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Birth to Grade 3 Indicator Framework:

Opportunities to Integrate Early Childhood in ESSA Toolkit

CEELO
Center on Enhancing
Early Learning Outcomes

CCSSO
Council of Chief State School Officers

Center on Enhancing Early Learning Outcomes

One of 22 Comprehensive Centers funded by the U.S. Department of Education's Office of Elementary and Secondary Education, the Center on Enhancing Early Learning Outcomes (CEELO) will strengthen the capacity of State Education Agencies (SEAs) to lead sustained improvements in early learning opportunities and outcomes. CEELO works in partnership with SEAs, state and local early childhood leaders, and other federal and national technical assistance (TA) providers to promote innovation and accountability.

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The Council of Chief State School Officers (CCSSO) is a nonpartisan, nationwide, nonprofit organization of public officials who head departments of elementary and secondary education in the states, the District of Columbia, the Department of Defense Education Activity, and five U.S. extra-state jurisdictions. CCSSO provides leadership, advocacy, and technical assistance on major educational issues. The Council seeks member consensus on major educational issues and expresses their views to civic and professional organizations, federal agencies, Congress, and the public.

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Birth to Grade 3 Indicator Framework: Opportunities to Integrate Early Childhood in ESSA Toolkit

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BACKGROUND

In our work with state and local leaders, the Council of Chief State School Officers (CCSSO) and the Center on Enhancing Early Learning Outcomes (CEELO), have seen remarkable progress and momentum around birth to third grade learning. More K-12 education leaders understand the critical effects of children's early years on their future success and growth, and appreciate the potential for high-quality early learning experiences to help close achievement gaps. Increasing access to Pre-K and full-day kindergarten, the spread of quality rating and improvement systems, and increased attention to the early childhood educator workforce are all signs of important progress at the state and local levels.

This increased leadership, commitment, and knowledge is not, however, always reflected in state plans for school improvement. For many years, most states' measures of school performance began with third grade, in accordance with the requirements of No Child Left Behind Act (NCLB). The federal law has now changed, and with the Every Student Succeeds Act (ESSA), states can seize the opportunity to better align their school improvement plans with what we know about child development and early learning from birth to third grade.

This toolkit provides a framework and research base for states to explore these possibilities. There are concrete steps state education agencies can take in the short- and the long-term to include the early years in state school improvement plans, in pursuit of much larger goals around improving student outcomes and closing achievement gaps.

1. INTRODUCTION

The early years of a child's life lay the foundation for his or her later success and long-term outcomes. One powerful illustration of this is third grade literacy: Children who can read fluently by third grade are six times more likely to graduate high school on time than those who cannot.[1] School accountability systems in the United States tend to *start* measuring success at third grade, even though children begin developing critical language, literacy, and numeracy skills and foundational content knowledge long before

they reach third grade, ignoring everything that came before. States and school districts across the country are beginning to fix this problem, and focus more of their school improvement and achievement gap closure strategies on the early years.

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1   Donald Hernandez, "Double Jeopardy: How Third Grade Reading Skills and Poverty Influence High School Graduation," Annie E. Casey Foundation, 2012

The Every Student Succeeds Act (ESSA), passed in 2015 and being implemented now, gives states significant flexibility to keep moving in this direction. States have options to include different measures in their school quality rating systems as well as the structures used to support and improve schools. If states seize this opportunity in smart ways, they can reflect a research-based, holistic understanding of the importance of high-quality early childhood education, while encouraging schools and districts to focus more on high-quality learning for young children.

This toolkit helps states identify ways to integrate early learning more fully into their state accountability and school improvement systems. This paper will outline actionable steps for states who have incorporated early learning into their current ESSA state plans and states interested in emphasizing these early years as they implement and revise their ESSA state plans in coming years. Although ESSA requires states to create accountability systems that meaningfully differentiate schools, this paper is meant to help states move beyond a conversation about "accountability" that starts and ends solely with rating schools, and instead include a full spectrum of school improvement supports, interventions, and public reporting tools.

This toolkit is designed to help bridge the gap that too often exists between state policymakers involved in early childhood and K-12 education policy. It is a guide for those individuals tasked with crafting and implementing state plans, including state accountability chiefs, school improvement specialists, early learning directors, and data directors. It can also help advocates and community members understand the range of options available to their states and school districts, and push for early learning to be a key piece of the ESSA conversation.

> ## What do we mean by early learning?
>
> Research on child development and learning trajectories suggest that **birth to age eight**, or birth to third grade, are the pivotal years for child language development and learning. To achieve their full potential, children need high-quality learning experiences throughout these years. This definition bridges the divide between early childhood and K-12 education systems in most states and state education agencies have varying levels of oversight for children below kindergarten age. For this reason, many school-driven opportunities begin when school begins, in Pre-K or kindergarten. But access to high-quality early education before children reach school age is still extremely relevant to states' long-term educational goals. The specific grades and age groups that states choose to prioritize within the birth to age eight continuum may vary in the short term, but in the long term states should build toward an aligned birth through third grade approach that includes Pre-K, Head Start, Early Head Start, child care providers, and elementary schools.

This work is timely as states continue to work with stakeholders to create plans to support and improve schools for the 2017-18 school year and beyond. Over the longer term, states will evaluate, refine, and revise their systems, creating even more opportunities in the coming years. As states begin to implement and modify their plans and flesh out details not required for federal approval, there are other important

opportunities for states and school districts to emphasize early learning outside of the Title I/ School Improvement sections of ESSA state plans,[2] as well as in state and local policies and funding streams beyond the federal law.

The toolkit starts with a review of the evidence supporting an early learning approach to school improvement. Then, we explain how early learning could fit within the framework of state ESSA plans. In particular, we focus on four potential opportunity areas for states to consider:

1. Indicators used in formal school differentiation systems;

2. Interventions and supports for low-performing schools;

3. Transparency and public reporting; and

4. School district accountability and improvement.

Finally, we review a list of potential indicators of access, academics, and engagement in early childhood education. These indicators were drawn from the research and vetted by a CCSSO/ CEELO working group of state education officials and experts on both early childhood education and K-12 school accountability. This sections also outlines the considerations for states to integrate those indicators into their plans.

2. THE IMPORTANCE OF EARLY LEARNING

State education agencies looking to improve long-term student outcomes, accelerate educational progress, and close achievement gaps cannot afford to ignore the years before third grade. Without consideration of the developmentally critical years of birth-grade three, a school accountability system may end up presenting a more limited portrayal of school quality. In addition, it may not provide sufficient information to drive the improvement efforts that are needed to see changes in student outcomes.

Multi-decade evaluations have shown that children with access to high-quality early learning see both short-term gains and long-term benefits in terms of educational attainment, health, decreased incarceration rates, and increased earnings.[3] Early skills in math, reading, and attention are predictive of later school achievement,[4] but too often opportunity gaps for disadvantaged students in the early years translate into persistent achievement gaps in third grade and beyond.

