the quality of the VPI experience. The quality of the classroom interactions is being measured through another instructional tool through the Advancing Effective Interactions and Instruction (AEII) Initiative. For much of the academic year 2019-2020, the quality of teacher-child interactions was assessed in VPI classrooms via objective observations using the Classroom Assessment Scoring System (CLASS[TM]) 2020 prior to the COVID pandemic suspending all instruction in Virginia public schools. These findings have been submitted via a separate committee report (https://aeiionline.org/wp-content/uploads/sites/5/2020/09/Advancing-Effective-Interactions-and-Instruction-in-VPI-Classrooms-Progress-Report-June-2020.pdf).

We identified students as attending VPI using the Preschool Funding Code from VDOE. Students were identified as attending VPI if the student slot is fully funded by the state Virginia Preschool Initiative. CASTL then compared students who participated in VPI to students who were identified as economically disadvantaged but were reported to have no preschool experience via the Preschool Experience Code from VDOE (see Appendix Item 2). These results are provided in Item 12 and Item 13.

Item 11: Students considered to be from economically disadvantaged backgrounds with preschool experience were significantly *less likely* to be categorized as "not ready" than their peers with no preschool experience (Item 9). A similar advantage was also found for students from economically disadvantaged backgrounds who attended VPI funded preschool prior to entering kindergarten. These data show that children who come from economically disadvantaged backgrounds who attend VPI are *less likely* to be categorized as "not ready" (47.2%) as compared to those who do not attend any preschool (67.5%).

Item 11. Fall 2019 Overall Readiness Estimates by VPI Experience for Students from Economically Disadvantaged Backgrounds
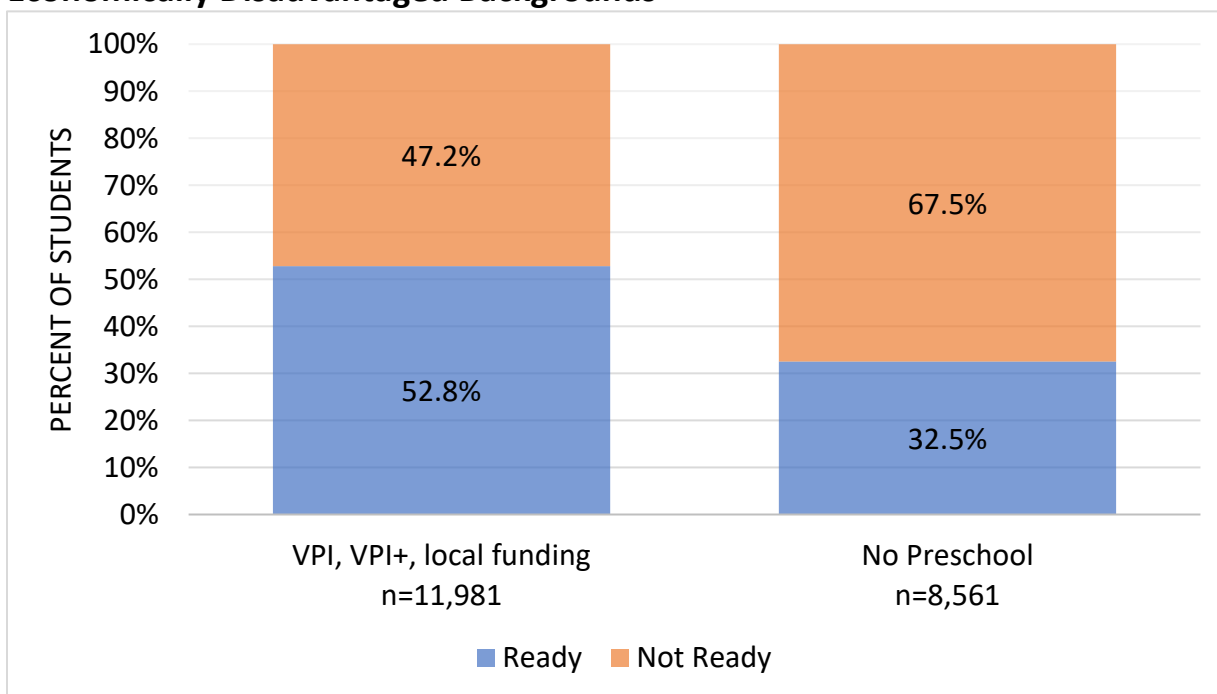
Note: Students with complete readiness assessment, Disadvantage Status=Y, and preschool funding data were included.

Item 12: Students from economically disadvantaged backgrounds with VPI preschool experience were also significantly *less likely* to be categorized as "not ready" (orange) than students from economically disadvantaged backgrounds with no preschool experience in each of the four separate learning areas, except social skills.

Item 12. Fall 2019 Areas of Readiness by VPI Experience for Students from Economically Disadvantaged Backgrounds

Readiness		VPI, VPI+, or local funding for VPI placement		No preschool experience		Total	
		n	%	n	%	n	%
Overall[a]	Not Ready	5,651	47.2	5,780	67.5	11,431	55.6
	Ready	6,330	52.8	2,781	32.5	9,111	44.4
Literacy[b]	Not Ready	1,769	14.8	3,841	44.9	5,610	27.3
	Ready	10,212	85.2	4,720	55.1	14,932	72.7
Math[c]	Not Ready	2,865	23.9	3,949	46.1	6,814	33.2
	Ready	9,116	76.1	4,612	53.9	13,728	66.8
Self-Regulation[d]	Not Ready	2,470	20.6	2,420	28.3	4,890	23.8
	Ready	9,511	79.4	6,141	71.7	15,652	76.2
Social Skills[e]	Not Ready	3,011	25.1	1,882	22.0	4,893	23.8
	Ready	8,970	74.9	6,679	78.0	15,649	76.2
Total		**11,981**	**100.0**	**8,561**	**100.0**	**20,542***	**100.0**

Note: * = Students with complete readiness assessment, Disadvantage Status=Y, and preschool funding data were included. All differences are significant ($p < .001$).

Item 13: All public preschool students must be reported to the Student Record Collection (SRC) system when the school division is the fiscal agent, grantee, or sub-grantee. All public preschool students receive both a Preschool Funding Code and a Preschool Experience Code assigned by school divisions in the preschool year. Non-public preschoolers are not captured in the SRC system, and their Preschool Experience Code is parent-reported at kindergarten entry. If parent-reported preschool experience does not match the SRC system, the Preschool Experience Code will default to division records. This information comes from the Guidance for PK Funding and PK Experience Codes posted on the VPI website.[20] Preschool experience and funding codes (see Appendix Item 2) were combined to display overall readiness rates by type of preschool experience and funding. Readiness rates ranged from 68.9% (private preschool or daycare) to 37.0% (special education preschool).

Item 13. Fall 2019 Overall Readiness by Preschool Experience and Funding

Bar chart — PERCENT OF STUDENTS READY (Ready):
- Private Preschool or Daycare n=31,559: 68.9%
- Title I n=1,196: 67.6%
- Local funding for other placement n=1,135: 58.7%
- Family Home Daycare n=1,473: 57.2%
- VPI, VPI+, local funding for VPI placement n=20,927: 56.3%
- DoD Child Dev Program n=662: 54.5%
- Head Start n=6,140: 45.2%
- Missing n=462: 43.1%
- No Preschool Experience n=18,811: 41.6%
- SpEd Preschool n=3,513: 37.0%
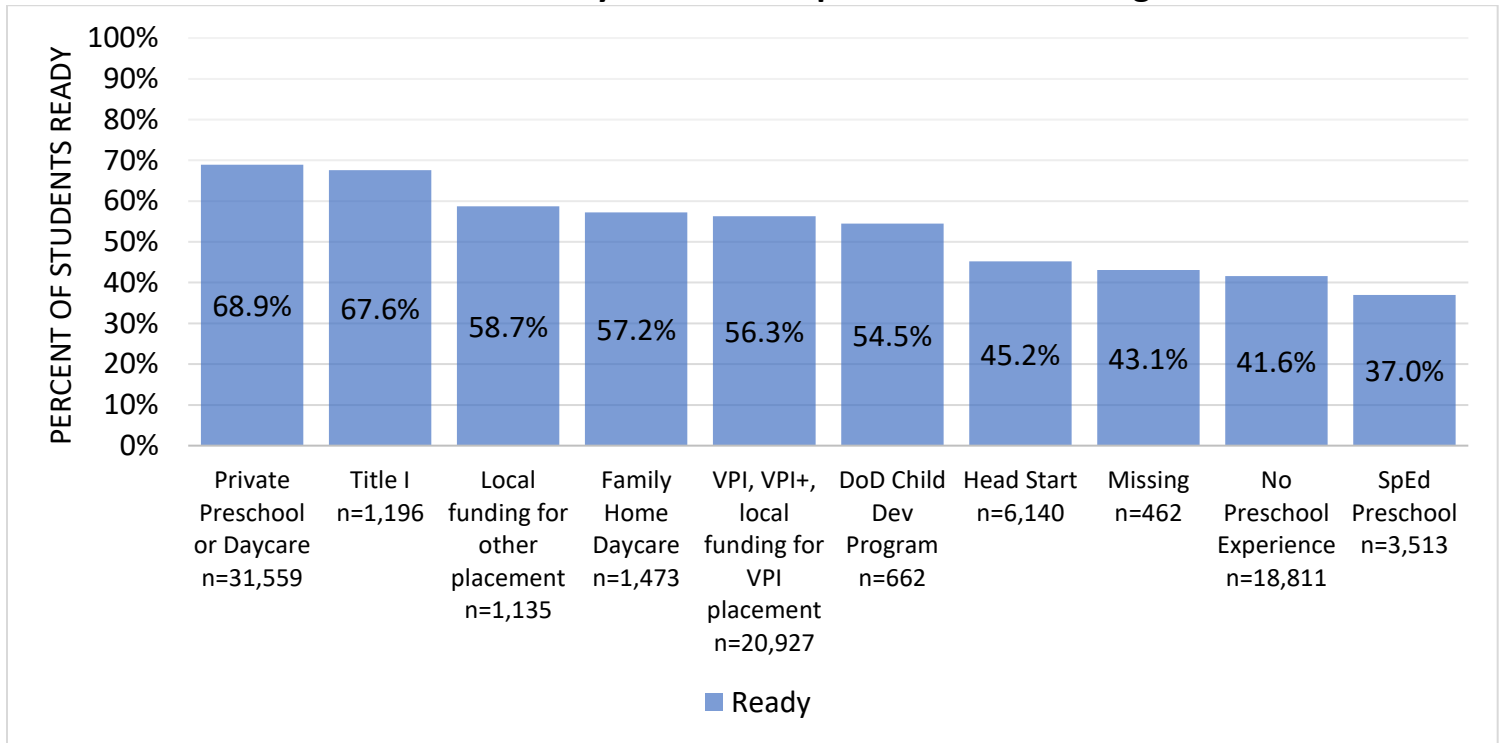
Note: Students with complete readiness assessment, preschool experience, and/or preschool funding data were included.

