A Systems Focus to Improve School Readiness

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Research has demonstrated that over 1 million new neural connections are formed every second during the first three years of life, signaling a critical time period for children's development and eventual school readiness. Without the proper supports — such as nurturing relationships and safe and stable environments — significant gaps in language, literacy and math skills begin to form. Research has identified persistent literacy and math achievement gaps for kindergarten-aged children (ranging from six months behind to over one year) including those who, historically, have been marginalized by education systems, such as Black and Hispanic children and those from families with low income. Gaps in science skills and social and emotional learning have also been found. Conversely, high-quality environments, experiences and supports ahead of kindergarten have been linked with a multitude of positive benefits, including reading and math achievement, further emphasizing the importance of school readiness.

There are myriad factors that affect school readiness and are a part of a young child's life, including health; poverty; safe and stable living environments; parental education levels and employment status; discrimination; food security; and environmental, housing, racial and social factors. Layer on top of these factors inequitable access to high-quality programs and services, such as pre-K, pediatric care and other enrichment opportunities, and it becomes clear how opportunity gaps form and impact both school readiness and subsequent achievement.

The COVID-19 pandemic intensified these conditions. A striking number of child care settings have been forced to close (with debt and staffing issues persisting), attendance has declined significantly (22% in pre-K), while reported social and emotional challenges are on the rise. Academic achievement for young students has declined as well, with losses especially acute in schools that predominately serve students of color. Further, families

School readiness definitions and supports need to be comprehensive, equitable and responsive to the diversity of young children and families, with a focus on mitigating rather than perpetuating existing gaps.

School readiness should be a systems-level measure and evaluation of the ECE system, enabling continuous improvement and connection to the K-12 system.

Kindergarten entry assessments are common across states and can be used to determine where gaps exist and for whom, providing targeted interventions and supports in an equitable manner.

with young children have been especially impacted by the pandemic, and of those, families with lower incomes have been the hardest hit with regard to unemployment, health care and child care.

The pandemic has brought significant attention to the importance of early care and education (ECE), as well as the importance of engaging families in new ways. For the majority of the country, it has brought to light what advocates and researchers have pushed for decades — that systemic reform is needed in states' ECE systems to ensure more equitable opportunities and outcomes.

To begin to address this systemic issue, state education leaders have been developing, and requiring their states to employ, definitions of school readiness. These definitions help agencies set goals and benchmarks that are tied to early learning and development standards. Traditional definitions of school readiness have focused primarily on the skills, knowledge and abilities children need for educational success. However, these definitions have evolved in recent years to encompass a multidimensional view, adding physical and mental health, social and emotional skills, executive functioning and self-regulation, and broader family and community supports. While 16 states plus the District of Columbia currently have statutory definitions of school readiness, these vary considerably in terms of comprehensiveness.

This Special Report looks at the malleable and transformative components of educational and health considerations (and their intersections) as they impact school readiness. It provides examples of innovative state programs and policies, highlights new federal financial supports and closes with state-level policy takeaways.

Data-Sharing: A Continual Hurdle

There are multiple barriers to sharing data concerning the educational and health components of young children's school readiness. Technical challenges, coupled with concerns about the privacy of their personal information, have made it difficult for ECE systems and K-12 systems to share data with one another. States have made it a priority to connect data systems addressing child care, child welfare, behavioral and physical health, home visiting, preschool and other related areas.

As part of their Preschool Development Grant Birth through Five projects, for example, several states are making improvements to their data systems, in part, by strengthening links among ECE, health and K-12 data systems. Improving data-sharing capacity across systems has the potential to significantly enhance states' school readiness practices and strategies.

Educational Components

Educational programs and supports are key pieces of the ECE system, providing the foundations for learning and development. The following are just a few components that policymakers can leverage toward improving school readiness.