2   Laura Bornfreund, Harriet Dichter, Miriam Calderon and Amaya Garcia, "Unlocking ESSA's Potential to Support Early Learning." New America Foundation, 2017.

3   Yoshikawa, Christina Weiland, et.al., "Investing in Our Future: The Evidence Base on Preschool Education," the Foundation for Child Development, 2013, 10-11.
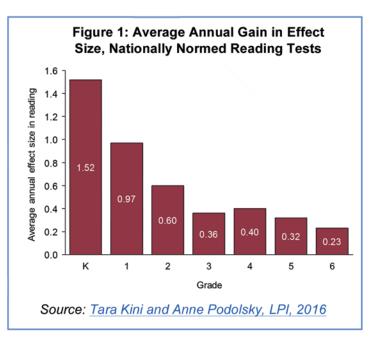
4   Greg Duncan, et. al., "School readiness and later achievement," *Developmental Psychology* v.46 n1, 2008.

While research shows that high-quality early learning has positive effects for students, there are concerns about how to sustain those effects over time.[5] Some studies have shown that impacts of isolated early childhood interventions decrease as students progress through elementary school. This informs the rationale for an aligned and comprehensive birth through third grade approach, where each year of learning builds upon the last. A recent consensus report from leading early education researchers emphasized that the benefits from high-quality Pre-K programs are more likely to last if early elementary grades build upon Pre-K gains with rigorous and engaging educational opportunities.[6]

A focus on early learning, including the early years of elementary school, can jump-start student achievement by targeting resources and attention in the years when children learn the most. As Figure 1 shows, the greatest growth in year-over-year reading scores occurs in kindergarten, followed by first grade and then second grade. Throughout the years from birth to third grade, children are building numeracy and social-emotional skills, executive function, and content knowledge that will serve as a foundation for learning throughout their lives.

Figure 1: Average Annual Gain in Effect Size, Nationally Normed Reading Tests

Source: *Tara Kini and Anne Podolsky, LPI, 2016*

Prioritizing early learning also presents an opportunity to limit achievement gaps before they have a chance to grow, and to ensure a higher overall level of student success and well-being. Achievement gaps emerge among children as young as 18 months old,[7] and one-third to one-half of the achievement gap between black and white students that exists at the end of their K-12 education is already present by the start of first grade.[8] Knowledge and skills build on each other over time, and students who start out significantly behind their peers tend to stay behind, absent early interventions. For states unable to shift the needle on persistent

5   Kathryn Tout, Tamara Halle, Sarah Daily, Ladia Alberston-Junkans, and Shannon Moodie, "The Research Base for a Birth to Age Eight State Policy Framework." Alliance for Early Success and Child Trends, 2013, 21.

6   Deborah A. Phillips, Mark W. Lipsey, Kenneth A. Dodge, Ron Haskins, Daphna Bassok, Margaret R. Burchinal, Greg J. Duncan, Mark Dynarski, Katherine A. Magnuson and Christina Weiland, "Puzzling it Out: The Current State of Scientific Knowledge on Pre-Kindergarten Effects, A Consensus Statement." *The Brookings Institution*, 2017.

7   Tamara Halle et. al., "Disparities in Early Learning and Development: Lessons from the Early Childhood Longitudinal Study – Birth Cohort (ECLS-B)," *Council of Chief State School Officers* and *Child Trends*, June 2009.

8   Christopher Jencks and Meredith Phillips, eds., *The Black-White Test Score Gap* (Washington, DC: Brookings Institution Press, 1998).

achievement gaps and improve outcomes for disadvantaged students, paying more attention to early childhood may yield long-term dividends.[9]
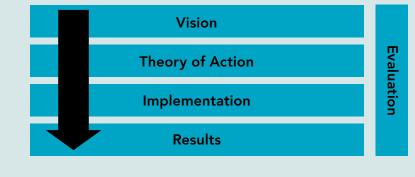
Given all the evidence supporting a focus on early learning, why has it been mostly absent from accountability and school improvement conversations up to this point? The reasons are both technical and policy related, but they can be overcome. First, standardized assessments used by states are not developmentally appropriate for young students, and more appropriate assessments can be prohibitively time-consuming, costly, and less reliable at scale.[10] There is also a risk that tying student outcomes in the early grades to high-stakes school accountability metrics could have

Fitting Early Childhood into a State's Strategic Vision and Theory of Action

If a state is considering emphasizing early learning within its state plan, it is important to first understand how all the components fit together, within a strategic vision for the state's priorities and an aligned theory of action. For a more detailed guide to creating a strategic vision, see CCSSO's recently published *"State Strategic Vision Guide"*. A strategic vision establishes state leaders' top education priorities, independent of ESSA or accountability. A theory of action establishes a plausible chain of events for how that vision will be realized. If part of a state's vision is high-quality early and elementary education, universal third grade literacy, and closing achievement and opportunity gaps for subgroups of students, birth to third grade strategies should be a component of the theory of action.

A theory of action will help states specify how the complex components of an accountability system will come together to create change in schools, and help them navigate the decisions and tradeoffs that arise in pursuit of those goals. States should strive for simplicity, clarity, and fairness across their plan, while providing a holistic and honest picture of school quality across all grades.

Each state's vision and theory of action will be unique, which is why it is impossible to precisely define the ideal pathway for including early childhood in state plans, but decisions should be informed by data, evidence, and research, and continuously monitored and improved throughout implementation via evaluation and monitoring. For an example of a state with an explicit state vision and school improvement theory of action in their ESSA plan, see Tennessee.*

Vision

Theory of Action

Implementation

Results

Evaluation

*Tennessee ESSA state plan published April 3, 2017, page 74, available on Tennessee.gov/education

9   See, for example: Allison Friedman-Krauss, W. Steven Barnett, and Milagros Nores, "How Much Can High-Quality Pre-K Reduce Achievement Gaps?" *Center for American Progress* and *National Institute for Early Education Research*, 2016.

10   W. Steven Barnett, Shannon Riley-Ayers, and Jessica Francis, "Measuring Child Outcomes in the Early Years," *Center on Enhancing Early Learning Outcomes Policy Brief,* v 2015.

harmful effects such as curriculum-narrowing or over-testing. State and local policies have also been a barrier. Limitations placed on accountability systems under No Child Left Behind (NCLB) prevented some information about performance in the early grades to be directly considered. As a result, state systems did little to encourage school leaders to invest time and resources in those years. Worse, researchers have found evidence that schools shifted their best teachers and additional resources into the grades that "counted" for accountability purposes.[11]

While the challenges and risks are real and persistent, the evidence on the importance of early learning is too strong to ignore. In the following sections we show how options for states have opened up, making now the right time to encourage and measure high quality early learning in the context of ESSA.