Items 14 and 15: Students identified with a disability were more likely to be categorized as "not ready" (66.3%) compared to students without a disability (41.7%). This is true overall and in each of the four separate learning areas.

Item 14. Fall 2019 Overall Readiness by Disability Status

Stacked bar chart — PERCENT OF STUDENTS (Ready / Not Ready):
- Disability n=6,773: Not Ready 66.3%, Ready 33.7%
- No Disability n=78,421: Not Ready 41.7%, Ready 58.3%
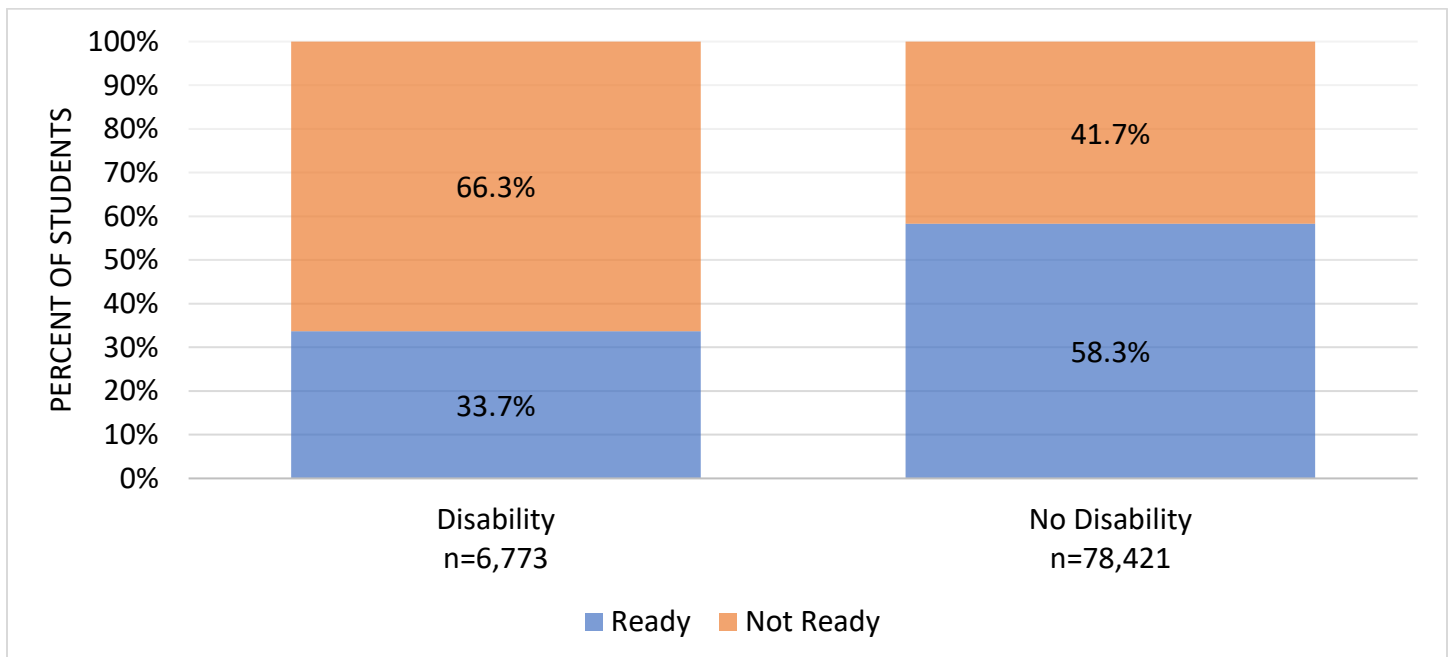
Note: Students with complete readiness assessment and Disability status were included.

Item 15. Fall 2019 Areas of Readiness by Disability Status

Readiness		Disability Status						Total	
		Missing		Disability		No Disability			
		n	%	n	%	n	%	n	%
Overall[a]	Not Ready	365	53.4	4,493	66.3	32,729	41.7	37,587	43.8
	Ready	319	46.6	2,280	33.7	45,692	58.3	48,291	56.2
Literacy[b]	Not Ready	156	22.8	1,757	25.9	12,935	16.5	14,848	17.3
	Ready	528	77.2	5,016	74.1	65,486	83.5	71,030	82.7
Math[c]	Not Ready	190	27.8	2,626	38.8	15,209	19.4	18,025	21.0
	Ready	494	72.2	4,147	61.2	63,212	80.6	67,853	79.0
Self-Regulation[d]	Not Ready	178	26.0	2,755	40.7	13,638	17.4	16,571	19.3
	Ready	506	74.0	4,018	59.3	64,783	82.6	69,307	80.7
Social Skills[e]	Not Ready	198	28.9	2,532	37.4	16,112	20.5	18,842	21.9
	Ready	486	71.1	4,241	62.6	62,309	79.5	67,036	78.1
Total		684	100.0	6,773	100.0	78,421	100.0	85,878*	100.0

Note: * = Students with complete readiness assessment data were included. All differences are significant ($p < .001$).

Items 16 and 17: Students identified as English Language Learners (ELL) are more likely to be categorized as "not ready" (63.8%) than students who are not considered ELL (40.6%). This is true overall and in each of the four separate learning areas.

Item 16. Fall 2019 Overall Readiness by English Language Learner Status
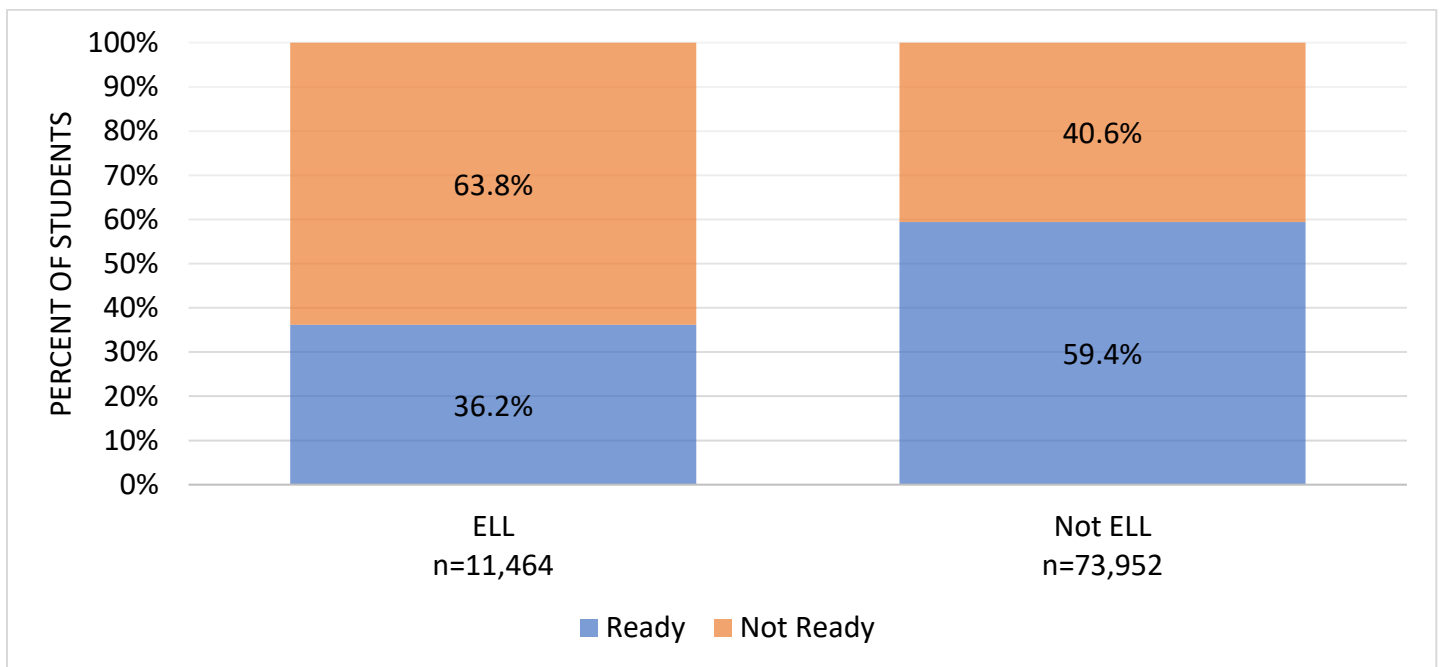
Note: Students with complete readiness assessment and ELL status were included.

