INVISIBLE STUDENTS

THE INFORMATION CRISIS IN EARLY EDUCATION

BY LYNN OLSON
JANUARY 2022

FutureEd
GEORGETOWN UNIVERSITY

About the Author

Lynn Olson is a FutureEd senior fellow.

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FutureEd is an independent, solution-oriented think tank at Georgetown University's McCourt School of Public Policy, committed to bringing fresh energy to the causes of excellence, equity, and efficiency in K-12 and higher education. Follow us on Twitter at @FutureEdGU

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FOREWORD

No part of the nation's education infrastructure has been more disrupted by the pandemic over the past two years than early learning—where students acquire the foundational academic, social and emotional skills that are critical to success in school and beyond.

Nationwide, preschool participation plunged from 61 percent of students eligible pre-pandemic to 36 percent at the outset of the 2020-21 school year. Nearly half of kindergartners in 41 states were falling well below grade-level benchmarks midway through that school year.

But the nation's capacity to respond to the crisis—and the potential of the pending federal Build Back Better legislation to greatly expand and improve child care and pre-kindergarten—is threatened by fragmented governance, a systematic lack of reliable information about the nation's youngest learners, and weak alignment between pre-schooling and elementary education.

This new FutureEd report by Senior Fellow Lynn Olson explores the depth and breadth of these problems, examines their causes and consequences, and points to solutions, including work underway in Virginia and other states to build stronger governance, performance, and information systems in early education.

Research Associate Nathan Kriha supported the project and Molly Breen and Jackie Arthur on our editorial team helped produce the final product. We are grateful to the Bill & Melinda Gates Foundation for funding the work.

Thomas Toch
Director, FutureEd

When Virginia officials looked at their state's 2020-21 early education enrollment, the figures set off alarm bells: compared to the previous year, pre-kindergarten enrollment was down nearly 19 percent and kindergarten enrollment nearly 13 percent. Participation in the state's child-care subsidy program for low-income families had plummeted 43 percent from before the Covid-19 pandemic. Head Start enrollment had declined 30 percent since the 2019-20 school year.[1]

No part of the nation's education infrastructure has been more disrupted by the pandemic than early learning, where students acquire the foundational academic, social and emotional skills that undergird their success in school and beyond. Children who receive high-quality early childhood education are less likely to be placed in special education, less likely to repeat a grade, and more likely to graduate from high school.[2] And high-quality early learning opportunities are critical to closing the troubling achievement gaps between students of different races and economic backgrounds.[3]

Now, as schools struggle to accelerate learning in the face of the latest resurgence of the coronavirus and as the pending federal Build Back Better Act proffers billions of new dollars for vastly expanded child care and pre-kindergarten programs, education leaders are facing fundamental questions about where young children are spending their days, the quality of their experiences during the pandemic, and the implications for their social, emotional, and academic development and transition to elementary education.

But a severe lack of reliable information about the status of the nation's youngest learners and the educational opportunities available to them—a widespread problem even before the pandemic—is making it hard for policymakers to respond effectively to these challenges. Without better data on early learning and an ability to share those data with elementary schools, the country risks leaving an entire cohort of young children permanently disadvantaged.

Virginia and a handful of other states are working to address this information gap. By expanding the use of high-quality early learning assessments, strengthening their early childhood education data systems and linking them to information about K-12 schooling, these states hope to better focus recovery resources, smooth the transition of young children from early learning settings into public schools, and boost their development. Their work provides policymakers and practitioners valuable lessons as the nation responds to the dire educational consequences of the pandemic and gears up to educate its youngest students on a vastly larger scale under the Biden administration's universal pre-kindergarten and child-care expansion plan.