3. THE OPPORTUNITIES PRESENTED BY THE EVERY STUDENT SUCCEEDS ACT

Now is the right time for state accountability decision-makers to expand their school improvement strategies to include early learning. In late 2015, Congress passed ESSA, which calls on states to design a consolidated state plan that must be in place by the 2017-18 school year. States are currently developing and submitting their state plans for federal approval, but that is only the first step; most states will continue to refine and revise their systems as they implement their plans.

ESSA allows—but does not require—states to build on their existing efforts and emphasize the early years as a key systemic piece of educational excellence, which means states do not have to do everything at once. There are both short-term, simple action steps that states can take now, and longer-term, more ambitious opportunities for states to develop over time. For states that have never stressed an early learning approach to school improvement, simply reporting out more performance indicators at birth-grade three levels could be a meaningful step in the right direction. For states looking for a more ambitious, systemic approach, or already implementing a birth to third grade strategy, there are few limitations on what a state can do to embed that strategy throughout state plans.

While much public conversation around ESSA focuses on school ratings systems, ratings are just one of many areas where early learning can be integrated into states' school

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11   Jason Grissom, Demtra Kalogrides, and Susanna Loeb, "Strategic Staffing: How Accountability Pressures Affect the Distribution of Teachers with Schools and Resulting Student Achievement," *Vanderbilt University* working paper, 2014.

improvement efforts – specific opportunities for state policymakers to consider are explored in further detail in section four. What's more, ESSA differs from previous federal requirements in that it provides more flexibility for determining how multiple indicators can be combined to produce an overall school rating. Practically speaking, this means early learning indicators and other factors can affect school ratings and encourage systemic change in schools, districts, and states.

While there are benefits to increasing attention to early learning in state accountability systems, there are also real risks, which states should take into account as they design their plans. The perception of high-stakes by leaders and teachers, combined with narrowly defined measures of success, can affect adult incentives and behaviors in ways that are detrimental to students. Poorly designed systems can lead those being held accountable to "game" the system in unproductive ways. For this reason, sections four and five of the toolkit include pros, cons, and key considerations for both broad opportunity areas and specific early learning indicators.

> **Smart strategies for measuring school success and encouraging improvements in the early years may differ from strategies for older students.**

Smart strategies for measuring school success and encouraging improvements in the early years may differ from strategies for older students. This is especially true because reliable and developmentally-appropriate measures of educational quality for younger students are still evolving.[12] But there are still many strong options for states to consider. The next section discusses what ESSA requires and allows, and how high-quality early learning could be embedded within those parameters.

4. HOW TO EMBED EARLY LEARNING IN ESSA STATE PLANS

In this section we explore what ESSA requires and allows, and outline some action steps for states to consider in each of these areas. ESSA state plans should not only design a system to rate school quality, it should set forth a vision for school quality and education improvement for the state, which includes the early years. Four broad areas of state plans present promising opportunities for increasing focus on early learning as a key part of school improvement:

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12   Elliot Regenstein and Rio Romero-Jurado, "A Framework for Rethinking State Education Accountability and Support from birth through high school," *The Ounce Policy Conversations* n5, 2016.

1. **Meaningfully differentiating schools**

2. **Interventions and supports for low-performing schools**

3. **Transparency and public reporting**

4. **School district accountability and improvement**

These areas offer a framework for how states can prioritize early learning in their state ESSA plans. Each of the four indicators represent areas (or strategies) of the state plan that are complementary, and to maximize the impact of any one area, states should align their approaches across all four. A state accountability system works, in part, by sending messages to schools, districts, and community members about what a high-quality school looks like. An aligned framework that shows school districts how early learning can be addressed in a way that provides coherence to school differentiation, interventions, and school report cards. District accountability plans should send the message that early learning is a top priority, and encourage schools and districts to take actions that will benefit young students.

After explaining broad areas of state plan opportunities in this section, section five goes into a more granular level of detail by looking at individual indicators of high-quality early learning, the evidence and rationale behind them, and how they might best fit into a state plan.

OPPORTUNITY 1: SCHOOL QUALITY RATINGS

ESSA requires states to develop formal, high-stakes school rating systems to identify low performing schools and schools with large achievement gaps, based on at least five indicators. Those indicators must include:[13] Although all states will have submitted their ESSA state plans, which includes their school quality rating systems, to the US Department of Education for review and approval by September 18, 2017, states will have the opportunity to revise their state plans through the amendment process in the coming years. Many states have articulated in their state plans that they will revisit the configuration and inclusion of indicators in their accountability system in the coming years as states continue to work with stakeholders and implement their systems. States are committed to continuously improving their state accountability systems for the 2017-18 schools year and beyond.

1. Academic achievement as measured by proficiency in state tests in grades 3-8 and once in high school;

2. A measure of student growth or another valid and reliable academic indicator, for elementary and middle schools;

3. High school graduation rate, if applicable;

4. English language proficiency; and

5. At least one indicator of school quality or student success.

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13   ESEA§ 1111(c)(4)(B)

While ESSA prescribes some standards and boundaries for these rating systems, the measures are largely left to states. But ESSA clearly signaled that states should move beyond a focus on test scores in reading and math by including other indicators of school quality or student success. States must use their differentiation systems to identify the lowest-performing five percent of schools in the state for "comprehensive support," and schools where one or more groups of students are "consistently underperforming" or low-performing for "targeted support."[14] States have some discretion about how to weigh these indicators, and could elect to include multiple indicators, or an index measure, in their systems.[15] Any indicator included in the accountability system under ESSA must meet a relatively high bar for quality:[16]

> **While ESSA prescribes some standards and boundaries for these rating systems, the measures are largely left to states.**

1. It must be valid and reliable;
2. It must "meaningfully differentiate" across schools;
3. It must be measured consistently statewide within each grade span; and
4. It must be reported annually for all students, and for subgroups of students.

States should take extra care in considering indicators for inclusion in school ratings; not everything educationally important is appropriate for high-stakes ratings. First, any indicator in a school rating system should be something that a school could reasonably work to improve by changing their practices, rather than something external to a schools' control. For instance, kindergarten-readiness is important for students' learning, but is something most schools can only influence indirectly. Second, putting heavy stakes on a single indicator could create incentives to "game" the system to improve ratings without improving students' educational experiences. Those caveats aside, there are some ways that early learning could be better emphasized in formal school rating systems:

The Second Academic Indicator for Elementary and Middle Schools

What ESSA Says: An academic indicator for elementary and middle schools beyond reading and math test proficiency is a required element of school ratings.[17] This could be "a measure of student growth", or "another valid and reliable statewide academic indicator that allows for meaningful differentiation in school performance."[18]

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14   ESEA§ 1111(c)(4)(C)

15   ESSA requires other indicators to be given a "substantial weight" and "in the aggregate, much greater weight" than the indicator of school quality and student success

16   Erika Hall, "Identifying a School Quality/Student Success Indicator for ESSA: Requirements and Considerations," *Council of Chief State School Officers*, January 2017.