Item 17. Fall 2019 Areas of Readiness by ELL Status

Readiness		ELL Status						Total	
		Missing		ELL		Not ELL			
		n	%	n	%	n	%	n	%
Overall[a]	Not Ready	263	56.9	7,310	63.8	30,014	40.6	37,587	43.8
	Ready	199	43.1	4,154	36.2	43,938	59.4	48,291	56.2
Literacy[b]	Not Ready	136	29.4	4,170	36.4	10,542	14.3	14,848	17.3
	Ready	326	70.6	7,294	63.6	63,410	85.7	71,030	82.7
Math[c]	Not Ready	155	33.5	5,144	44.9	12,726	17.2	18,025	21.0
	Ready	307	66.5	6,320	55.1	61,226	82.8	67,853	79.0
Self-Regulation[d]	Not Ready	132	28.6	2,872	25.1	13,567	18.3	16,571	19.3
	Ready	330	71.4	8,592	74.9	60,385	81.7	69,307	80.7
Social Skills[e]	Not Ready	127	27.5	2,578	22.5	16,137	21.8	18,842	21.9
	Ready	335	72.5	8,886	77.5	57,815	78.2	67,036	78.1
Total		684	100.0	6,773	100.0	78,421	100.0	85,878*	100.0

Note: * = Students with complete readiness assessment data were included. All differences are significant ($p < .001$).

Items 18 and 19: There was significant variability in the readiness rates across ethnic groups and race. Hispanic, Black, and American Indian/Alaska Native students were more likely to be categorized as "not ready" (58.2% Hispanic, 52.6% Black, 49.1% American Indian/Alaska Native) overall compared to White students. This pattern holds for the four separate learning areas.

Item 18. Fall 2019 Overall Readiness by Race and Ethnicity
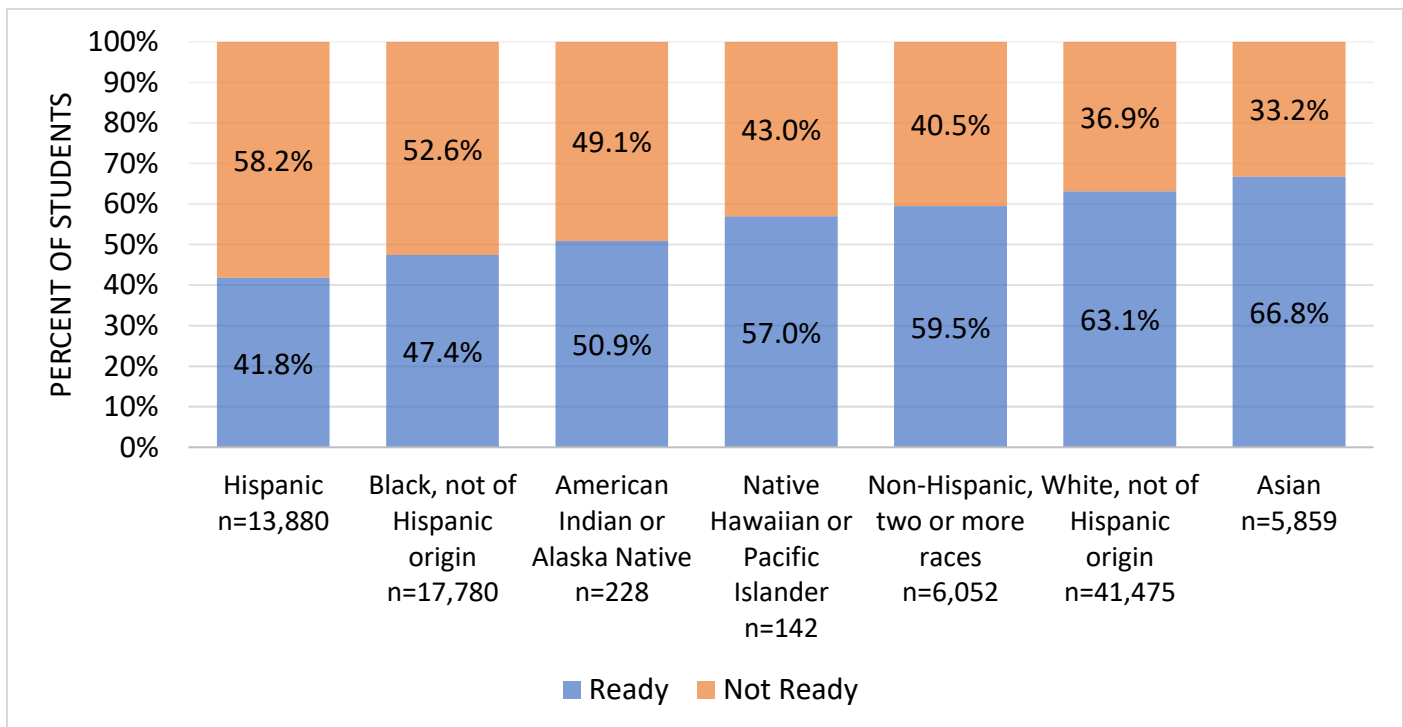
Note: Students with complete readiness assessment and race/ethnicity data were included

Item 19. Fall 2019 Areas of Readiness by Race and Ethnicity

Readiness		American Indian or Alaska Native		Asian		Black, not of Hispanic origin		Hispanic		White, not of Hispanic origin		Native Hawaiian or Pacific Islander		Non-Hispanic, two or more races		Total	
		n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Overall[a]	Not Ready	112	49.1	1,946	33.2	9,356	52.6	8,077	58.2	15,323	36.9	61	43.0	2,449	40.5	37,324	43.7
	Ready	116	50.9	3,913	66.8	8,424	47.4	5,803	41.8	26,152	63.1	81	57.0	3,603	59.5	48,092	56.3
Literacy[b]	Not Ready	36	15.8	595	10.2	3,222	18.1	4,436	32.0	5,543	13.4	21	14.8	859	14.2	14,712	17.2
	Ready	192	84.2	5,264	89.8	14,558	81.9	9,444	68.0	35,932	86.6	121	85.2	5,193	85.8	70,704	82.8
Math[c]	Not Ready	52	22.8	937	16.0	5,062	28.5	5,241	37.8	5,551	13.4	29	20.4	998	16.5	17,870	20.9
	Ready	176	77.2	4,922	84.0	12,718	71.5	8,639	62.2	35,924	86.6	113	79.6	5,054	83.5	67,546	79.1
Self-Regulation[d]	Not Ready	52	22.8	935	16.0	4,439	25.0	3,056	22.0	6,849	16.5	28	19.7	1,080	17.8	16,439	19.2
	Ready	176	77.2	4,924	84.0	13,341	75.0	10,824	78.0	34,626	83.5	114	80.3	4,972	82.2	68,977	80.8
Social Skills[e]	Not Ready	61	26.8	896	15.3	5,116	28.8	3,002	21.6	8,287	20.0	24	16.9	1,329	22.0	18,715	21.9
	Ready	167	73.2	4,963	84.7	12,664	71.2	10,878	78.4	33,188	80.0	118	83.1	4,723	78.0	66,701	78.1
Total		228	100.0	5,859	100.0	17,780	100.0	13,880	100.0	41,475	100.0	142	100.0	6,052	100.0	85,416*	100.0

Note: * = Students with race/ethnicity code and complete readiness assessment data were included. All differences are significant ($p < .001$).

Item 20: Male students are more likely to be categorized as "not ready" (49.7%) than female students (37.4%) both overall and within each of the separate learning areas.

Item 20. Fall 2019 Overall Readiness by Gender

Note: Students with complete readiness assessment and gender data were included.

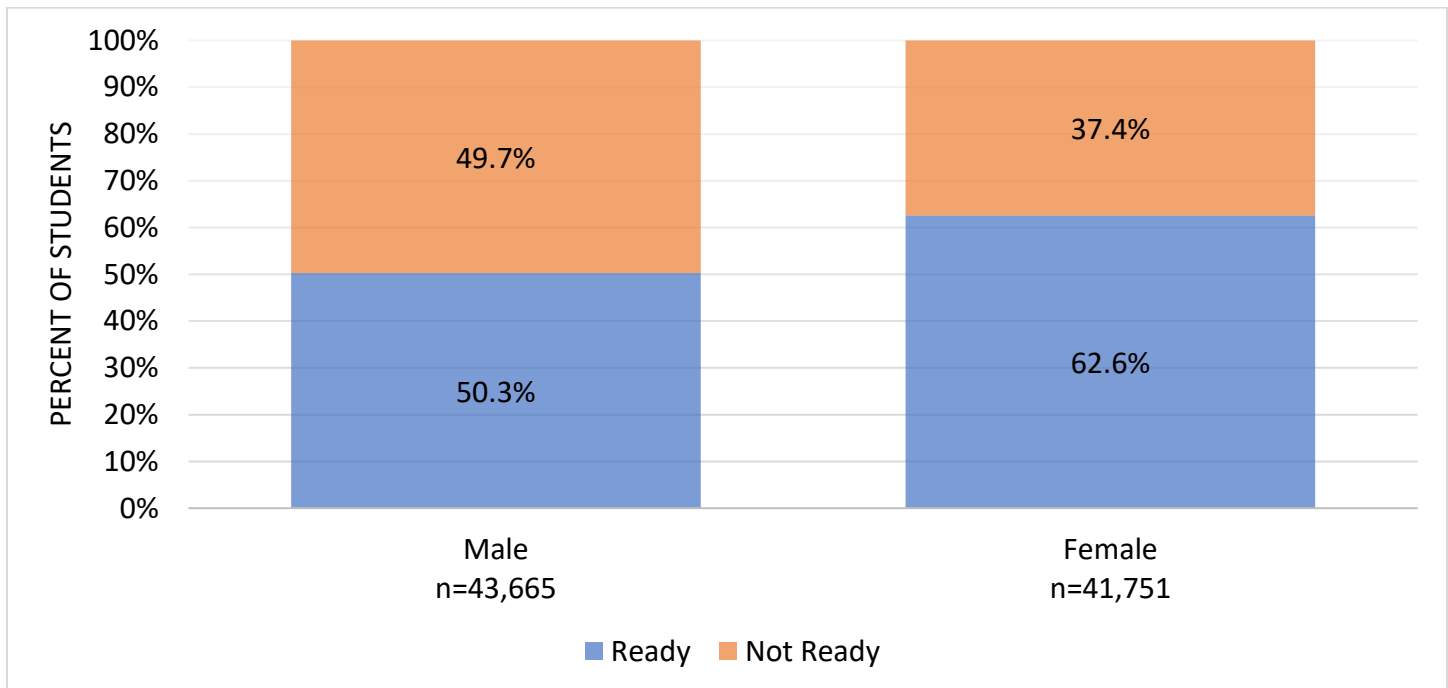## Item 21. Fall 2019 Areas of Readiness by Gender