Virginia Elementary School Enrollment Declines, Fall 2019 to Fall 2020
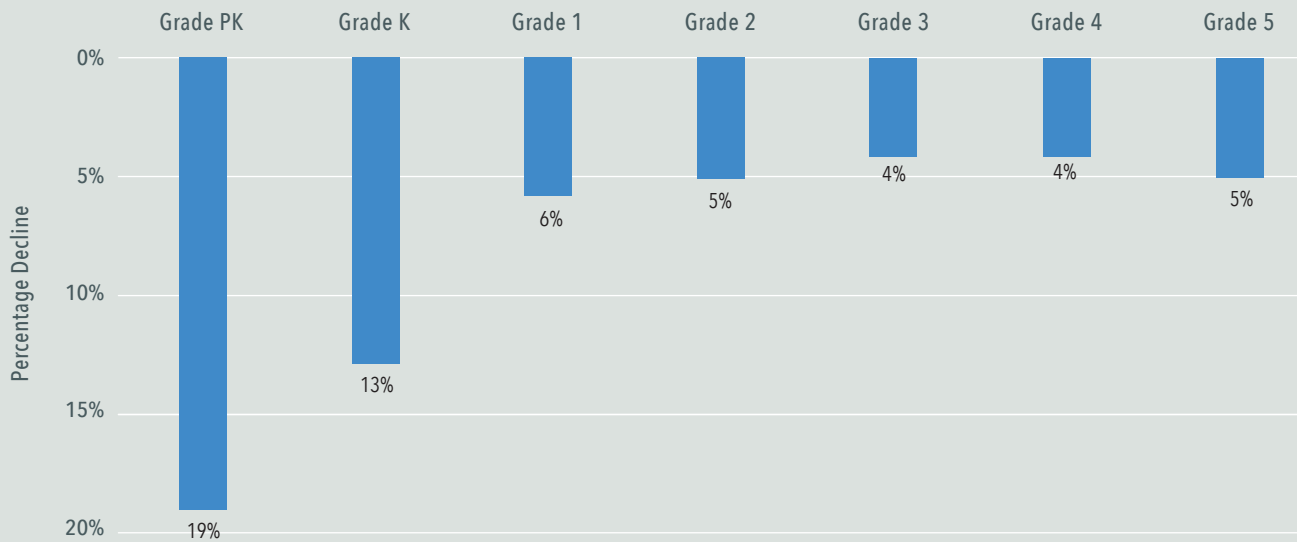
SOURCE: Virginia Department of Education

A Troubled Landscape

The information gap in early learning starts with its fragmented delivery system. Young children participate in many forms of early childhood education, including state funded pre-kindergarten, federally funded Head Start programs, and private or publicly subsidized child care in child-care centers and family homes. This diversity in funding sources, formats and venues makes it difficult to gather dependable information about the sector.

In most states many different agencies administer these programs, which means they must use data-sharing agreements to track even the most basic information about which children are receiving what services at any given time. "In the early childhood sector," notes the Data Quality Campaign, "states have struggled mightily to produce a distinct count of children enrolled in major programs."[4] Only 12 states require kindergarten attendance, and preschool enrollment is voluntary in every state.[5]

A second problem is the uneven quality of classroom and individual child assessments for young children

used in many states and communities today.[6] A report released by FutureEd in 2021, *Tough Test: The Nation's Troubled Early Learning Assessment System*, underscores the need for better measurement and improvement systems in Pre-K to third grade. It found that early learning assessments are costly, challenging to administer, prone to misuse, and often neglected altogether. Most states, for example, do not require all programs that receive public funding to use the same quality measures, with many publicly funded programs lacking any measurement at all. This has led to a dearth of information about the progress young children are making, or not making, in preschool and the early elementary grades.[7]

Another challenge is that even where effective measures of program quality and student progress are in place, the progress of students in early learning programs often can't be compared to measures of student performance in kindergarten and beyond. Most states have not built systems that securely integrate data across early childhood, K-12, postsecondary, and the workforce to better understand how students fare as they transition from one sector to another. As of 2019, only 17 states and

the District of Columbia had built such "P-20W" data systems, according to the Data Quality Campaign.[8] In addition to test score data, such systems include student demographics; enrollment, attendance, and participation rates; other academic information such as grades, course enrollment, and graduation rates; educator characteristics; school climate and culture data; and funding information.

Moreover, states don't disaggregate early learning measures by race and income in ways that would allow policymakers to ensure all students have equal access to quality programs. A study by the Education Trust found not a single state has a data system that allows clear, transparent measures of student access to quality early childhood programming. "Too often, preschool access data are reported at the district/county level, and not at the individual preschool program level," the analysis found. "But quality ratings are reported at the program level, making it impossible to see how access to quality varies by race or ethnicity."[9]

Given this slew of problems—the lack of comparability across different early learning providers, the low quality of early learning assessments, the disconnect between

Pre-K and K-12 data, the dearth of P-20W data systems, and the lack of detailed racial and income data for early learning programs—how are states to know whether young children are being well-served and how effectively taxpayer dollars are being spent?

Although these problems are not new, the suspension of classroom observations and kindergarten readiness assessments during the pandemic has compounded their effects in many states.