17   ESEA § 1111 (c)(4)(B)

18   ESEA § 1111 (c)(4)(B)

Opportunity to Embed Early Learning: A longstanding barrier to including early grades in school improvement systems has been a dearth of developmentally appropriate academic outcomes measurement tools that meet reliability and validity standards for inclusion in school quality ratings, and reflect a well-rounded early learning approach. There are concerns that even valid and reliable measures of academic outcomes in early grades could have adverse effects in a rating context, by encouraging educators to narrow curriculum to fit assessments. States could pilot or explore non-traditional academic indicators for Pre-K through second grade. Current evidence in this category is insufficient to recommend a specific measure, but additional research and investment from states will be critical to advancing the field around this topic.

Indicator of School Quality and Student Success (A.K.A. the fifth indicator)[19]

What ESSA Says: ESSA requires states to include at least one indicator of "school quality or student success," in their formal school rating systems and gives the examples of student engagement, educator engagement, access to advanced coursework, postsecondary-readiness, school climate and safety, or any other indicators that meet the standards above.[20] This indicator, which could incorporate multiple indicators and measures, will require states to go beyond the NCLB-era reliance on assessments and graduation rates as the sole measures of school quality.[21]

Opportunity to Embed Early Learning: ESSA sets a high bar for indicators included in school ratings, but several indicators applicable to birth through third grade could be considered for the indicator of school quality or student success, including:

- Any measures that could be easily reportable and applicable at the subgroup level for all grade levels, such as chronic absenteeism or student discipline, if states' are planning to use these measures in later grades. These measures could all be defined similarly across all grades, and there's no reason to exclude grades Pre-K to third.

- For measures that align with later grades, states could consider adding extra weight or "double-counting" the early grades in the ratings system to emphasize their importance.[22]

- Teacher/student interaction measures or observation tools, such as Classroom Observation Scoring System (CLASS), a widely used observational measure primarily used in early childhood and elementary school settings (see further details in the sidebar below and in section 5). Incorporating these measures in state accountability systems could have the dual benefit of aligning quality measures across the birth to third grade continuum and focusing attention on quality of instruction across grades.

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19   (c)(4)(B)(v) of Section 1111 of ESSA

20   (c)(4)(B)(v) of Section 1111 of ESSA

21   Hall, 2017

22   Elliot Regenstein, Maia Connors, Rio Romero-Jurado, "Valuing the Early Years in State Accountability Systems Under the Every Student Succeeds Act," *The Ounce Policy Conversations* n5, 2016.

School Quality Ratings Spotlight: Teacher/Student Interaction Measures

Many states use teacher/student interaction measures as quality indicators and improvement tools in early childhood settings. Washington, D.C. and Louisiana have done so in ways that connect to their state plans and overall accountability vision. Both use the Classroom Observation Scoring System (CLASS), an observational measure of teacher/student interaction. CLASS is available in versions designed for infant/toddler programs through high school, but is most frequently used in Pre-K and other early childhood programs (see section 5 for more details on CLASS and other observational measures of teacher quality).

D.C. is unique in that almost every elementary school has Pre-K classrooms for three-and four-year-olds. In D.C., CLASS has been used for several years as a citywide Pre-K performance measure in a representative sample of 3- and 4-year-old classrooms. CLASS for Pre-K is also used as a measure of school environment in the D.C. Public Charter School Board's Performance Management Framework, the accountability tool for charter schools. Now, D.C.'s ESSA state plan includes CLASS for Pre-K as one measure in their indicator of school quality and student success, which they call the school environment indicator. School environment measures make up 25/100 points of a schools' overall rating; CLASS counts for three potential points. The other measures D.C. plans to use in this indicator are attendance/absenteeism, re-enrollment rates, and a measure of access to well-rounded education.

In Louisiana, the state department of education (LADOE) uses CLASS as a quality measure in publicly funded early childhood settings (birth through Pre-K). LADOE chose CLASS as a common statewide measure of early learning quality as part of implementing a 2012 state law focused on early learning and kindergarten-readiness, called Act 3. Every publicly funded early childhood education classroom is observed multiple times per year. Local early childhood education networks coordinate these observations. In 2015-16 the state published CLASS results for the first time after several pilot years. In 2016-17 the state rated Pre-K and childcare programs based on their CLASS scores. Now, Louisiana is continuing to refine the ratings for early learning settings, while exploring and piloting CLASS in early elementary school grades. These scores may eventually be incorporated into elementary school quality ratings.

D.C. and Louisiana are using this same measure in different ways: D.C. will use CLASS as a component of school ratings, while Louisiana will use it as the primary performance measure for Pre-K classes and childcare centers, separate from elementary school ratings. Both took multiple years to implement this tool as a way to measure, emphasize, and improve early childhood instructional practices, and are sharing those results with schools, families, and the community. These examples can show other states how to take their time in implementing new measures of early learning quality, adapt uses to local context and needs, and maintain transparency throughout the process.

OPPORTUNITY 2: INTERVENTIONS AND SUPPORTS FOR LOW-PERFORMING SCHOOLS

Once a state rating system identifies schools in need of support, states will oversee school district improvement processes and provide general support to all schools and districts with low-performing schools. In that capacity, states should help schools and districts identify strengths and weaknesses via a comprehensive needs assessment, and then create effective improvement plans. There are ample opportunities throughout this process to integrate and emphasize early learning. Specific elements of state plans include:

Needs Assessments and Improvement Plans for Schools Identified for Support
What ESSA Says: ESSA requires states to identify at least two categories of schools: 1) comprehensive support and improvement schools, which are overall the lowest performing schools in the ratings systems,[23] and 2) targeted support and improvement schools, in which a subgroup of students is consistently underperforming. States must define identification criteria as part of the school ratings system, review school district improvement plans for comprehensive support schools, and require more rigorous actions for identified schools if improvement stalls.[24] While states' ESSA-prescribed roles supporting targeted support schools are more limited, states can shape school improvement via guidance, technical assistance, and support to school districts.[25]

Opportunity to Embed Early Learning: When states review and approve improvement plans put forward by comprehensive support schools, they can ask elementary schools to conduct a rigorous and comprehensive needs analysis on their early learning investments and outcomes. Indicators that might not be fair or appropriate in the context of a ratings system could be extremely useful in diagnosing root causes of the schools' challenges and creating a successful plan of action. These indicators might include student health and wellness measures, kindergarten-readiness, formative assessment results, and/or access to extended learning opportunities. States could require their low-performing elementary schools to examine birth to third grade indicators in designing their improvement plans, and share guidance on early learning action steps to consider as part of an evidence-based school improvement plan. For example, schools may realize they need to implement a more rigorous curriculum and teacher coaching in grades K-two, introduce more wraparound health services

> **When states review and approve improvement plans put forward by comprehensive support schools, they can ask elementary schools to conduct a rigorous and comprehensive needs analysis on their early learning investments and outcomes.**

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23   ESEA § 1111 (c)(4)(D)

24   ESEA § 1111 (d)(1)

25   ESEA § 1111 (d)(2)

in schools to reduce early absenteeism, or support professional development in local early learning centers to improve kindergarten-readiness.