Readiness		Gender						Total	
		Missing		Female		Male			
		n	%	n	%	n	%	n	%
Overall[a]	Not Ready	263	56.9	15,631	37.4	21,693	49.7	37,587	43.8
	Ready	199	43.1	26,120	62.6	21,972	50.3	48,291	56.2
Literacy[b]	Not Ready	136	29.4	6,647	15.9	8,065	18.5	14,848	17.3
	Ready	326	70.6	35,104	84.1	35,600	81.5	71,030	82.7
Math[c]	Not Ready	155	33.5	8,398	20.1	9,472	21.7	18,025	21.0
	Ready	307	66.5	33,353	79.9	34,193	78.3	67,853	79.0
Self-Regulation[d]	Not Ready	132	28.6	5,232	12.5	11,207	25.7	16,571	19.3
	Ready	330	71.4	36,519	87.5	32,458	74.3	69,307	80.7
Social Skills[e]	Not Ready	127	27.5	6,493	15.6	12,222	28.0	18,842	21.9
	Ready	335	72.5	35,258	84.4	31,443	72.0	67,036	78.1
Total		462	100.0	41,751	100.0	43,665	100.0	85,878*	100.0

Note: * = Students with complete readiness assessment data were included. All differences are significant ($p < .001$).

Item 22: Younger students were more likely to be categorized as "not ready" overall and in each of the four learning areas than older students.

Item 22. Fall 2019 Areas of Readiness by Age

Readiness		Age in Months Quartiles								Total	
		<=62.26		62.27 – 65.45		65.46 – 68.80		68.61+			
		n	%	n	%	n	%	n	%	n	%
Overall[a]	Not Ready	11,338	52.9	9,596	44.8	8,442	40.2	7,948	36.9	37,324	43.7
	Ready	10,089	47.1	11,818	55.2	12,584	59.8	13,601	63.1	48,092	56.3
Literacy[b]	Not Ready	5,048	23.6	3,847	18.0	3,131	14.9	2,686	12.5	14,712	17.2
	Ready	16,379	76.4	17,567	82.0	17,895	85.1	18,863	87.5	70,704	82.8
Math[c]	Not Ready	6,358	29.7	4,672	21.8	3,741	17.8	3,099	14.4	17,870	20.9
	Ready	15,069	70.3	16,742	78.2	17,285	82.2	18,450	85.6	67,546	79.1
Self-Regulation[d]	Not Ready	5,515	25.7	4,358	20.4	3,426	16.3	3,140	14.6	16,439	19.2
	Ready	15,912	74.3	17,056	79.6	17,600	83.7	18,409	85.4	68,977	80.8
Social Skills[e]	Not Ready	5,074	23.7	4,718	22.0	4,445	21.1	4,478	20.8	18,715	21.9
	Ready	16,353	76.3	16,696	78.0	16,581	78.9	17,071	79.2	66,701	78.1
Total		21,427	100.0	21,414	100.0	21,026	100.0	21,549	100.0	85,416*	100.0

Note: * = Students with birthdate and complete readiness assessment data were included. All differences are significant ($p < .001$).

Item 23: In fall 2019 56.2% of the statewide sample was categorized as "ready" for kindergarten. Item 23 displays the proportion of students categorized as "ready" in each of the 132 participating divisions (randomly ordered). Division-level readiness rates ranged from 28% to 82% with a standard deviation of 8.5%. See Appendix 1 for individual division participation, completion, and readiness rates.

Item 23. Fall 2019 Overall Readiness Variability Across Divisions
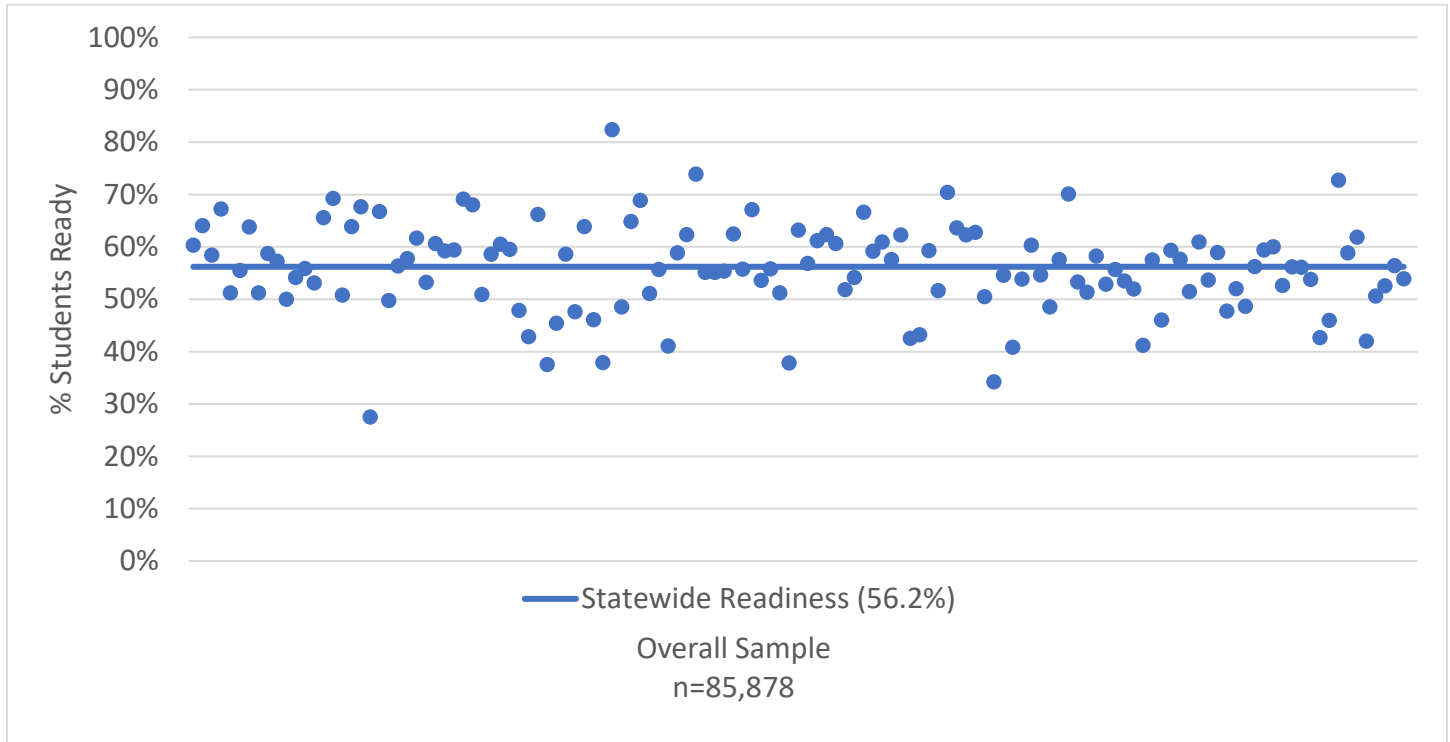
Prekindergarten VKRP Pilot Cohort

Development and Piloting of Prekindergarten Assessments
The preschool math, social skills, and self-regulation assessments continue to be piloted through funding from the Virginia Department of Social Services (VDSS) and private funding (The Obici Healthcare Foundation in Western Tidewater and the Alleghany Foundation in the Alleghany Highlands) as part of an implementation pilot of an early childhood education curriculum package called STREAMin[3].[21] The prekindergarten EMAS forms (beginning and end of preschool) were developed in a similar process to the spring kindergarten form described above. The items of the CBRS that measure children's self-regulation and social skills are the same at each timepoint (fall preschool, spring preschool, fall kindergarten, spring kindergarten). Preschool VKRP training and instructional resources have also been developed that mirror the kindergarten VKRP system. As part of the STREAMin[3] implementation pilot, the preschool VKRP assessments are being administered in the participating preschool classrooms.

Based on preliminary data from the pilots, the preschool measures are working given the variability of scores and sub-scores on the CBRS and EMAS. Similar to the kindergarten version of the VKRP, the pre-K VKRP are able to show student academic and social-emotional growth over the course of the school year. For children assessed during preschool and kindergarten, their growth can be tracked across this two-year period.

The COVID pandemic prevented preschool teachers from completing the preschool VKRP assessments in the spring of 2020. We will continue to pilot the preschool version of VKRP in the 2020-21 school year with an additional five public school divisions participating this year.

Prekindergarten VKRP Pilot Fall 2019 data
A total of 147 classrooms spread across 45 programs within 20 divisions participated in the 2019 fall pilot. Participating classrooms submitted a total of 1,041 prekindergarten EMAS and 2,246 CBRS assessments. School division participation in VKRP was voluntary and, therefore, the prekindergarten readiness data are not representative of Virginia's prekindergarten student population. Demographic information on fall 2019 sample of classrooms and students is provided in Item 24.

Item 24. VKRP Pre-K Pilot Demographics for Fall 2019

			2019 Mean (SD) or N (%)
Demographics	Age	In months on Sept 1	52.5 (3.6)
	Gender	Female	1,017 (50.0%)
		Male	1,016 (50.0%)
	Race	American Indian or Alaska Native	8 (0.4%)
		Asian	23 (1.1%)
		Black, not of Hispanic origin	1,074 (52.8%)
		Hispanic	246 (12.1%)
		White, not of Hispanic origin	516 (25.4%)
		Native Hawaiian or Pacific Islander	9 (0.4%)
		Non-Hispanic, two or more races	157 (7.7%)
	Socio-Economic Status	Disadvantaged=Y[a]	913 (40.0%)
	Preschool Experience	Public Preschool	1,997 (87.6%)
		No Preschool	0 (0%)
	Disability	Disabled=Y[b]	127 (6.3%)
	English Learner	ELL=Y[c]	126 (6.2%)
Domain Scores	Math	EMAS Scaled Score	513.67 (81.87)
	Self-Regulation	CBRS Self-Regulation	3.37 (0.77)
	Social Skills	CBRS Social Skills	3.80 (0.76)

Note:
[a]Students identified as disadvantaged 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]Students identified as disabled if any VDOE Disability Code is present *except* Otherwise Qualified Handicapped under Sec. 504.
[c]Students identified as ELL if VDOE EL 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.