While a full understanding of the pandemic's impact on young children is years away, what we do know suggests that Virginia's challenges aren't unique. A National Public Radio poll of 60 districts in 20 states found that average kindergarten enrollment dropped 16 percent post-Covid.[10] A study by Rutgers University's National Institute for Early Education Research (NIEER) found that participation in preschool programs declined nationwide from 61 percent pre-pandemic to just 36 percent in fall 2020, with the sharpest declines among children from low-income families attending in-person learning.[11]

Enrollment declines are only the tip of the iceberg. A synthesis of 76 high-quality national, state, and local

Nationwide Preschool Participation Rates, Before and During the Pandemic

SOURCE: National Institute for Early Education Research
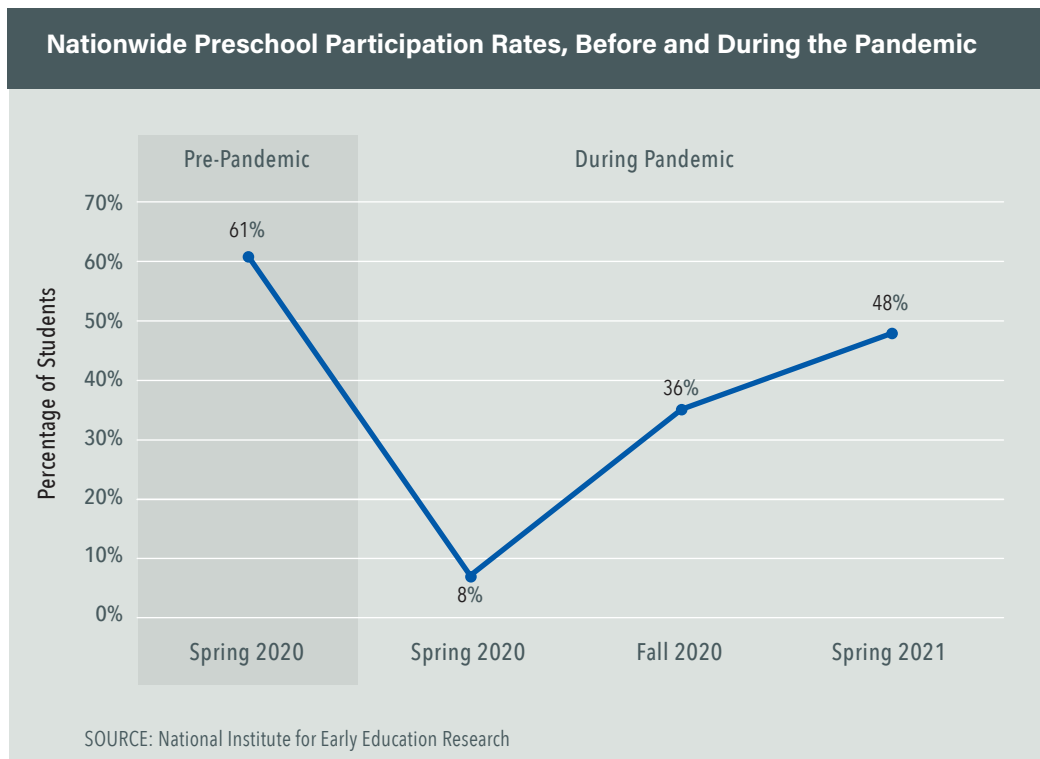