Exit Criteria for Schools Identified for Comprehensive and Targeted Support

What ESSA Says: Beyond identifying low-performing schools and designing improvement plan guidance, states must determine the criteria and timeline by which schools can demonstrate enough improvement to exit from low-performing status, and specify any restrictions or increased monitoring that might come from continued low performance.[26]

Opportunity to Embed Early Learning: Even if states do not include early childhood indicators in their school rating system, states could use these indicators as a progress measure for elementary schools seeking to exit low-performing status. This would encourage low-performing schools to focus on early learning strategies that might not have an immediate test score payoff, but could set the school up for growth and success in the long term. Examples include investing in high-quality Pre-K, or improving classroom observation scores in early grades. States should not use early learning indicators as exit criteria unless the state has validated that exit measures are predictive of later success, and ensured that schools have a strong plan to sustain learning gains.

State Support and Funding for Low-Performing Schools

What ESSA Says: States must reserve seven percent of their Title I allocation to support school improvement efforts in low-performing schools.[27] These funds, known as Section 1003 funds, represent roughly one billion dollars nationwide at present authorization levels. 95 percent of these funds must pass through to schools identified as in need of comprehensive and targeted support,[28] while states can reserve the remaining five percent to support their own statewide school improvement activities.[29] State have discretion over whether they distribute these funds via a competition, a formula, or some combination of both. States must also recommend evidence-based school improvement approaches to schools across the performance spectrum. States must provide various supports, technical assistance, and resource allocation oversight to districts with low-performing schools. Another three percent set-aside for "Direct Student Services" could be used for things like expanding full-day kindergarten or public Pre-K.

Opportunity to Embed Early Learning: States can integrate early childhood approaches and indicators in school district grant applications for Section 1003 funds, and other funding streams related to school improvement. Embedding those priorities in grant applications and review criteria would encourage school districts to examine their own data, use evidence-based interventions in early grades, and explain how they are using funds to expand and improve early childhood services. In designing technical assistance and

26   ESEA § 1111 (d)(3)(A)(i)

27   ESEA § 1003

28   ESEA § 1003(h)

29   ESEA § 1003(b)

support delivery systems, states could also guide funding priorities and support activities in support of high-quality early learning. States could use a portion of their Section 1003 funds for state-level early learning professional development opportunities, such as training for elementary school principals on the key competencies and skills around early literacy and child development.

Special School Categories

What It Is: Beyond the minimum requirements of ESSA, states could choose to identify special categories of schools for extra support, attention, and resources focused on improvements in birth to third grade. States could apportion technical assistance and competitive funding opportunities to schools in need of birth to third grade support, which may not necessarily appear in the ESSA-prescribed improvement categories.

Opportunity to Embed Early Learning: States could use early learning indicators to identify schools most in need of support and improvement in the early years. For example, schools scoring poorly in a combination of third grade reading, Pre-K access, kindergarten entry assessment, and family surveys could be placed in an "early childhood" improvement cohort, and be given technical assistance, access to supplementary funds, and training around evidence-based interventions.

> ### Transparency and Public Reporting Spotlight: School Report Cards and Early Childhood
>
> ESSA increases data and reporting requirements for states. Redesigning state report cards could be an important opportunity to integrate information that highlights birth to third grade data for families and community members.
>
> For example, Michigan's school report card website, MISchoolData.org, includes an early childhood section with data including early childhood program enrollment, kindergarten-readiness, early childhood special education program enrollment, and K to third grade absenteeism rates. Data are available at the state, district, school, and subgroup level.
>
> The New York City Department of Education, which offers public Pre-K in schools and community-based programs, publishes Pre-K quality snapshots alongside elementary/middle and high school quality snapshots. While Pre-K quality measures differ from other school quality measures, the reports share a common format, organized around the district's "framework for great schools". Families can look at these reports and see the alignment between Pre-K and K-12 quality standards.

Birth to Grade 3 Indicator Framework: Opportunities to Integrate Early Childhood in ESSA Toolkit

OPPORTUNITY 3: TRANSPARENCY AND PUBLIC REPORTING

ESSA requires states to report a wide variety of data in publicly-available school report cards. These report cards are a crucial vehicle to define school quality and engage the public on the attributes of a high quality school, including high-quality early learning experiences.

School Report Cards

What ESSA Says: ESSA requires states to publish public-facing school "report cards" with specific data points on student performance, demographics, funding, and other metrics. CCSSO's estimate found that each state will need to report thousands of distinct data items.[30] ESSA requires states to include the number and percentage of children enrolled in preschool on report cards, along with school spending.[31] If a state chooses to use any birth to third grade indicators in its ratings system, these must also be included in the report card, and states are free to add other data components as well.

Opportunity to Embed Early Learning: Early childhood indicators are particularly well-suited to report cards, as they could be valuable to parents making decisions about where to live and where to send their children to school. For states that want to emphasize early childhood education but feel that currently available data are not ready for high-stakes ratings systems, report cards and other transparency measures are a low-stakes way to encourage schools and school districts to improve their offerings, and emphasize the importance of birth to third grade years. As previously mentioned, reporting out data per grade level could draw attention to disparities and challenges for children in early grades (see the example from Michigan at right). By including school spending data in report cards, there is an opportunity to increase budget and spending transparency around early learning, and encourage resource equity for early grades. There also may be environmental data about schools that are relevant to early learning, such as the availability of community resources, afterschool programs, health and wellness information, or community access to Pre-K. To the extent possible, states should align indicators from Pre-K through later elementary school years in report cards, so parents do not receive conflicting or confusing messages about school quality.

OPPORTUNITY 4: SCHOOL DISTRICT ACCOUNTABILITY AND IMPROVEMENT

While ESSA sets a minimum framework for school accountability, states and school districts have the option to look beyond compliance as they design school accountability and improvement systems. One area not required by ESSA, but particularly important for early learning is the role of school districts. Many resource allocation, goal setting, and improvement strategy decisions around early learning are made at the district level, not by individual schools, and state accountability systems could take this into account. Specific district-focused approaches to consider include:

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30   Penn Hill Group, "State Report Card Requirements Memorandum," *Council of Chief State School Officers*, 2016.
31   ESEA § 1111(h)(1), (2).

State-Directed School *District* Accountability Systems

What It Is: While ESSA delegates significant responsibilities to states, and it ultimately asks states to hold *schools* accountable for performance. States can surpass ESSA's expectations by designing accountability metrics for school districts, distinct from but aligned to school ratings. If states spotlight quality and equity at the district level, they can address important aspects of schooling that are generally outside of any one schools' direct control.

Opportunity to Embed Early Learning: School districts are usually better positioned than individual schools to make budgetary decisions and form partnerships with early childhood education providers working with children ages zero to five. For this reason, it states should think of access to Pre-K and equitable resource allocation as *district* responsibilities. Also, if a state wants to emphasize instructional quality in early grades, but does not have sufficient resources to observe every classroom in every school, observational measures of early learning quality could be sampled at the school district level, and school districts could be rated on early learning quality over a multi-year period.