Item 25: Prekindergarten students involved in the pilot completed the VKRP assessment, to include both the EMAS and the CBRS. Descriptive statistics from the pilot sample indicate there is variability in scores and relatively high internal consistency for both measures.

Item 25. VKRP 2019 Pre-K Pilot Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	α
Geometry Subdomain Score	1041	0	9	5.21	2.57	.783
Patterning Subdomain Score	1041	0	6	2.57	1.99	.767
Numeracy Subdomain Score	1041	0	16	8.26	4.471	.869
Computation Subdomain Score	1041	0	2	1.25	0.809	.605
EMAS Total Score	1041	0	33	17.29	8.255	.916
EMAS Scaled Score	1041	250	758	513.23	81.454	-
CBRS Self-Regulation Score	2246	1	5	3.37	0.77	.961
CBRS Social Skills Score	2246	1	5	3.80	0.76	.910

Communication of Kindergarten VKRP to the Preschool Community

CASTL has developed a series of resources to communicate with prekindergarten parents and teachers about school readiness and how VKRP measures and supports school readiness skills. These resources include short videos about early math, self-regulation, and social skills, a set of slides that can be adapted, and instructional resources for both preschool teachers and parents to support children's skill development. This spring, the toolkit of prekindergarten instructional resources became available to divisions across the Commonwealth. Additionally, the VKRP team led several in-person presentations with prekindergarten teachers and parents to discuss the importance of school readiness and how VKRP measures and supports readiness. Prekindergarten teachers were given access to view the VKRP training modules in order to understand the facets of the assessments and how to apply the overarching concepts into their daily practice.

VKRP During the COVID-19 Pandemic

Kindergarten VKRP
For the 2020-21 school year, VKRP administration is mandated for all incoming kindergarten students in the Commonwealth of Virginia. Readiness data is critical, especially this year, to understand the pandemic's impact on Virginia kindergarteners. All divisions are expected to complete the assessments in the fall and spring of this school year. No waivers are being granted at the division level and VDOE and UVA-CASTL are providing additional guidance and support to school divisions to complete fall and spring VKRP assessments, with consideration for the various and shifting scenarios of instruction (e.g., in person, virtual including synchronous and asynchronous, hybrid, etc.) that will occur this year given the pandemic.

However, health and safety practices put into place for the COVID-19 pandemic prevent these assessments from being administered as designed. For example, the literacy assessment administered via PALS now has both in-person and virtual modes of administration (see PALS office for additional information). The math assessment (EMAS) can only be administered in-person. The self-regulation and social skills assessments are based upon observations of students and school experiences look very different this year. We anticipate that fewer kindergarten students will be assessed across all learning domains (math, literacy via PALS, self-regulation, and social skills) this year due to children being exempted for various reasons (e.g., the in-person math assessment could not be completed, a teacher does not have enough interaction with a student to observe their self-regulation and social skills, etc.).

The CBRS portion of the VKRP assessments is recommended to be completed after the teacher has interacted with the student for at least four weeks. This interaction can be in-person or virtual. To improve teachers' and educational leaders' understanding of children's social-emotional skills during the COVID-19 pandemic, five additional items were added to the CBRS to understand children's well-being. These items assess a student's skills to calm down after being frustrated, adapt to changes in plans, feelings of happiness, and feelings of sadness and anxiety. In addition, an item was added for teachers to indicate if they were concerned about the social-emotional well-being of a student. Finally, questions were added to estimate how much time a teacher interacted with a student.

The readiness data from VKRP provides an opportunity for Virginia to better understand the impacts that the COVID-19 pandemic has had on children's early learning. As such, VDOE and UVA-CASTL are providing additional guidance and supporting school divisions to complete fall and spring 2020-21 VKRP kindergarten assessments, while also expanding access to VKRP prekindergarten assessments to meet the unique needs of school divisions during COVID.

To assist teachers in the completion of the VKRP assessments, the testing windows have been extended and the VKRP team has provided additional guidance detailing how to ensure the testing environment is as safe as possible for students and teachers and in compliance with Virginia Department of Education and CDC guidelines for the math portion of the assessment. The fall 2020 manual details how to conduct the math assessment given the current health and safety guidelines. Additionally, online trainings provide recommendations on how to safely administer the math assessment. Webinar sessions have been scheduled that allow for question and answer sessions with VKRP and VDOE representatives. In addition, our hotline support team provides teachers and administrators up-to-date information in an evolving pandemic situation.

VKRP will be assisting divisions in monitoring their kindergarten assessments completion rates throughout the year. VKRP assists divisions in problem solving obstacles that may negatively impact assessment completion rates. The VKRP team will report the current status of completion rates to VDOE multiple times during the fall term in an effort to make sure all divisions are in compliance by the end of the assessment term.

Prekindergarten VKRP Expansion
In addition to the 8 divisions currently using the pre-K version of the VKRP, an additional 5 public school divisions have requested to be a part of the full pilot for the 2020-2021 school year. Therefore, at this time, a total of 13 divisions will fully assess pre-kindergarten students using both the EMAS and CBRS portions of the VKRP.

Also, through the federal Governor's Emergency Education Relief (GEER) Fund, CASTL will provide support for all Virginia VPI divisions to use the VKRP preschool system to assess their preschool students' self-regulation and social skills using the CBRS. Data will be collected in a similar fashion as the kindergarten VKRP measure in order to better understand the impact of COVID-19 on children's social-emotional functioning. Additionally, 22 divisions throughout Virginia will be participating in and piloting the CBRS only to measure the social-emotional skills of their preschool students.

Additional Training and Instructional Resources
To help meet the various models of instruction expected in the state of Virginia for this year, the VKRP team is modifying and creating new instructional modules tailored to the needs of school staff. Because some schools are entirely virtual at the start of this school year, we are encouraging schools to use the online training modules and are reaching out through both live and recorded webinars and presentations in order to share the most recent updates and recommendations for administering the VKRP.

Additionally, we are creating online data-use modules, based on our in-person training objectives, in an effort to provide needed assistance for divisions to effectively use the VKRP data and resources to support individual students in division classrooms, both in-person and online. VKRP staff will work hand-in-hand with divisions throughout the year to analyze the kindergarten VKRP data to inform the prekindergarten classrooms of current kindergarten performance while highlighting areas of strength and areas for improvement.

Finally, as a way of meeting teacher needs during the COVID-19 pandemic, a variety of social-emotional links and resources will be available on our website to help assist Virginia teachers, administrators, and parents as they return to school this year. Based on feedback from our Fall 2020 VKRP survey, we have updated our website and web portal to include a number of requested resources for both schools and families.

Conclusion

In the fall of 2019, 132 divisions participated in VKRP and teachers assessed students' readiness skills in 5,021 classrooms and from 91,943 kindergarten students. The results showed that 44% of Virginia students entered kindergarten far behind in one or more key areas of readiness—literacy, math, self-regulation and/or social skills. The proportion of students "not ready" increases to 56% for students with economic disadvantage. However, students from economically disadvantaged backgrounds with preschool experience were significantly *less likely* to be categorized as "not ready" when compared to their peers who also came from economically disadvantaged backgrounds with no preschool experience. Based on the fall 2019 data, there were also a number of notable differences with regards to race/ethnicity, gender, English Language Learner status, and age upon entering kindergarten.

Due to the COVID-19 pandemic in the spring of 2020 and the official closure of Virginia schools in March, teachers were unable to complete the spring VKRP assessments. This spring data would have provided a valuable window into the growth of Virginia kindergarteners throughout the academic year as well as given an estimate of student skill achievement prior to entering first grade.

For the 2020-21 school year, VKRP administration is mandated for all incoming kindergarten students in the Commonwealth of Virginia. Readiness data is critical, especially this year, to understand the pandemic's impact on Virginia kindergarteners. All divisions are expected to complete the assessments in the fall and spring of this school year. No waivers are being granted at the division level. VDOE and UVA-CASTL are providing additional guidance and supporting school divisions to complete fall and spring 2020-21 VKRP kindergarten assessments, while also expanding access to VKRP prekindergarten assessments. Students may be exempted on a case-by-case basis if they are unable to complete a portion of the VKRP assessment.

To improve teachers' and educational leaders understanding of children's social-emotional skills during the COVID-19 pandemic, five additional items were added to the CBRS. These items assess a student's skills to calm down after being frustrated, adapt to changes in plans, feelings of happiness, and feelings of sadness and anxiety. In addition, an item was added for teachers to indicate if they were concerned about the social-emotional well-being of a student.

The prekindergarten version of VKRP continues to be piloted and refined based on feedback and results. Additional public school VPI programs will pilot all components of the preschool VKRP system this year. Other VPI programs will elect to use the CBRS measure for the first time to measure their preschoolers social-emotional skills to better understand the impacts of the COVID-19 pandemic on student functioning.