studies found that the pandemic "had profound impacts both on children and on the programs and educators that serve them," with young children from families with low incomes, children of color, and dual language learners bearing the brunt of the crisis.[12] In addition to declining enrollments, the review found fewer learning gains in literacy, math, and social-emotional skills among young children than in past years. For example, nearly half of kindergartners were falling well below grade-level benchmarks midway through the 2020-21 school year, based on literacy assessments in 41 states.[13]
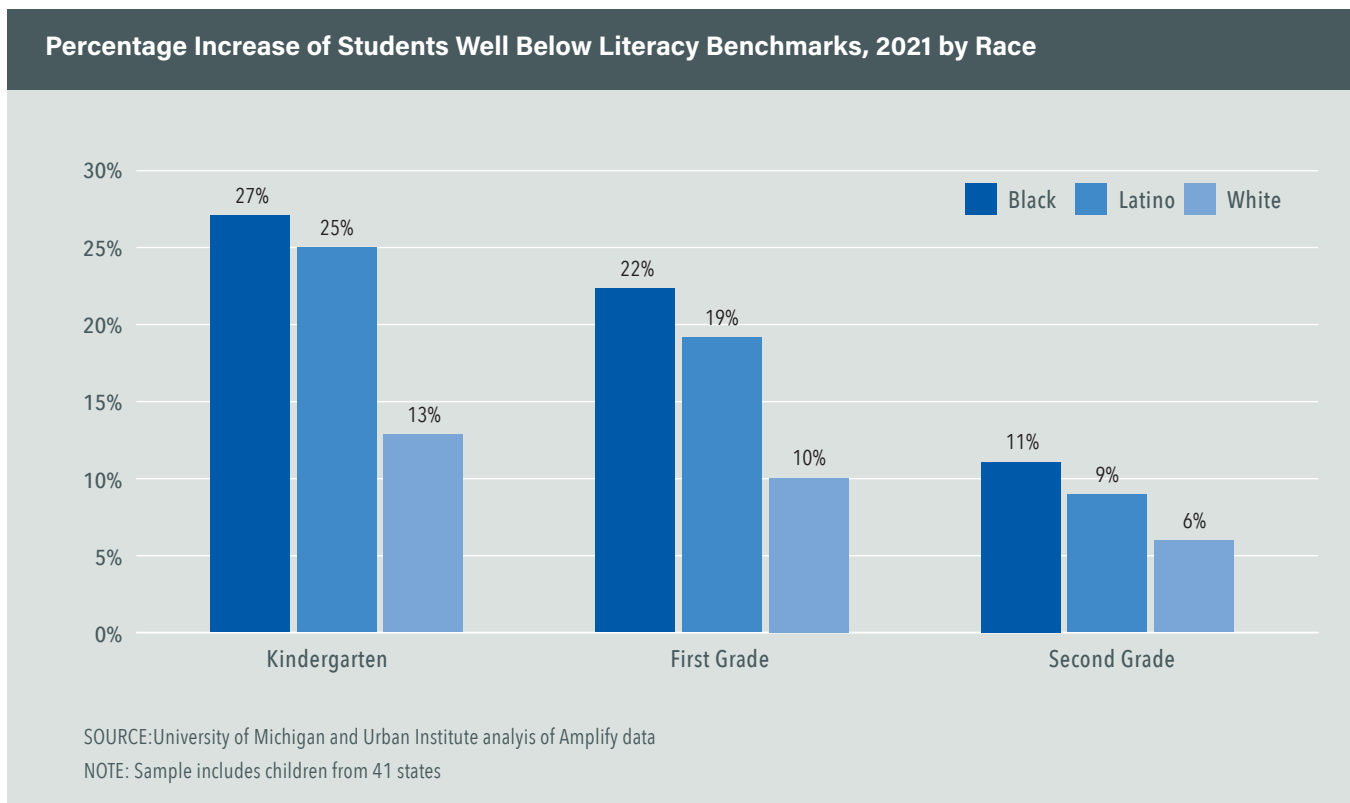
Two other nationally representative surveys of families with young children paint a picture of rising stress levels and decreasing quality in early childhood experiences. One ongoing national survey of households with young children from birth to age 5 found high levels of childhood hunger, emotional distress among parents, frequent disruptions in child-care services, and increased behavioral problems in young children.[14] Another national survey of parents of children ages 3 to 5 and not yet in