HIGH-QUALITY CHILD CARE AND PRE-K	
101	While often split into two distinct categories, child care and pre-K both serve the same purpose — to provide safe, nurturing and educational environments for young children before they enter kindergarten. Quality is of utmost importance and is indicated by two components: structural, such as caregiver-/teacher-to-child ratios, class size maximums and teacher's aides; and process, which includes safe and supportive climates and relationships, and supports for social and emotional learning. A fairly compensated, skilled and supported workforce is also critical for students' success.
Impacts on School Readiness	Scientific research has demonstrated the critical nature of the earliest years of a child's development. High-quality child care and pre-K environments support this development by centering stable, caring and interactive relationships with adults and positive learning experiences during this time. High-quality pre-K has immediate and long-lasting effects across literacy, math and science achievement, and can have intergenerational effects, such as achieving higher levels of education and employment. Pre-K has been shown to be especially beneficial for dual language learners and students from families with low income.
State Examples	**Florida** H.B. 419 (2021) requires the state department of education to calculate a kindergarten readiness rate, based on learning gains and the percentage of students assessed as ready for kindergarten, for each provider participating in the state's voluntary pre-K program. The department must also use screening and progress monitoring data to identify student learning outcomes and compare these to performance standards and provide this information to parents, teachers and school and program administrators. **Vermont** H.B. 171 (2021) expands eligibility for the state's child care financial assistance program, directs the department for children and families to work with stakeholders to craft a plan for investing the state's American Rescue Plan funds, establishes goals for child care affordability and educator compensation, and requires two studies — a systems analysis and a financing study.

Educational Components *continued*

INDIVIDUALS WITH DISABILITIES EDUCATION ACT (PARTS C AND B)	
101	IDEA Part C (Early Intervention) provides supports for eligible infants and toddlers with developmental delays and disabilities. IDEA Part B 619 provides supports for children ages 3 to 5 with identified disabilities.
Impacts on School Readiness	IDEA services include physical or speech therapy, assistive technology devices, supplementary aides and transportation. These individualized supports and services promote development of young children's adaptive, cognitive, communication, physical, and social and emotional skills and can have lifelong benefits.
State Examples	States vary significantly in their implementation of Part C services. **Massachusetts, New Mexico** and **West Virginia** have made substantial progress toward implementation of early intervention services, providing them to 10.1%, 8.7% and 6.6%, respectively, of those who are eligible — far above the national average of 2.7%.

SUPPORTS FOR DUAL LANGUAGE LEARNERS	
101	Dual language learners are in the process of learning English in addition to their native language(s). The home language survey (HLS), is used to identify English learners and place them into language support programming. It is completed by a parent/guardian. At least 21 states require it, but primarily in K-12, not pre-K settings.
Impacts on School Readiness	Ideally, the results of an HLS effectively identify the language supports dual language learners need for success, ultimately improving equity and educational and linguistic outcomes. The HLS is also used to inform student placement with qualified instructors who can provide native language support to increase access to instruction and curriculum, as well as possible translation of educational materials and communications with families.
State Examples	**Illinois** requires school districts contracting with preschool providers to identify English learners ages 3 to 5, using the HLS (which has been translated into 39 languages), no later than their first day attending a preschool program. Children are screened again, using the WIDA MODEL instrument, upon transition to kindergarten to determine their educational placement.

Dual Language Learners and English Learners

Dual language learners are children between the ages of birth and 8, who are in the process of learning English in addition to their native language(s); generally, they are included within the larger group of English learners.

Kindergarten Transitions: Outcomes From Five States' Technical Assistance Projects

It's important to acknowledge that children transition into kindergarten from a wide variety of settings. At the time of kindergarten entry, some children have had very little experience in formal child care settings, while others have had full-time participation in pre-K. With so much variation in settings and quality, states need multiple strategies to systematically assess school readiness and improve subsequent outcomes for all students.

In 2021, Education Commission of the States provided technical assistance to five states addressing transitions into kindergarten. Some notable outcomes:

- **Maine:** Through surveys and focus groups with over 100 practitioners and families, state leaders have gathered feedback to inform improvements to the state's kindergarten transitions website and the design of online training modules for teachers, both of which will include best practices resources and research.
- **Mississippi:** Using information from an analysis of federal and state transition policies and a state-sponsored survey of kindergarten teachers related to transitions, state leaders identified that additional policy supports were needed for children with disabilities, children from child care settings and state-supported classrooms transitioning into kindergarten.
- **South Carolina:** State leaders have formed a pre-K to kindergarten transition committee to review the findings of a landscape analysis of all federal and state early childhood policies and state resources, services and supports to inform a cross-sector state plan on family engagement in the pre-K to K transition.
- **Utah:** State leaders developed a transition to kindergarten toolkit for teachers and school administrators so they can engage in a year-long comprehensive process to improve outcomes for students and families.
- **Wyoming:** State leaders worked on aligning initiatives focused on transitions into kindergarten, embedding family engagement practices and collaborating with leaders in Illinois to learn more about their promising pilots at the community level.