Appendix

Appendix Item 1. Division Participation and 2019 Readiness Estimates

Division	Total Students	% Complete Assessment	% Ready Literacy	Math	% Ready Self-Reg	Social Skills	Overall	ELL Students[a] Total Students	% Complete Assessment	% Ready Overall	Disabled Students[b] Total Students	% Complete Assessment	% Ready Overall	Disadvantaged Students[c] Total Students	% Complete Assessment	% Ready Overall	Not Identified Students[d] Total Students	% Complete Assessment	% Ready Overall
Accomack County Public Schools	342	99%	77%	74%	77%	78%	50%	81	100%	48%	33	97%	19%	200	100%	52%	86	100%	56%
Albemarle County Public Schools	1092	22%	81%	90%	87%	79%	54%	131	21%	44%	108	12%	31%	352	21%	38%	664	23%	64%
Alexandria City Public Schools	1480	95%	78%	70%	84%	75%	51%	593	93%	31%	96	77%	23%	523	95%	38%	661	99%	70%
Alleghany County Public Schools	137	99%	76%	85%	83%	77%	56%	2	100%	0%	25	100%	44%	49	100%	53%	70	100%	63%
Amelia County Public Schools	120	80%	82%	86%	78%	68%	53%	7	43%	33%	7	29%	0%	57	74%	36%	61	85%	67%
Amherst County Public Schools	289	98%	80%	79%	74%	74%	51%	2	100%	0%	28	89%	36%	152	97%	45%	122	99%	57%
Appomattox County Public Schools	180	84%	87%	76%	85%	84%	66%	3	100%	0%	19	42%	50%	83	81%	51%	90	90%	78%
Arlington County Public Schools	2235	86%	92%	90%	82%	80%	69%	638	77%	53%	220	73%	44%	610	78%	52%	1298	92%	79%
Augusta County Public Schools	707	99%	73%	76%	84%	76%	51%	8	100%	25%	31	87%	15%	294	99%	40%	395	100%	60%
Bath County Public Schools	37	97%	84%	92%	86%	78%	64%	0			7	86%	33%	25	100%	64%	9	100%	67%
Bedford County Public Schools	707	98%	83%	84%	89%	85%	68%	9	100%	33%	61	90%	45%	277	99%	53%	399	100%	79%
Bland County Public Schools	40	100%	70%	93%	48%	33%	28%	0			3	100%	67%	5	100%	20%	34	100%	26%
Botetourt County Public Schools	341	98%	83%	86%	90%	89%	67%	7	86%	17%	33	88%	45%	114	98%	46%	200	100%	80%
Bristol City Public Schools	189	98%	84%	66%	70%	79%	50%	1	100%	100%	17	94%	25%	47	100%	51%	117	99%	55%
Brunswick County Public Schools	93	59%	82%	76%	80%	73%	56%	3	100%	33%	8	38%	33%	0			80	61%	59%
Buchanan County Public Schools	170	95%	81%	79%	81%	80%	58%	3	100%	0%	22	77%	35%	23	87%	60%	128	98%	61%
Buckingham County Public Schools	126	95%	75%	69%	88%	90%	62%	0			15	100%	20%	68	96%	48%	56	95%	79%
Buena Vista City Public Schools	62	100%	76%	77%	82%	87%	53%	0			21	100%	43%	30	100%	43%	22	100%	64%
Campbell County Public Schools	520	91%	89%	83%	80%	78%	61%	16	94%	60%	51	92%	36%	282	91%	51%	214	93%	75%
Caroline County Public Schools	356	93%	82%	76%	85%	83%	59%	16	63%	0%	28	61%	29%	143	89%	55%	204	98%	63%
Carroll County Public Schools	265	98%	78%	89%	81%	80%	59%	12	100%	75%	42	95%	40%	172	99%	55%	81	99%	70%

Division	Total Students	% Complete Assessment	Literacy	Math	% Ready Self-Reg	Social Skills	Overall	ELL Students[a]			Disabled Students[b]			Disadvantaged Students[c]			Not Identified Students[d]		
								Total Students	% Complete Assessment	% Ready Overall	Total Students	% Complete Assessment	% Ready Overall	Total Students	% Complete Assessment	% Ready Overall	Total Students	% Complete Assessment	% Ready Overall
Charles City County Public Schools	55	100%	82%	84%	87%	85%	69%	0			6	100%	33%	19	100%	74%	32	100%	69%
Charlotte County Public Schools	125	98%	80%	83%	89%	88%	68%	1	100%	0%	16	88%	43%	84	98%	62%	36	100%	89%
Charlottesville City Public Schools	353	95%	83%	71%	79%	74%	51%	49	86%	24%	41	88%	36%	148	94%	29%	169	99%	69%
Chesapeake City Public Schools	2669	98%	90%	83%	74%	79%	59%	123	95%	48%	316	90%	42%	967	98%	51%	1421	100%	65%
Chesterfield County Public Schools	4340	96%	84%	82%	82%	79%	61%	519	85%	39%	380	92%	36%	686	97%	52%	3016	99%	66%
Clarke County Public Schools	105	80%	82%	79%	83%	80%	60%	5	80%	0%	14	86%	33%	24	92%	36%	72	75%	72%
Colonial Beach Public Schools	46	100%	80%	72%	67%	89%	48%	0			3	100%	100%	24	100%	46%	20	100%	45%
Colonial Heights City Public Schools	214	98%	77%	73%	73%	70%	43%	9	89%	25%	20	90%	28%	117	97%	28%	88	100%	60%
Covington City Public Schools	76	97%	91%	76%	92%	92%	66%	0			16	94%	27%	0			56	98%	76%
Craig County Public Schools	32	100%	75%	84%	81%	53%	38%	0			3	100%	33%	15	100%	27%	9	100%	56%
Culpeper County Public Schools	643	94%	72%	60%	77%	80%	45%	104	91%	16%	69	87%	25%	317	93%	35%	273	96%	61%
Cumberland County Public Schools	89	65%	88%	77%	90%	74%	59%	1	100%	100%	4	25%	100%	35	60%	52%	52	71%	62%
Danville City Public Schools	448	98%	75%	67%	79%	74%	48%	35	89%	52%	43	93%	25%	217	99%	48%	177	99%	49%
Dickenson County Public Schools	147	98%	81%	86%	84%	82%	64%	0			13	85%	55%	33	94%	77%	103	100%	60%
Dinwiddie County Public Schools	329	94%	77%	62%	78%	78%	46%	11	73%	25%	3	100%	0%	170	92%	40%	153	95%	54%
Essex County Public Schools	95	100%	65%	72%	79%	77%	38%	9	100%	44%	10	100%	30%	54	100%	31%	35	100%	49%
Fairfax County Public Schools	13091	90%	80%	78%	78%	73%	54%	4088	77%	30%	1152	77%	28%	3834	81%	32%	7027	99%	67%
Falls Church City Public Schools	179	98%	94%	97%	92%	87%	82%	16	94%	53%	13	100%	46%	3	100%	67%	148	99%	88%
Fauquier County Public Schools	747	96%	80%	71%	77%	79%	49%	78	91%	24%	70	84%	39%	217	94%	29%	458	99%	59%
Floyd County Public Schools	131	98%	91%	87%	89%	76%	65%	5	100%	80%	15	87%	31%	63	95%	60%	61	100%	67%
Fluvanna County Public Schools	218	97%	86%	88%	89%	86%	69%	8	100%	25%	18	89%	19%	90	100%	57%	115	97%	82%
Franklin City Public Schools	70	67%	85%	77%	65%	75%	51%	4	50%	50%	1			55	64%	51%	13	85%	55%
Franklin County	449	98%	78%	80%	84%	78%	58%	4	100%	25%	62	97%	38%	207	99%	47%	221	97%	70%
Frederick County Public Schools	950	95%	85%	81%	83%	85%	64%	85	92%	21%	67	85%	37%	329	94%	49%	563	97%	74%

Division	Total Students	% Complete Assessment	Literacy	Math	% Ready Self-Reg	Social Skills	Overall	ELL Students[a] Total Students	% Complete Assessment	% Ready Overall	Disabled Students[b] Total Students	% Complete Assessment	% Ready Overall	Disadvantaged Students[c] Total Students	% Complete Assessment	% Ready Overall	Not Identified Students[d] Total Students	% Complete Assessment	% Ready Overall
Fredericksburg City Public Schools	353	70%	76%	77%	82%	81%	56%	77	49%	53%	19	95%	33%	99	70%	64%	194	76%	58%
Galax City Public Schools	115	97%	75%	62%	75%	80%	41%	26	92%	25%	9	100%	33%	70	96%	34%	41	100%	51%
Giles County Public Schools	170	90%	78%	78%	87%	82%	59%	0			27	81%	41%	88	90%	48%	72	92%	70%
Gloucester County Public Schools	356	99%	88%	83%	83%	80%	62%	7	100%	14%	35	94%	24%	67	100%	51%	269	100%	68%
Goochland County Public Schools	161	98%	91%	94%	91%	87%	74%	4	50%	50%	15	87%	46%	43	93%	60%	108	99%	81%
Grayson County Public Schools	137	99%	76%	81%	79%	80%	55%	2	50%	100%	15	100%	47%	94	99%	46%	40	100%	78%
Greene County Public Schools	218	98%	71%	79%	84%	89%	55%	9	56%	40%	19	95%	50%	97	99%	48%	103	100%	64%
Greensville County Public Schools	160	87%	73%	69%	79%	84%	55%	5	60%	0%	17	100%	29%	112	88%	59%	40	88%	54%
Halifax County Public Schools	348	96%	82%	82%	81%	81%	62%	9	100%	56%	71	90%	39%	225	95%	58%	96	99%	76%
Hampton City Public Schools	1458	96%	86%	81%	78%	74%	56%	38	97%	43%	106	78%	33%	665	96%	53%	705	98%	60%
Hanover County Public Schools	1159	99%	89%	90%	82%	80%	67%	40	90%	44%	119	97%	38%	275	99%	51%	791	100%	76%
Harrisonburg City Public Schools	500	86%	69%	75%	82%	79%	54%	254	77%	43%	46	76%	20%	301	86%	46%	121	99%	77%
Henrico County Public Schools	3738	96%	83%	78%	79%	77%	56%	391	98%	31%	248	81%	33%	1195	96%	44%	2185	97%	65%
Henry County Public Schools	486	94%	78%	71%	76%	79%	51%	24	100%	25%	56	88%	35%	250	94%	47%	200	95%	60%
Highland County Public Schools	18	0%	94%	94%				0			2			17			1		
Hopewell City Public Schools	303	98%	71%	62%	80%	69%	38%	1	100%	0%	51	100%	18%	141	99%	35%	136	98%	42%
Isle of Wight County Public Schools	377	99%	87%	87%	82%	81%	63%	5	80%	75%	30	100%	30%	124	98%	46%	227	100%	74%
King and Queen County Public Schools	52	98%	82%	78%	90%	83%	57%	0			6	100%	17%	34	100%	50%	17	94%	75%
King George County Public Schools	327	98%	76%	77%	89%	87%	61%	4	100%	50%	42	95%	48%	88	99%	51%	207	100%	67%
King William County Public Schools	146	100%	81%	79%	88%	89%	62%	1	100%	100%	14	100%	43%	46	100%	57%	91	100%	67%
Lancaster County Public Schools	61	100%	90%	80%	82%	77%	61%	0			6	100%	50%	33	100%	64%	24	100%	58%
Lee County Public Schools	228	47%	67%	78%	83%	88%	52%	0			36	50%	39%	119	47%	46%	93	46%	58%
Lexington City Public Schools	50	96%	86%	90%	71%	67%	54%	3	67%	50%	3	100%	33%	17	88%	33%	30	100%	63%
Loudoun County Public Schools	5700	94%	89%	86%	84%	82%	67%	1647	91%	51%	431	77%	37%	1136	89%	40%	3411	97%	77%