kindergarten, conducted by NIEER, found parents more concerned about their children's social and emotional development and well-being than they were prior to the pandemic.[15]

"When you think about what all this means as kids move through the grades," says W. Steven Barnett, NIEER's senior co-director, "you have kids who are less prepared in terms of language development, kids who are less prepared in terms of their behavior and social-emotional skills. The whole child will be harder to teach."

The Virginia Response

In order to address both the devastating consequences of the pandemic on young learners and the systemic problems that impeded early learning pre-pandemic, Virginia is working to understand where and how well young children are being served and how they're faring socially and emotionally, while also increasing the quality of early learning programs in the state.

Percentage Increase of Students Well Below Literacy Benchmarks, 2021 by Race

SOURCE: University of Michigan and Urban Institute analyis of Amplify data

NOTE: Sample includes children from 41 states

Until recently, Virginia's system of early learning, as in many states, had been highly fragmented, making it difficult to gauge the quality and availability of early learning programs to all students. But in 2020, legislators on both sides of the aisle and hundreds of stakeholders worked with then-Governor Ralph Northam to pass a law that unifies the state's early childhood system under the Virginia Department of Education. Effective July 2021, the unification of early childhood and K-12 education under one public agency has made it easier to coordinate services, share data and communicate with parents.

The shift creates a single point of accountability for school readiness in the Commonwealth: All publicly funded early learning programs—including child-care centers, preschool programs in public schools, Head Start, early childhood special education, and family or home-based providers—fall under the auspices of the Virginia Department of Education and the Virginia State Board of Education. The law also created a new Early Childhood Advisory Committee representing the diversity of early childhood providers, advocates, and experts in the state.

As part of that reorganization, the legislature charged the state board of education with developing a uniform measurement and improvement system for all early learning programs that receive public dollars. Virginia Quality Birth to Five (VQB5) stands out among other national quality-rating and improvement systems for its dual priorities: the use of an early learning curriculum aligned with state standards, and the use of a nationally recognized classroom observation system. For the first time, every early learning classroom in Virginia, regardless of provider, receives points under the VQB5 rating system for using an early learning curriculum approved by the state and aligned with state standards. And every program must use the same performance measure, a nationally recognized classroom observation system known as CLASS that assesses the quality of adult-child interactions in both fall and spring, in every participating classroom. Studies have found that the use of a research-based early learning curriculum and high-quality adult-child interactions are linked with better child outcomes.[16]

The state also is developing a new data system, LinkB5, that will help providers and policymakers understand Virginia's early childhood care and education landscape. For the first time, LinkB5 will include data on participation rates, funding sources, the educator workforce, and quality inputs and measures, such as curricula and classroom observations, from different provider types, sites, funding streams, and communities across the state. As LinkB5 gathers and analyzes this information, patterns related to enrollment, the workforce, and the quality of care will become visible and, therefore, actionable. For example, the information will allow state and local policymakers to tell whether children of color or children from low-income families have equal access to high-quality programs and, eventually, with additional planned investments, which curricula are linked with stronger childhood outcomes.

The new measurement and improvement system and the new data system are going through a practice run this year, with all publicly funded sites required to participate in both systems by 2023. More than 4,200 classroom observations were conducted in fall 2021, which represents just under half of the classrooms for students from birth to age 5 that eventually will participate in VQB5. "What was really missing in Virginia was down-to-the-classroom-level quality factors and results, allowing families to choose the best options for their children and policymakers to understand what factors lead to positive outcomes," says Jenna Conway, the state's deputy superintendent of early childhood care and education.

Virginia is partnering closely with researchers at the University of Virginia to develop both systems. Carolyn Gosse, a senior scientist at UVA and the director of LinkB5, says states need to invest in better data systems from birth to age 5 "so that children become visible, especially very young children who are in many different avenues of publicly funded care and education."

The university previously worked with Virginia to develop a composite kindergarten readiness assessment, the Virginia Kindergarten Readiness Program (VKRP), which focuses on children's math, literacy, self-regulation, and social skills on entry to kindergarten. The assessment

integrates results from the Phonological Awareness Literacy Screener (PALS), an independent measurement system that the state has used in grades Pre-K to 2 for many years; a math assessment; and a self-regulation and social-skills rating scale completed by teachers.

Based on concerns that the pandemic was negatively affecting young children's mental health and well-being—as parents and caregivers lost jobs, students lost connections to their peers, and students lost loved ones—VKRP added five items to the behavior-skills rating scale this past year. Teachers reported being moderately, very, or extremely worried about the mental health and social-emotional well-being of about 11 percent of kindergarten students.

The state has expanded VKRP to measure children's growth over time, in the fall and spring of kindergarten. Starting in fall 2021, VKRP has been required in all publicly funded preschool classrooms serving 4-year-olds. A tool for 3-year-olds is under development. By expanding VKRP to pre-kindergarten, the state can measure growth over time—both within a school year and across school years, from age 4 through the end of kindergarten. This allows policymakers and school leaders to understand which students are going to need more support in the early grades.

For example, in spring of 2021, VKRP showed that 52 percent of Virginia's kindergartners ended the school year still needing to build foundational skills in literacy, math, self-regulation, and/or social skills, compared to 45 percent of students who fell below the benchmark in one or more areas in fall of 2020. The biggest drops were in reading, with 27 percent of kindergartners and 29 percent of first graders at high risk for reading failure based on PALS results.[17]

Students needing more support at the end of kindergarten were disproportionately students of color, English learners, students with disabilities, and students from low-income families, elevating concerns that disparities in access to high-quality educational experiences were likely exacerbated during the 2020-21 school year. This is crucial information that many states and school districts lack. And it is information that the Biden early learning initiative could help fund.