A recent review of transition research reveals several key takeaways that can inform policy:

1. The existing mixed-delivery ECE system plays an important, albeit confusing, role as the sending side of transitions to kindergarten. This requires attention to the variability across programs such as Head Start, state-funded pre-K and child care when designing effective transition to kindergarten programs.
2. The K-12 system has widely variable approaches to support transitions, which may be tied to school and district leadership or logistical processes.
3. Effective implementation of transition policies, plans and practices requires joint buy-in from, and in-person collaboration between, ECE and K-12 leaders and staff.
4. Practitioners and families benefit from having a clear definition of readiness for kindergarten that accounts for multiple dimensions of children's learning and development.
5. Examining various features of ECE and kindergarten programs and pedagogy through the lens of vertical alignment provides a more complex, and more accurate, perspective on how learning environments can best support children's development over time.

Health Components

Health and education are inextricably linked. Health issues can have significant impacts on school readiness and subsequent academic achievement. The following are a few components that state leaders can leverage.

STUDENT PHYSICAL HEALTH	
101	The measure of a child's physical health and development is composed of multiple components, including fine and gross motor skill development. Various factors impact health, such as vision, dental health, hearing, nutrition and asthma. About 38% of children have at least one current or lifelong health condition, with disproportionate effects on students of color and those living in families with low income.
Impacts on School Readiness	Chronic health conditions, such as asthma, have been linked to increased risk of chronic absenteeism. Screening and subsequent services to address any potential health issues can have profound impacts on students' long-term health and academic success.
State Examples	Recent data suggests there is a shortage of school health professionals to provide both physical and mental health supports to students. As of 2017, less than 40% of schools, nationally, employ a full-time nurse. **Maine** S.P. 533 (2021) creates the "Help Maine Grow System," established in the department of health and human services to develop a coordinated system of services for children from birth to age 8 and their families as well as to increase the percentage of children screened for developmental, social or emotional issues across settings. The bill also creates the "First 4 ME Early Care and Education Program" to achieve system efficiencies and create opportunities to improve social, emotional, educational and health outcomes for children under age 6 by providing ECE services with a whole family approach. **Oregon** has coordinated its health care and early education reform efforts, enabling the state to align activities, combine funding streams, and improve accountability and outcomes.

STUDENT MENTAL HEALTH	
101	There are several factors to consider when understanding students' mental wellness, including adverse childhood experiences (ACEs), trauma, toxic stress, anxiety, attention-deficit/hyperactivity, mental illness/disorders, resilience and protective factors, and executive functioning. It is critical to understand the connections and distinctions between these terms and how they impact a young child's development as well as the ecosystem of support. Understanding the various school-based services and their oversight is also important.
Impacts on School Readiness	Toxic stress can be especially detrimental to young children as it may have negative effects on brain development and other organ systems, impairing school readiness, academic achievement and both physical and mental health outcomes throughout the lifespan. ACEs — such as child abuse, neglect and domestic violence — can have significant lasting effects. Children experiencing four or more ACEs are at greater risk for developing learning and behavior problems. Executive function is a set of skills underlying the capacity to plan ahead and meet goals, control one's behavior and follow directions, among others. It is especially important as it impacts students' mental wellness and school readiness.
State Examples	States have taken a variety of approaches to address and fund supports to improve student mental health and wellness. **Maryland** H.B. 776 (2021) requires the state department of education to perform a study and analysis of the Infant and Early Childhood Mental Health Consultation Project, evaluating services, capacity and integration with existing programs, among other requirements. **Utah** H.B. 337 (2021) requires the division of substance abuse and mental health to administer a grant program to provide education regarding best practices for early childhood mental health support and interventions.

EDUCATOR MENTAL HEALTH	
101	Teachers have also been grappling with additional stress and mental health issues and may be in need of supports.
Impacts on School Readiness	Stronger professional well-being has been associated with less conflict in teacher-student relationships and lower risk of staff turnover in a sample of preschool teachers.
State Examples	**Delaware** H.B.100 (2021) phases in a mental health services unit for elementary schools. Goal ratios are 250:1 for full-time school counselors, school social workers or licensed clinical social workers and 700:1 for full-time school psychologists. A partnership between the **Louisiana** Department of Education and Ochsner Health is providing access to free mental health virtual visits for all educators in the state. This service will provide four free virtual therapy visits and includes educators of children from birth through 12th grade.