School District Internal Improvement Efforts

What It Is: All school districts should seek to continuously improve student outcomes and close achievement gaps, regardless of whether the state or federal government directs them to do so. ESSA leaves many school improvement decisions in the hands of school districts, especially around targeted support and improvement (achievement gap) schools. For these reasons, school districts may want to design their own improvement systems and strategies for early learning beyond what ESSA or the state require, customized to their particular schools and communities. The state can provide assistance and guidance to help districts pursue continuous improvement with early learning quality in mind.

Opportunity to Embed Early Learning: In addition to taking actions required by the state accountability systems, districts could use more detailed, comprehensive early childhood indicators to guide improvement in schools and make strategic decisions about resources and staffing. It is both appropriate and essential that districts use formative and interim student outcome data from birth through third grade to identify, understand, and respond to patterns of student learning, including strengths and weaknesses. This is substantially different than using these indicators at the state level because the district has direct responsibility and

> **It is both appropriate and essential that districts use formative and interim student outcome data from Pre-K through third grade to identify, understand, and respond to patterns of student learning, including strengths and weaknesses.**

control over instructional and staffing decisions in their schools. Districts also understand their community landscape better than the state, and can identify opportunities to work in partnership with early learning providers, community organizations, and other local agencies on early childhood strategies that can facilitate out-of-school conditions for student success, such as health and wellness, family engagement, community resources, summer learning opportunities, and more. States can support and encourage districts doing this work in several ways. For example, states could create cohorts or learning communities of district leaders interested in improving early learning systems, encourage districts to use ESSA funding streams to work with community-based early learning providers, and reward districts leading the way on early learning.

5. EARLY LEARNING INDICATORS

There are many indicators available today that states could use to measure and encourage high-quality early learning, some of which would not require additional data collection. Potential early learning indicators states might consider can be grouped into three categories, which represent different aspects of educational quality:

1. **Access indicators**, which measure student access to learning experiences in and out of school;

2. **Academic indicators**, which measure instructional quality or student learning outcomes; and

3. **Engagement indicators**, which measure satisfaction or engagement with school climate, environment, and/or culture.

This section dives deeply into 13 potential early learning indicators that represent all three indicator types, and focus on birth to third grade. Each includes a rationale as to why and how an indicator might be valuable, selected key research and resources, potential measures, and examples of states and school districts already using these indicators in various ways. Not every indicator is appropriate for use in school quality ratings or other high-stakes uses, as explained below, but many could be useful in the context of school support or transparent reporting. It is not necessary or advisable for states to include every single indicator below in their ESSA plans; rather, it is important that each state understands the breadth of options available to measure and encourage improvement in early learning, and consider how they fit in with the states' overall goals, visions, and theories of action.

Early Learning Indicators, by Type of Indicator (click on an indicator name to jump to more detailed information about that indicator)		
ACCESS	**ENGAGEMENT**	**ACADEMIC**
Chronic Absenteeism	Chronic Absenteeism	Teacher Qualification/Effectiveness
Student Discipline	Student Discipline	Kindergarten Readiness Assessment Results
Teacher Absenteeism	Quality Rating and Improvement Systems (QRIS)	Teacher Observations, Instructional Quality Reviews, Teacher/student Interaction Measures
Teacher Qualification/Effectiveness	School Climate Measures	Formative or Diagnostic Assessments of Academic Progress
Access to Resources	Social and Emotional Learning	
Access to Full Day Kindergarten		
Access to Publicly-Funded Pre-K		
Quality Rating and Improvement Systems (QRIS)		

1. Chronic absenteeism

ESSA Opportunities: School Quality Ratings/Interventions and Supports for Low-Performing Schools/Transparency and Public Reporting/School District Accountability and Improvement

Type: Access/Engagement
Age range: Pre-K through grade 12

Considerations:

- Research points to a strong relationship between absenteeism and learning outcomes, and higher rates of absenteeism for disadvantaged students can widen achievement gaps.
- Chronic absenteeism rates differ from truancy rates and average daily attendance in that they include "excused" and "unexcused" absences as well as suspensions.
- Attendance information is already collected by states.
- States and districts can point schools towards root cause analyses of absences such as discipline policies, family engagement transportation systems, health and wellness.
- Absenteeism should not be so heavily weighted in ratings systems as to create inequitable ratings for schools with high-poverty student populations or significant transportation challenges, which are likely to result in higher rates of absenteeism.
- Absenteeism metrics should be accompanied by supports and resources for schools to address root causes of absenteeism and improve attendance.

Potential measures:

- Vary by state, but must include both excused and unexcused absences from school, and suspensions.
- The most common definition of absenteeism is the percent of students missing ten percent or more of school days to-date; this can be continuously monitored and tracked throughout the year.

Use cases:

- California's CORE School Districts were among the first to incorporate chronic absenteeism into their school rating systems.
- Maryland requires schools to report the percentage of students absent for more than 20 days, and reports data online via their public report cards.

Key research:

- Robert Balfanz and Vaughn Byrnes, "The Importance of Being in School: A Report on Absenteeism in the Nation's Public Schools," *Johns Hopkins University Center for the Social Organization of Schools,* 2012.
  - o Explains how chronic absenteeism differs from average daily attendance and truancy, and estimates the positive academic impacts of increased attendance, especially for at-risk students.
- Applied Survey Research, "Attendance in Early Elementary Grades: Associations with Student Characteristics, School Readiness and Third Grade Outcomes," *Attendance Works*, 2011.
  - o Found that students with high attendance in kindergarten and first grade scored better on third grade tests.
- Melissa Dahlin and Jim Squires, "Pre-K Attendance – Why It's Important and How to Support It," *Center for Enhancing Early Learning Outcomes (CEELO)*, 2016.
  - o Profiles state and local efforts to improve attendance in Pre-K, and summarizes frequent root causes of absences in early childhood.
- Attendance Works research collection.
  - o Collection of briefs and white papers on chronic absenteeism, focused on early grades and including actionable steps for policymakers.

2. Student discipline

ESSA Opportunities: School Quality Ratings/Interventions and Supports for Low-Performing Schools/Transparency and Public Reporting/School District Accountability and Improvement

Type of indicator: Access/Engagement
Age range: Pre-K through grade 12

Considerations:

- Research suggests that high rates of suspension and expulsion (together referred to as exclusionary discipline) reduces students' opportunity to learn, increases likelihood of dropping out or becoming disengaged from school, and disproportionately affects black, Latino, and special education students.
- Schools can reduce rates of suspension and expulsion in a relatively short period of time with focused interventions.
- Suspension and expulsion data are already collected by states.
- A blanket ban on suspensions with no other positive resources or training could lead to backlash from educators and families, or safety concerns in extreme instances.