The Value of a Clearer Picture

In response to this clearer picture of student need, Virginia has taken several steps to restore pre-kindergarten and kindergarten enrollment and to help teachers and schools address the vastly different skill

Percentage of Virginia Kindergarten Students Lacking Foundational Skills, Spring 2021
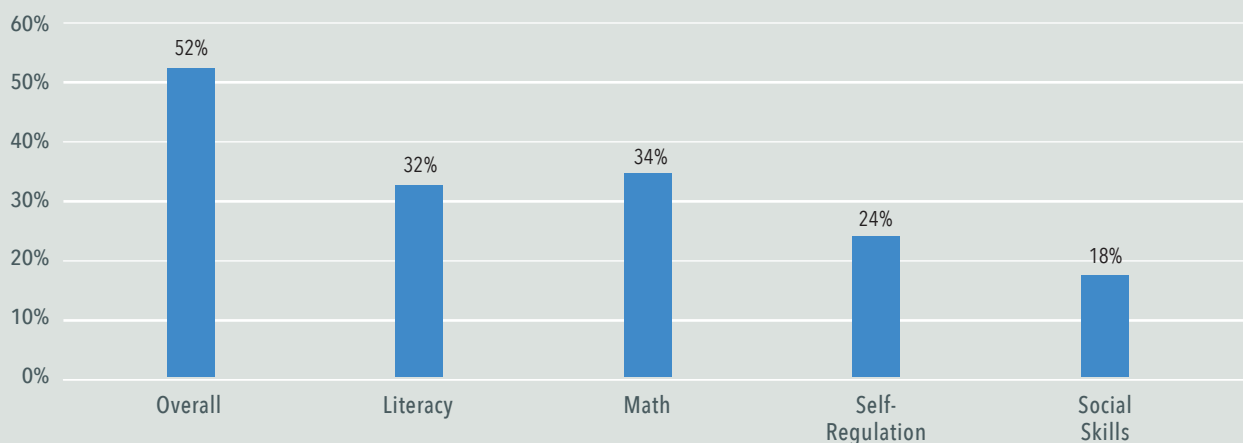
SOURCE: Virginia Department of Education

levels, exacerbated by the pandemic, among young children in early education classrooms. It has used federal child-care relief funding to bolster the child-care subsidy program to make more families eligible for subsidies and to reimburse providers at rates closer to the actual cost of care.

Virginia has also used federal relief dollars to encourage more private providers to take public funds, thereby expanding child-care choices to more families. And the state has made it easier for families to choose the right early learning setting by remaining flexible on age requirements for different grades. For example, a parent could select pre-kindergarten for a 5-year-old who missed in-person learning the previous year.[18]

Because districts control most federal education recovery funds, the Virginia Department of Education has produced a guide for local school systems that includes resources and best practices on curricula, especially in literacy and math, known as Virginia LEARNS. "The state is trying to make sure folks understand that we have a literacy challenge in front of us," says Conway.

To that end, Virginia is promoting tutoring for its youngest students, creating tools to help teachers track students' growth over the course of the year to help individualize instruction in classrooms, and overhauling state assessments, including PALS, which has not been updated in more than 20 years. The updated PALS will reflect the latest research on the science of reading from Pre-K through grade 3, including alphabet knowledge, phonological awareness, decoding, and reading fluency.

The PALS assessment also will add a screener for children's language skills, such as vocabulary, semantics, syntax, and the ability to retell a story. "We really want to be able to home in on those things that we know predict reading comprehension over time," says Emily Solari, a professor of reading education at UVA who leads the revision. The updated assessment will be able to measure children's growth over time, from age 3 through grade 3. In addition, the state has asked UVA to develop a Spanish version of the assessment for children who speak Spanish or who are in dual-language or bilingual programs.

Stabilizing the Workforce

Working with UVA researchers, Virginia education officials have taken steps to address another challenge in the early learning sector: turnover in the child-care workforce, which was high even before the pandemic. "If you don't solve for teacher turnover, so many of these quality efforts [amount to] shouting into the wind," says Conway. "Our pre-pandemic child-care turnover was about 25 percent [annually]. It could be upwards of 40 percent because of the pandemic. That is catastrophic for kids."