SOCIAL AND EMOTIONAL LEARNING (SEL)	
101	SEL is the process through which children acquire and effectively apply the knowledge, attitudes and skills necessary to manage emotions, set and achieve positive goals, feel and show empathy for others, establish and maintain positive relationships, and make responsible and caring decisions.
Impacts on School Readiness	SEL programs have been shown to significantly improve executive function, social and emotional skills, attitudes, behavior and academic performance across K-12 grades. Results are similar for preschool — an SEL program led to a significant decrease of internalizing behaviors (anxiety, depression, etc.) and improvement in the student-teacher relationship. Inhibitory control (of impulses and other behavioral responses to stimuli) at age 4 was associated with early math skills and predicted growth in these skills from ages 4 to 6.
State Examples	32 states plus the District of Columbia address SEL in state law. **Illinois** H.B. 2170 (2019) creates the Whole Child Task Force to identify or develop a process to conduct an analysis of the organizations that provide training in restorative practices, implicit bias, anti-racism and trauma-responsive systems, mental health services, and social and emotional services to schools.

Intersections

Engaging families, teachers, school leaders and communities in supporting school readiness is also a key strategy. The following system components are provided as a means to improve the conditions for enhanced school readiness.

FAMILY ENGAGEMENT	
101	Parents and families are children's first educators, and strong partnerships between teachers and parents/families are key for success. Important components of family engagement include communication (frequent and two-way), consistency (creating routines and consistent opportunities to enhance learning at home), and collaboration (cooperative partnership that involves planning and problem-solving).
Impacts on School Readiness	Positive connections and relationships between parents and teachers have been shown to improve academic achievement, social competencies and emotional well-being of children. This also includes children's work habits and attitudes about school and grades. Specifically, family engagement has been shown to support literacy, math and self-regulatory skills.
State Examples	**South Carolina** created First Steps 4K + Siblings to provide high-quality care and education to 4-year-olds enrolled in the state-funded pre-K program, as well as their eligible siblings. This free program supports siblings up to age 12 for up to a full calendar year in various settings, as long as the provider is enrolled in the state's Quality Rating and Improvement System. These added supports provide more comprehensive and quality supports to families and include just one application. **South Dakota's** Statewide Family Engagement Center provides resources and learning opportunities, including a specific focus on birth to age 5. Also, within this center is the Center for Early Literacy Learning, an initiative to engage families in their young children's literacy skills.

SCHOOL DISCIPLINE	
101	Preschool suspension and expulsion are considered exclusionary policies, as they remove the student from the classroom. On average, 8,700 3-year-old and 4-year-old children are expelled from preschool settings every year, disproportionately impacting Black boys. To address this, 17 states have a provision in statute or regulation limiting the suspension or expulsion of students in pre-K through third grade.
Impacts on School Readiness	During the 2015-16 academic year, there were 11.3 million days of instruction lost as a result of out-of-school suspensions across the K-12 grades. Combine that with preschool suspension data, and a discipline gap begins to form, impacting educational outcomes. Additional research points to the role that implicit bias may play in the distribution of exclusionary discipline. Researchers tracked the eye movements of both Black and white teachers and found all teachers watched the Black preschool boys far more than all other children. This may be fueled by implicit biases and racial expectations for behavior, and could help explain the disparate rates of expulsion for Black boys.
State Examples	Part of **Washington's** Fair Start for Kids Act from 2021 includes a focus on promoting kindergarten readiness by enhancing child development, including removal of disproportionate suspensions in child care and early learning programs and providing new professional development opportunities for educators.