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Division	Total Students	% Complete Assessment	Literacy	Math	% Ready Self-Reg	Social Skills	Overall	ELL Students[a]			Disabled Students[b]			Disadvantaged Students[c]			Not Identified Students[d]		
								Total Students	% Complete Assessment	% Ready Overall	Total Students	% Complete Assessment	% Ready Overall	Total Students	% Complete Assessment	% Ready Overall	Total Students	% Complete Assessment	% Ready Overall
Louisa County Public Schools	344	98%	85%	78%	81%	84%	59%	18	94%	82%	37	97%	47%	160	98%	52%	156	99%	65%
Lunenburg County Public Schools	113	97%	71%	74%	83%	93%	61%	11	82%	78%	11	100%	55%	76	97%	59%	34	100%	65%
Lynchburg City Public Schools	661	96%	81%	76%	83%	82%	58%	35	83%	38%	105	87%	42%	402	96%	49%	204	100%	75%
Madison County Public Schools	107	99%	72%	77%	93%	93%	62%	1	100%	100%	8	88%	14%	49	98%	48%	51	100%	78%
Manassas City Public Schools	567	94%	59%	69%	81%	78%	43%	277	92%	31%	38	87%	36%	314	93%	39%	149	99%	58%
Manassas Park City Public Schools	234	85%	69%	60%	82%	85%	43%	135	84%	33%	17	82%	36%	160	88%	39%	48	88%	67%
Martinsville City Public Schools	118	96%	80%	88%	85%	74%	59%	10	60%	67%	10	100%	30%	75	97%	58%	35	100%	66%
Mathews County Public Schools	65	95%	71%	81%	77%	80%	52%	0			9	78%	29%	30	93%	29%	31	100%	71%
Mecklenburg County Public Schools	290	98%	86%	86%	86%	89%	70%	11	100%	91%	25	88%	59%	154	99%	66%	125	98%	75%
Middlesex County Public Schools	96	80%	73%	76%	91%	95%	64%	5	80%	25%	11	55%	50%	25	72%	50%	61	85%	69%
Montgomery County Public Schools	719	98%	84%	83%	82%	79%	62%	50	100%	52%	43	88%	29%	290	99%	46%	389	100%	75%
Nelson County Public Schools	99	97%	69%	76%	88%	89%	57%	2	50%	0%	12	100%	50%	61	95%	57%	33	100%	64%
New Kent County Public Schools	224	100%	88%	89%	82%	82%	63%	0			19	100%	47%	47	100%	45%	160	100%	69%
Newport News City Public Schools	2150	97%	85%	79%	83%	74%	55%	150	93%	42%	150	78%	33%	929	97%	50%	1006	99%	63%
Norfolk City Public Schools	2476	96%	83%	72%	77%	72%	50%	94	84%	25%	243	86%	32%	1421	96%	48%	880	98%	57%
Northampton County Public Schools	112	99%	77%	59%	73%	64%	34%	13	100%	46%	13	100%	8%	100	99%	32%	10	100%	60%
Northumberland County Public Schools	77	100%	91%	79%	81%	78%	55%	5	100%	20%	6	100%	17%	26	100%	50%	44	100%	64%
Norton City Public Schools	73	97%	51%	83%	73%	73%	41%	0			5	100%	40%	30	97%	38%	37	100%	46%
Nottoway County Public Schools	147	97%	72%	66%	86%	86%	54%	8	88%	43%	11	64%	14%	71	99%	54%	65	100%	57%
Orange County Public Schools	355	97%	83%	85%	83%	77%	60%	20	85%	47%	21	86%	33%	166	98%	51%	167	98%	73%
Page County Public Schools	231	99%	76%	82%	84%	90%	64%	3	100%	33%	27	96%	42%	83	99%	66%	140	100%	64%
Patrick County Public Schools	167	96%	78%	80%	77%	82%	55%	6	83%	100%	33	85%	43%	85	98%	45%	67	100%	64%
Petersburg City Public Schools	363	93%	81%	77%	72%	66%	49%	17	12%	50%	13	85%	36%	266	95%	49%	85	96%	50%

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Division	Total Students	% Complete Assessment	Literacy	Math	% Ready Self-Reg	Social Skills	Overall	ELL Students[a]			Disabled Students[b]			Disadvantaged Students[c]			Not Identified Students[d]		
								Total Students	% Complete Assessment	% Ready Overall	Total Students	% Complete Assessment	% Ready Overall	Total Students	% Complete Assessment	% Ready Overall	Total Students	% Complete Assessment	% Ready Overall
Pittsylvania County Public Schools	542	99%	80%	74%	84%	85%	58%	25	92%	43%	35	89%	26%	331	98%	52%	197	100%	69%
Poquoson City Public Schools	138	99%	93%	82%	91%	88%	70%	0			18	94%	35%	18	100%	50%	106	100%	76%
Portsmouth City Public Schools	1072	97%	81%	80%	76%	76%	53%	11	82%	33%	52	92%	23%	518	98%	53%	506	98%	55%
Powhatan County Public Schools	307	98%	89%	85%	79%	65%	51%	2	50%	0%	25	88%	14%	49	98%	35%	237	100%	57%
Prince Edward County Public Schools	150	97%	76%	79%	82%	85%	58%	2	100%	0%	13	100%	8%	64	97%	52%	79	97%	68%
Prince George County Public Schools	488	97%	73%	81%	80%	79%	53%	6	100%	0%	33	97%	28%	221	99%	49%	234	98%	59%
Prince William County Public Schools	6257	96%	80%	74%	85%	82%	56%	1891	94%	36%	432	80%	38%	2729	96%	43%	2765	99%	70%
Pulaski County Public Schools	317	100%	70%	83%	77%	79%	53%	5	100%	60%	22	95%	14%	74	100%	54%	225	100%	54%
Radford City Public Schools	123	98%	82%	78%	78%	73%	60%	0			11	82%	44%	67	97%	52%	51	100%	69%
Rappahannock County Public School	54	96%	62%	73%	94%	92%	52%	1	100%	0%	3	100%	0%	21	100%	43%	28	100%	64%
Richmond City Public Schools	1888	86%	71%	69%	72%	67%	41%	288	71%	20%	127	80%	23%	1023	92%	37%	566	90%	56%
Richmond County Public Schools	80	100%	86%	89%	84%	71%	58%	11	100%	45%	4	100%	50%	33	100%	45%	41	100%	68%
Roanoke City Public Schools	1143	93%	72%	69%	78%	71%	46%	138	78%	29%	146	82%	30%	667	95%	38%	348	98%	65%
Roanoke County Public Schools	893	94%	85%	82%	80%	79%	59%	31	65%	40%	108	90%	36%	302	93%	38%	523	96%	71%
Rockbridge County Public Schools	182	97%	80%	83%	82%	83%	58%	4	100%	25%	14	86%	42%	118	96%	51%	62	100%	71%
Rockingham County Public Schools	862	90%	77%	83%	78%	72%	51%	132	83%	36%	72	78%	21%	368	90%	42%	433	93%	61%
Russell County Public Schools	292	86%	80%	86%	80%	78%	61%	3	67%	100%	35	89%	52%	187	82%	55%	91	92%	71%
Salem City Public Schools	262	96%	80%	82%	83%	81%	59%	11	73%	25%	37	84%	32%	102	96%	48%	132	99%	69%
Scott County Public Schools	262	99%	75%	75%	85%	85%	54%	0			34	97%	48%	124	99%	44%	124	99%	63%
Shenandoah County Public Schools	389	89%	77%	77%	81%	87%	59%	46	85%	38%	42	86%	42%	199	91%	49%	163	92%	71%
Smyth County Public Schools	289	99%	70%	75%	70%	74%	48%	4	75%	33%	40	100%	30%	143	99%	38%	127	100%	61%
Southampton County Public Schools	181	97%	81%	77%	77%	79%	52%	1			17	88%	40%	78	97%	50%	95	97%	53%
Spotsylvania County Public Schools	1614	95%	79%	71%	75%	77%	49%	195	92%	26%	154	85%	27%	686	95%	38%	802	99%	59%
Stafford County Public Schools	1976	93%	82%	74%	83%	82%	56%	222	78%	24%	155	75%	32%	696	90%	41%	1101	97%	67%