- Without monitoring, a suspension ban could also create incentives for schools/district to game the system, for instance by increasing in-school suspension without improving disciplinary practices.
- Any action should be accompanied by supports and resources to address root causes of misbehavior, implement more effective and equitable disciplinary alternatives, and improve school climate (see below).

Potential Measures:
- Suspension, expulsion, and overall exclusionary discipline rates and numbers of students impacted
- Percent of total instructional time missed
- Behavioral reasons for discipline
- Discipline equity gaps by student subgroup

Use cases:
- Chicago Public Schools (CPS) worked with the Collaborative for Academic, Social, and Emotional Learning (CASEL), to target and reduce exclusionary discipline rates as part of an overarching strategy to improve social and emotional learning and implement positive behavior support systems and culture-building strategies in schools. In 2014, CPS implemented a policy of no suspensions and expulsions for children in preschool through second grade.
- Connecticut limited out-of-school suspensions for children from Pre-K through second grade and provided one-on-one behavior management support to schools and childcare providers through a program called the Early Childhood Consultation Partnership.
- Washington state collects, analyzes, and reports on a range of school discipline measures in each grade, and requires school districts to use this data to identify and monitor disproportionate rates of exclusionary discipline by student subgroups.
- Washington, D.C.'s school equity reports show the percent of students suspended and expelled for every school and charter school, by subgroup, and include grades PreK-12

Key research:
- U.S. Department of Health and Human Services and U.S. Department of Education, "Policy Statement on Expulsion and Suspension Policies in Early Childhood Settings," December 10, 2014.
  o Summarizes research on negative effects of suspension and expulsion in early childhood settings, and recommends alternative disciplinary strategies.
- Walter Gilliam. "Prekindergarteners Left Behind: Expulsion Rates in State Pre-Kindergarten Programs," *Foundation for Child Development*, 2010.
  o Analyzes data on high expulsion rates and lack of behavioral resources in state-funded Pre-K programs—three times the rate for students in K-12 grades, with particularly high rates for black boys.
- Michelle Horowitz, "Early Childhood Suspension and Expulsion," *Center for Enhancing Early Learning Outcomes (CEELO)*, 2015.
  o Collects and summarizes research on suspension and expulsion in early childhood settings, and identifies states with specific policies on discipline in early grades.

3. Teacher absenteeism

ESSA Opportunities: Interventions and Supports for Low-Performing Schools/Transparency and Public Reporting/School District Accountability and Improvement

Type of indicator: Access
Age range: Pre-K through grade 12

Considerations:

- High or chronic absenteeism by teachers disrupts students' learning experiences and is associated with lower academic performance.
- School systems in poor, rural areas and major cities are more likely to have high rates of teacher absenteeism.
- Reporting teacher absenteeism at the school district level is required by the U.S. Department of Education Civil Rights Data Collection (CRDC).
- High or chronic absenteeism by teachers can be improved at the school and district level through focused interventions, and by bringing attention to root causes of teacher turnover and absenteeism.
- High or chronic absenteeism by teachers is not focused on students or easily measurable by student subgroup.
- Policies should not encourage teachers to come to work when ill, or discourage fair parental leave (many teachers use sick leave for this purpose)

Potential measures:

- Teacher Chronic Absenteeism: Percentage of teachers missing ten or more days of regular school, per year (required biennially at the school district level by the CRDC).
- Average Teacher Absenteeism: Days and percent of school year missed by homeroom teachers, by school and student subgroups.
- Substitute Time: Percent of student school days and/or learning time taught by a substitute teacher, by grade and subgroup.

Use cases:

- Illinois reports on the percentage of teachers absent 10 days or fewer in each school as part of their state report cards at the state, district, and school level.
- Aldine Independent School District in Texas implemented an incentive program to reduce teacher absenteeism where bonuses tied to retirement plans were given to teachers with high attendance rates.

Key research:

- Nithya Joseph, Nancy Waymack and Daniel Zielaski, "Roll Call: The importance of teacher attendance," *National Council on Teacher Quality,* June 2014.
  - o Using data from 40 large metropolitan areas, finds that teachers have an average 94% attendance rate, 16% of teachers were chronically absent, and many typical attendance incentive programs did not have a significant effect.
- Charles T. Clotfelter, Helen F. Ladd, and Jacob L. Vigdor, "Are teacher absences worth worrying about in the United States?" *Education Finance and Policy* v4 n2 (2009): 115-149.
  - o Finds that teacher absences are associated with lower elementary school performance, and high-poverty schools are likely to have higher teacher absenteeism rates. Recommends higher teacher salaries combined with financial penalties for absences.

4. Teacher qualifications and/or teacher effectiveness

ESSA Opportunities: Interventions and Supports for Low-Performing Schools/Transparency and Public Reporting/School District Accountability and Improvement

Type of indicator: Access/Academic
Age range: Pre-K through grade 12

Considerations:

- Teachers are the most important in-school factor in student learning, and too often, the least effective and least qualified teachers are concentrated in high-poverty schools.
- Early childhood education has increasingly focused on workforce training, development, and credentialing.
- States, schools, and districts could increase equitable access to highly-effective teachers, and work to raise the overall level of teacher quality in schools and early childhood programs.
- Teacher quality/effectiveness is not focused on students or easily measurable by student subgroup; effectiveness data may be unreliable depending on state or local definitions.
- Teacher quality/effectiveness is difficult to reliably measure in early grades; many states are retreating from statewide teacher evaluation systems, and these systems are rarely designed for teachers in early grades.
- Degree-based qualifications or years in the classroom, while easier to measure, are not equivalent to teacher effectiveness in the classroom.

Potential measures:

- Percent highly effective teachers, as measured by the state or local teacher evaluation system

Use cases:

- Kentucky requires schools to conduct K to third grade program reviews. Indicators of effective teaching make up the majority of the review rubric, encouraging schools to reflect and improve upon teaching practice in early grades.
- DC Public Schools' IMPACT teacher evaluation system has different frameworks designed for teachers in Pre-K to K, grades one to two, and grade three and beyond.

Key research:

- Council of Chief State School Officers, "Principles for Teacher Support and Evaluation Systems," 2016.
  - o Identifies principles for states to create effective and fair teacher evaluation and professional development systems that emphasize continuous improvement.
- Steven G. Rivkin, Eric A. Hanushek, and John F. Kain, "Teachers, Schools, and Academic Achievement," *Econometrica* v. 73, no. 2 (2005): 417-458.
  - o Estimates teachers' significant impact on student learning, and shows that improving overall teacher quality would have a greater impact on student achievement than reducing class sizes by ten students each.
- National Academies of Medicine and the National Research Council. Transforming the Workforce for Children Birth through Age 8. Washington, DC: National Academies Press, 2015.
  - o Examines the challenges and opportunities in improving the early childhood education workforce, and blueprint for action in higher education, qualifications, and evaluation. While much is known about what educators of young children should know and be able to do, this knowledge is rarely reflected in preparation and training for early childhood educators or in state and local policies.