In 2019, Virginia received federal funding for a Preschool Development Birth through Five grant (PDG), much of which it used to help keep early educators in classrooms. Under the program, teachers who worked for at least 30 hours per week with children aged 0-5 in participating sites could receive a $1,500 bonus payment if they continued this schedule over an eight-month period. For 25 of 26 cities and counties participating in the program, all teachers who worked at PDG sites and met these requirements were eligible.

In Fairfax, the most populated county in Virginia, funding was insufficient to serve all eligible teachers, so the state allocated the limited resources through a lottery, with half the sites randomly assigned to participate in the program and half ineligible. This allowed the state to work with UVA researcher Daphna Bassok to see if the $1,500 bonus payment for continuing employment would help keep teachers in the classroom. It did. The payment cut turnover rates in half.[19]

Based on the study, the state is using a combination of state dollars, funds from a federal preschool development grant, and Covid relief funds to provide $2,000 bonuses per year to early childhood educators during the pandemic. So far, 6,000 educators have signed up for the financial incentives, enabling the state to track the impact of reduced turnover on other key metrics. Says Conway: "We can see, how does it affect program quality, how does it affect CLASS scores, how does it affect kids' experiences?" Virginia's new early childhood data system allows officials to study these relationships.

Other Signs of Progress

While Virginia stands out for increasing the quality and coherence of its early learning data systems, other states are making strides.

California passed a law last summer to create a P-20W data system that's under development. And Massachusetts, through a joint effort involving several state education agencies, has created a new P-20W data hub to serve as the repository for data on students from Pre-K through the workforce. Housed in the state department of elementary and secondary education, the goal of the hub is to make data more useful and visible for education leaders and policymakers and more accessible to researchers through the creation of such tools as data visualizations and maps.

Like Virginia, Massachusetts has developed an early childhood integrated data system for all publicly funded programs, birth to age 5. It has given the state for the first time an accurate, non-duplicate count of where young children are being served, says Heidi S. Gold, a senior

policy manager in the executive office of education who's led the development of the early childhood integrated data system.

Data maps will allow policymakers to drill down to the city or district level to see where there are gaps in services. They will be able to ask, for example, what percentage of Latino children birth to age 5 are served in a community and what are the learning outcomes for Latino students in the early elementary grades in that community? "It doesn't let us make causal claims about what's working or what's leading to impact," says Sam Ribnick, the executive director of the hub. "That work needs to be done by researchers. But having the data assembled and linked is the first step."

Relatedly, 3SI, a Seattle-based firm that supports the development of early childhood integrated data systems, is working with a cohort of five states—Massachusetts, Georgia, Illinois (Chicago), Washington, and Wyoming—to use cloud technology to combine data from various state agencies with census data to more holistically map the early childhood landscape, using algorithms

Percentage of Virginia Students Falling Below Early Literacy Benchmarks
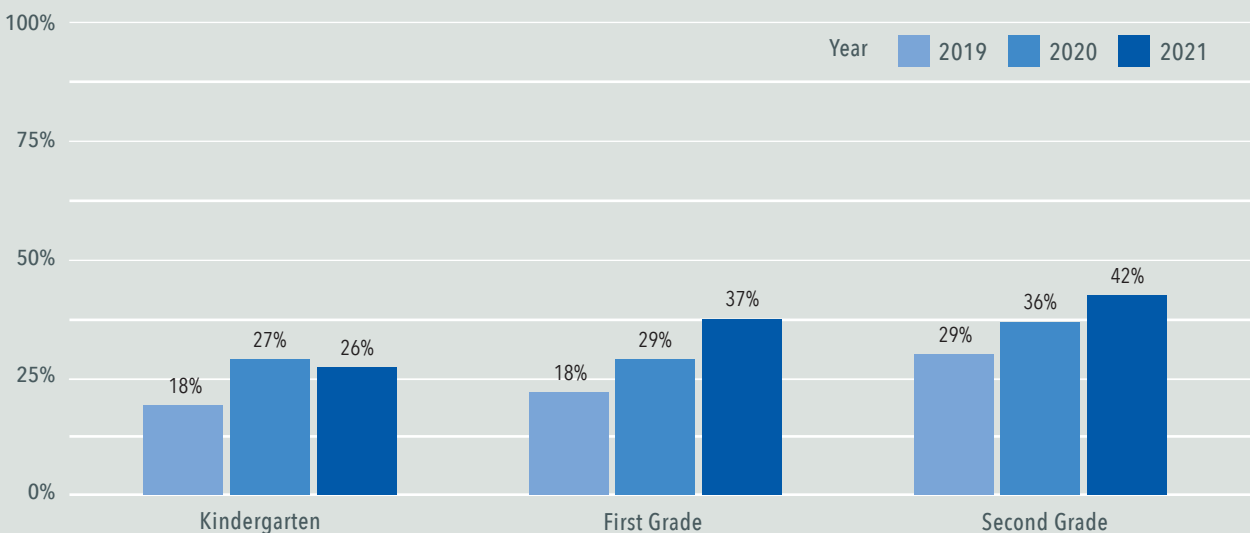
SOURCE: University of Virginia