COMMUNITY SCHOOL AND TWO-GENERATION STRATEGIES	
101	Community schools center students and families as partners in the educational process and provide access to a broad range of well-coordinated wraparound supports and services. Community schools can include health clinics and other supports and can coordinate services with the broader community. Two generation-strategies fuse together child-focused and parent-focused policy and programs to improve outcomes for all generations within the family.
Impacts on School Readiness	Wraparound supports provided through community schools and two-generation strategies — such as health and mental health services, food assistance, technology supports and other programming — can be beneficial for young children and their families, who otherwise may not have access to these supports. City Connects offers schools a partner to address the out-of-school factors that limit learning. City Connect Coordinators work with teachers and administrators to create a tailored plan for every student, leveraging services that already exist in the community. A randomized controlled trial evaluation found that program participation led to higher sustained gains from pre-K to kindergarten as well as improved scores in English language arts and math for elementary students.
State Examples	**Connecticut** S.B. 1502 (2015) established a two-generation school readiness and workforce development pilot program. Since passage, this initiative has aimed to disrupt cycles of poverty and advance family economic self-sufficiency, with a focus on ECE, health, workforce readiness and economic self-sufficiency. Head Start is one of the longest-running two-generation programs in the country. Regulations direct Head Start programs to help parents with self-sufficiency goals, including education and workforce pathways, while providing young children with high-quality learning environments and health services.

The American Rescue Plan

The American Rescue Plan Act was the third federal stimulus package passed since the COVID-19 pandemic started in 2020. Within the ARPA are substantial supports for school readiness — but only over the next two to three years. States will be charged with developing equitable and sustainable approaches once federal funds expire.

Child care and pre-K: ARPA provides states with funds ($24 billion) in the form of child care stabilization grants to support the continuation of care. Supplemental Child Care and Development Fund Discretionary Funds ($15 billion) is provided to states to support direct child care services, increased payment rates to providers, expanded eligibility for families and more. These funds and grants apply to state, territory and tribal lead agencies. ARPA Federal Elementary and Secondary School Emergency Relief (ESSER) funds may be used to address the impacts of the COVID-19 pandemic on pre-K.

Dual language learners: The American Rescue Plan provides significant flexibility for states to support dual language learners, including the acceleration of learning with targeted supports and systemic improvements, such as HLS requirements in pre-K settings.

Health and mental health supports: ARPA ESSER funds can be used to hire counselors, nurses and other specialists as well as provide SEL supports for students; and child care stabilization grants can be used for mental health supports.

Individuals with Disabilities Education Act: States have received an infusion of funds from ARPA specific to supporting young children with special needs, totaling $200 million for Part B 619 and $250 million for Part C for allowable expenses. Funds can be used, in part, to improve identification of children and provide services.

Intervention and other targeted supports: The ARPA also provides $1 billion for Head Start, Early Head Start and Early Head Start-Child Care Partnership grantees, encouraging grantees to prioritize additional programming. Funds are also available to support state-funded pre-K or state-licensed child care programs. Examples include individualized tutoring, summer learning, comprehensive after-school programs and extended school years.

Physical health: ESSER funds are now available to schools to clean and improve their facilities, promoting healthier environments.

Policy Considerations

The way in which policymakers tackle school readiness is evolving to match the challenges and opportunities that have persisted over several decades and that were laid bare by the COVID-19 pandemic. The following are steps state policymakers may consider to improve the school readiness of young children in their state.

Assess whether the state's definition of school readiness is comprehensive, equitable and responsive to the diverse needs and characteristics of young children and families, with a focus on mitigating rather than perpetuating existing gaps.

Adopt a systems-level view of the factors that impact school readiness, keeping in mind the state's ECE governance structure may (or may not) support a comprehensive, equitable and responsive vision of school readiness. Reach out to Preschool Development Grant Birth-Age 5 (PDG B-5) staff to tap into robust data about state needs and plans for improving ECE systems.

Frame school readiness as a measure of success for the state's ECE system. In a 2019 technical report, the American Academy of Pediatrics stated "children's readiness for kindergarten should become an outcome measure for a coordinated system of community-based programs and supports for the healthy development of young children."

Use kindergarten entry assessment data and other sources to determine where gaps exist and for whom, providing targeted supports and services to create a system with equity at its core. Most commonly, KEAs are used for three purposes: to inform instruction, families and state policy. At least 30 states plus the District of Columbia require KEAs, but how they use the data varies considerably.

Final Thoughts

As state leaders continue to grapple with this complex issue, it will be important to consider the equitable and sustainable enhancements that can be made to both ECE and K-12 systems to improve school readiness. Education and health components top this list but are also part of a much larger web of factors including childhood poverty, and systemic and structural racism. Leveraging the increased national political attention and funding is paramount.

About the Author

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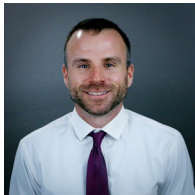
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