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Division	Total Students	% Complete Assessment	Literacy	Math	% Ready Self-Reg	Social Skills	Overall	ELL Students[a]			Disabled Students[b]			Disadvantaged Students[c]			Not Identified Students[d]		
								Total Students	% Complete Assessment	% Ready Overall	Total Students	% Complete Assessment	% Ready Overall	Total Students	% Complete Assessment	% Ready Overall	Total Students	% Complete Assessment	% Ready Overall
Staunton City Public Schools	212	95%	80%	74%	85%	81%	59%	4	100%	25%	12	75%	56%	82	94%	47%	124	98%	69%
Suffolk City	1019	97%	86%	78%	81%	81%	60%	8	100%	50%	77	86%	29%	418	98%	52%	540	99%	68%
Surry County Public Schools	42	90%	89%	69%	74%	62%	53%	0			9	56%	0%	23	87%	45%	17	100%	65%
Sussex County Public Schools	74	99%	78%	74%	67%	85%	56%	2	100%	100%	6	100%	33%	10	100%	60%	55	100%	55%
Tazewell County Public Schools	400	98%	75%	75%	82%	86%	56%	0			51	90%	35%	164	99%	48%	209	100%	65%
Virginia Beach City Public Schools	4954	97%	88%	79%	74%	72%	54%	181	96%	28%	420	89%	34%	1814	98%	46%	2763	99%	61%
Warren County Public Schools	400	99%	77%	75%	72%	66%	43%	10	90%	0%	38	89%	24%	188	100%	34%	184	100%	54%
Washington County Public Schools	437	98%	87%	87%	83%	86%	67%	9	89%	63%	47	89%	52%	193	96%	55%	214	100%	79%
Waynesboro City Public Schools	231	96%	72%	58%	79%	77%	46%	9	100%	33%	17	82%	21%	105	93%	43%	91	100%	58%
West Point Public Schools	55	100%	93%	87%	82%	84%	73%	0			7	100%	57%	19	100%	53%	34	100%	82%
Westmoreland County Public Schools	102	83%	90%	78%	83%	87%	59%	0			10	80%	38%	65	83%	50%	37	84%	74%
Williamsburg/James City Public Schools	788	98%	82%	82%	82%	82%	62%	49	92%	22%	99	91%	36%	264	96%	48%	463	100%	71%
Winchester City Public Schools	319	88%	68%	67%	77%	73%	42%	102	94%	32%	19	63%	8%	162	93%	32%	118	86%	64%
Wise County Public Schools	414	98%	82%	77%	72%	75%	51%	0			41	98%	33%	258	98%	40%	138	98%	73%
Wythe County Public Schools	281	98%	83%	80%	75%	71%	53%	0			42	93%	21%	148	98%	41%	116	99%	71%
York County Public Schools	956	98%	91%	86%	78%	73%	56%	39	87%	41%	72	93%	24%	213	98%	43%	660	100%	63%

Appendix Item 2. VDOE Codes

English Language Learners (ELL)	
Yes	If VODE EL Code is: 1) Identified as EL and receives EL services, 2) Identified as EL but has refused EL services, or 3) Identified as formerly EL for each of the two years after exiting EL services or 4) Identified as formerly EL for each of the four years after exiting EL services.
No	If VDOE demographic data is present but EL Code is not present.

Students With a Disability (SWD)	
Yes	If any VDOE Disability Code is present except "*Qualified individual under Section 504*"
No	If VDOE demographic data is present but Disability Code is not present or if Disability Code is "*Qualified individual under Section 504*".

Economically Disadvantaged Status	
Yes	If the student meets any one of the following: 1) is eligible for Free/Reduced Meals, or 2) receives TANF, or 3) is eligible for Medicaid, or 4) identified as either Migrant or experiencing Homelessness.
No	

All public preschool students must be reported to the Student Record Collection (SRC) system when the school division is the fiscal agent, grantee, or sub-grantee. All public preschool students receive both a Preschool Funding Code and a Preschool Experience Code assigned by school divisions in the preschool year. Non-public preschoolers are not captured in the SRC system, and their Preschool Experience Code is parent-reported at kindergarten entry. If parent-reported preschool experience does not match the SRC system, the Preschool Experience Code will default to division records. This information comes from the Guidance for PK Funding and PK Experience Codes posted on the VPI website.[22]

Preschool Experience Code	
Head Start	The preschool classroom for at-risk four-year-olds is funded by the federal Head Start grant in a community-based organization.
Public Preschool	A preschool program operated in the public school. This would include VPI, VPI+, Title I, ECSE, and Head Start programs – both in the public school and if the public school is the fiscal agent; and locally funded public preschool program.
Private Preschool/Daycare	The student is served by a preschool, child daycare, or other program provided by a private provider. This includes programs for-profit and non-profit providers, including faith-based programs and commercial daycare centers.

Department of Defense Child Development Program	A preschool program operated by the Department of Defense on a military installation.
Family Home Daycare Provider	The student was served by a preschool or child daycare provided in a home.
No Preschool Experience	The student has not had a formal classroom preschool experience. The student was at home with a parent, family member, caregiver, nanny, etc.

Preschool Funding Code	
Head Start	Select Head Start as the funding source code if the student slot is fully funded with federal Head Start funds administered by the school division as the Head Start grantee.
Virginia Preschool Initiative (VPI)	Select VPI as the funding source code if the student slot is fully funded by the state Virginia Preschool Initiative.
VPI Plus (VPI+)	Select VPI+ as the funding source code if the student slot is fully funded by the federal Preschool Development Grant.
Special Education Preschool (Part B, 619)	Select Special Education Preschool as the funding source code if the student slot is fully funded with federal Special Education Preschool funds. This code may apply to students with Individualized Education Programs who receive special education and related services in a public special education early childhood classroom, regular early childhood program, or in a service-provider location (e.g., therapist's office). This code may also apply to students in a private community-based program if services are funded with federal Special Education Preschool funds. This funding code is not be used if the student slot is funded by Head Start, VPI, or VPI+.
Title I Preschool	Select Title I Preschool as the funding source code if the student slot is fully funded with federal Title I, Part A funds, not mixed with state or other funding sources. *Ex. A student slot funded with VPI state funds in a classroom where the teaching assistant's salary is paid out of Title I funds would not be labeled with this funding code because the student slot is not fully funded by Title I. Instead, the slot would receive a #3 funding code as a VPI state funded slot.*
Local Funding for VPI Placement	Select local funding for VPI student placement if VPI local match is used. This funding code is typically used when a school division has been allocated state VPI funds for less than a full classroom of 18 students. *Ex. The division may be allocated 11 VPI funded slots. In order to maximize services for students, the school divisions places 7 more students in the room and provides local funds to account for the additional student slots. Seven students would be coded #8 in this scenario.*
Local Funding for Other Public Preschool Program	Select local funding that supports any other public preschool program not identified in this list.

Note:
Further documentation of these codes are available here:
http://www.doe.virginia.gov/statistics_reports/research_data/data_elements.shtml#disadvantage

https://docs.google.com/viewer?url=http%3A%2F%2Fwww.doe.virginia.gov%2Finfo_management%2Fdata_collection%2Fstudent_record_collection%2Fresources%2Fguidance-for-pk-funding-pk-experience-codes.docx

http://www.doe.virginia.gov/info_management/data_collection/student_record_collection/code_values/index.shtml

[1] "School Readiness," Virginia Department of Education. Retrieved from http://www.doe.virginia.giv/instruction/early_childhood/school_readiness

[2] Williford, Downer, and Hamre, Virginia Kindergarten Readiness Project--Phase 2; Martha B. Bronson et al., "Child Behavior Rating Scale." Cambridge, MA: Abt Associates (1990); Herbert P. Ginsburg and Sandra Pappas. "Invitation to the Birthday Party: Rationale and Description." ZDM 48, no. 7 (2016): 947-960.

[3] Ginsburg, H. P., Pappas, S., & Lee, Y. (2010). Early Mathematics Assessment System. An unpublished assessment measure created as part of the NIH supported project Computer Guided Comprehensive Mathematics Assessment for Young Children (Project number 1 RO1 HD051538-01).

[4] Bronson, M. B., Goodson, B. D., Layzer, J. I., & Love, J. M. (1990). *Child Behavior Rating Scale*. Cambridge, MA: Abt Associates.

[5] Williford, et al., *Virginia Kindergarten Readiness. Project--Phase 2.*

[6] Williford, et al., *Virginia Kindergarten Readiness. Project--Phase 2.*

[7] Assembly, V. G. (2017). Joint Legislative Audit and Review Commission. *Improving Virginia's Early Childhood Development Programs.* Retrieved from http://jlarc.virginia.gov/2017-early-childhood-programs.asp.

[8] Ginsburg, et al., Early Mathematics Assessment System.

[9] Virginia Department of Education. (2013). *Virginia's Foundation Blocks for Early Learning for Four-Year-Olds.* Retrieved from: http://www.doe.virginia.gov/early-childhood/curriculum/foundation-blocks.pdf

[10] Virginia Department of Education. (2016). *Mathematics Standards of Learning for Virginia Public Schools*. Retrieved from: http://www.doe.virginia.gov/testing/sol/standards_docs/mathematics/2016/stds/k-12-math-sol.pdf

[11] Clements, D. H., & Sarama, J. (2009). *Learning and teaching early math: The learning trajectories approach*. New York: Routledge.

[12] See citations:
Clements & Sarama, *Learning and teaching early math: The learning trajectories approach*.
Virginia Department of Education, *Virginia's Foundation Blocks for Early Learning for Four-Year-Olds.*
Virginia Department of Education, *Mathematics Standards of Learning for Virginia Public Schools.*

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[20] Guidance for PK Funding and PK Experience Codes posted on the VPI website: http://www.doe.virginia.gov/early-childhood/preschool/vpi/index.shtml

[21] STREAMin3 is a birth through preschool integrated and comprehensive curriculum. It was developed at the Center for Advanced Study of Teaching and Learning through funding from Elevate Early Education. It is currently being implemented in over 100 birth through preschool classrooms through state funding from the Virginia Department of Social Services and through private funding from the Obici Healthcare Foundation and the Alleghany Foundation.

[22] Guidance for PK Funding and PK Experience Codes posted on the VPI website: http://www.doe.virginia.gov/early-childhood/preschool/vpi/index.shtml