to account for young children who may be missing from state databases. Massachusetts, for example, has worked with 3SI to develop a "social vulnerability index" that can be cut by census tract, legislative district, or school district to see which of the most marginalized children have access to services and how well dollars are being targeted based on need.

New America and EducationCounsel, two Washington D.C.-based organizations, are working with three states and three school districts nationally to help them take a more systemic approach to improving young children's transition from early childhood programs into kindergarten and the early grades. Their work is intended as an immediate response to Covid-19 and as a longer-term support in the years following the pandemic. New America's analysis of 41 approved state plans found that only nine explicitly included strategies to help their youngest learners transition from preschool to the early grades, such as addressing learning loss stemming from declining kindergarten enrollments due to Covid or expanding early intervention services for young children with special needs or those experiencing trauma.

In July, the organizations released *A Toolkit for Effective and Supportive Transitions for Children, Families, and Educators in Fall 2021 and Beyond*, a publication designed to help state and local policymakers respond to forthcoming Covid-related scenarios.[20] Some scenarios they predict include a sharp increase in the demand for pre-kindergarten, after many parents chose to keep their children out of formal pre-kindergarten programs last year; an influx of kindergartners with widely varying skills, as parents enroll their children in school for the first time; and teachers encountering first graders with limited or no kindergarten experience.

More and higher quality information are key to addressing these challenges. At a basic level, says Laura Bornfreund, the director of early and elementary education policy at New America, states and districts should be collecting enrollment and absenteeism data. It would also be helpful for districts and schools to survey families about their young children's educational experiences.

Given the limited data about young children's learning experiences during the pandemic, many experts recommend that school districts link their approaches to academic learning and recovery to young children's social and emotional well-being and mental health. Virginia is currently piloting an early childhood mental-health consultation program using Covid relief monies. The state's department of education also funds an Early Childhood Education Resource Hub, which provides access to free resources designed to help early childhood educators foster social-emotional development and learning for children from birth to age five. These are sound investments, as research on the science of learning has shown that children's social, emotional, and cognitive development are deeply intertwined.[21]

The States' Imperative

Enrollment in early childhood education and kindergarten programs has begun to rebound, according to NIEER data and data from specific states, including Virginia, but not to pre-pandemic levels.

To help get a handle on the striking gaps in early learning participation during the pandemic and to spend federal Covid-recovery (and, potentially, Build Back Better) dollars effectively, states have an imperative to strengthen their data collection, analysis, and reporting systems for their youngest learners and to better link that information to K-12 data systems.

Last July, the same researchers who produced the synthesis of existing studies on the impact of the pandemic on young children urged a return to direct observations of early childhood education classrooms at scale. Finding very little information beyond early literacy assessments for kindergarten through grade 2, they recommended more direct measures of young children's learning across multiple domains, including mathematics and social-emotional learning. And they urged more states to systematically collect data on the early childhood workforce, which suffered from very low pay, very limited benefits, and few professional supports, even prior to Covid.[22]

Given evidence that America's children have not borne the effects of the pandemic equally, states also need to do a better job disaggregating early childhood data for key population groups, including children from low-income families, children of color, dual-language learners, and children experiencing homelessness. Although the Build Back Better Act would not require such disaggregation for child-care and pre-kindergarten programs, states could and should take on this responsibility to determine whether high-quality programs are reaching the children who most need them.

Now, more than ever, given a rapidly changing educational landscape and an influx of federal dollars, states and districts would be wise to join Virginia in investing in data infrastructure, data quality, and data training for staff at the school and program levels, including data-sharing agreements among city and community agencies. Like Virginia, states can partner with higher education or research institutions to help monitor and evaluate their investments in real time.

The pandemic has imposed a steep price on the nation's youngest learners—in lost learning opportunities, corrosive stress on families and communities, and reduced supports from peers and adults outside the home. Recovery will be a multi-year effort, one that would be greatly strengthened by better data on our most vulnerable young children.

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