ESSA Opportunities: Interventions and Supports for Low-Performing Schools/Transparency and Public Reporting/School District Accountability and Improvement

Type of indicator: Access
Age range: Birth through grade 12

Considerations:

- Access to resources that enable great teaching and learning is an important condition for student success in early grades. This can include overall funding levels as well as specific resources such as high-quality, well-rounded curricula (including access to arts, science, and foreign language instruction), facilities, transportation systems, libraries and books, and equitable access to effective teachers.
- Measures should be tailored to community and school contexts.
- In early childhood especially, an engaging and enriching classroom environment; comprehensive, research-based, developmentally appropriate curriculum; and schoolwide resources can facilitate learning growth.
- ESSA requires new school spending on reporting, which could focus public attention and school district actions on equitable access to resources.
- Resource allocation decisions are not always actionable at the individual school level, and cannot be easily disaggregated at the student level.
- States should not penalize innovative or specialized schools via overly prescriptive input requirements.

Potential measures:

- School finance equity
- Curriculum quality audits
- Distance to school and average student travel time
- Access to arts education and/or well-rounded curriculum

Use cases:

- In the March 2017 draft of their state ESSA plan, Massachusetts included a priority area for "increasing student access to an ambitious, engaging, well rounded curriculum," across all grades, with a focus on technical assistance, professional learning, and updated state curriculum frameworks. The state will also add an indicator of curriculum breadth to public state and district report cards.

Key research:

- Linda Darling-Hammond, Soung Bae, Channa M. Cook-Harvey, Livia Lam, Charmaine Mercer, Anne Podolsky, and Elizabeth Stosich, Pathways to New Accountability Through the Every Student Succeeds Act (Palo Alto: Learning Policy Institute, 2016).
  o Emphasizes federal, state, and district educational responsibilities in addition to school responsibilities, especially in building system capacity to support high-quality education, and providing adequate, equitable resources to support meaningful learning outcomes.
- Kristie Kauerz and Julia Coffman, "Framework for Planning, Implementing and Evaluating PreK-3rd Grade Approaches," University of Washington, 2013.
  o Lays out the systemic components of an integrated Pre-K to third grade approach, including high-quality instructional tools, and a healthy physical and emotional learning environment, with example indicators.

- C. Kirabo Jackson, Rucker C. Johnson and Claudia Persico, "The Effects of School Spending on Educational and Economic Outcomes: Evidence from School Finance Reforms," *The Quarterly Journal of Economics* vol 131 n1 (2016): 157-218.
  - Examines school finance reforms and finds that a ten percent increase in per-pupil spending results in more completed years of education and greater economic stability in adulthood, especially for students from low income families.

6. Access to full day kindergarten

ESSA Opportunities: Interventions and Supports for Low-Performing Schools/Transparency and Public Reporting/School District Accountability and Improvement

Type of indicator: Access
Age range: Kindergarten

Considerations:
- While the vast majority of students in the U.S. attend full-day kindergarten (over 75 percent in 2014), in some communities it remains unavailable, or only available on certain days.
- States could encourage districts to offer full-day kindergarten if they have not already done so.
- If most or all school districts in the state offer full-day kindergarten, this measure would not differentiate between schools or districts, and thus would not be useful.
- Offering full-day kindergarten is not always actionable at the school level, as school districts typically make most decisions in this area.
- Providing access to full-day kindergarten does account for the quality of those kindergarten programs.

Potential measures:
- Percent of entering first-graders who previously attended full-day kindergarten
- Percent of schools and/or districts offering full-day kindergarten

Use cases:
- Nebraska reports the percent of districts offering kindergarten programs that are half-day, full-day, every other day, or another configuration on its state report card website.
- Massachusetts offers targeted state incentive grants for districts transitioning half-day kindergarten classrooms to full-day classrooms, as well as full-day kindergarten quality enhancement grants to help schools use that time effectively.

Key research:
- Chloe R. Gibbs, "Experimental Evidence of Early Intervention: The Impact of Full-Day Kindergarten," *University of Virginia Frank Batten School of Leadership and Public Policy*, 2014.
  - Randomized trial found full-day kindergarten had substantial positive academic effects, especially for students with low literacy skills upon kindergarten entry.
- Elizabeth Votruba-Drzal, Christine P. Li-Grining, and Carolina Maldonado-Carreno, "A Development Perspective on Full-day vs. Part-day Kindergarten and Children's Academic Trajectories through Fifth Grade." *Child Development* v.79 n.4 (2008).
  - Full-day kindergarten was associated with greater growth of reading and math skills during kindergarten, but faded soon after. This is in part explained by differences in the children who attend part- and full-day kindergarten as well as school characteristics.
- Education Commission of the States. "50-State Comparison: State Kindergarten Policies." 2014.
  - Summarizes kindergarten funding, entry, and attendance policies by state.

7. Access to publicly funded Pre-K

ESSA Opportunities: Interventions and Supports for Low-Performing Schools/Transparency and Public Reporting/School District Accountability and Improvement

Type of indicator: Access
Age range: Pre-K

Considerations:

- About 40% of American four-year-olds attend publicly-funded Pre-K. Over 43 states have state-funded Pre-K programs and Head Start programs serve Pre-K age children and their families in all 50 states.
- Reporting Pre-K access on state report cards is newly required under ESSA; states and districts could use this data to encourage further improvements in access and quality.
- States could encourage school district investment in Pre-K and collaboration with local Head Start and Pre-K providers, and greater attention to school-readiness overall.
- This is not always actionable at the school level; school districts typically make most decisions in this area.
- Providing access to Pre-K does not measure quality within Pre-K classrooms, and some have argued that targeted, high-quality programs are a better use of limited resources than access for all without a significant investment in improving program quality.

Potential measures:

- Percent of three-year-olds and/or percent of four-year-olds enrolled in publicly funded Pre-K in a district
- Percent of low-income three-year-olds and/or four-year-olds enrolled in publicly funded Pre-K in a district
- Number of Pre-K seats offered vs. kindergarten class size

Use cases:

- Georgia's state report card on Pre-K includes total enrollment and at-risk student enrollment percentages, and disaggregates enrollment by Head Start and state programs, for every county in the state.
- See "Transparency and Public Reporting Spotlight: School Report Cards and Early Childhood," above.

Key research:

- Hirokazu Yoshigawa, Christina Weiland, Jeanne Brooks-Gunn, Margaret R. Burchinal, Linda M. Espinoza, Williams T. Gormley, Jens Ludwig, Katherine A. Magnuson, Deborah Phillips, and Martha J. Zaslow, "Investing in Our Future: The Evidence Base on Preschool," *Foundation for Child Development*, 2013.
- National Institute for Early Education Research, "The State of Preschool 2015."
- W. Steven Barnett, "Expanding Access to Quality Pre-K is Sound Public Policy," National Institute for Early Education Research, 2013.

8. Quality rating and improvement systems (QRIS)

ESSA Opportunities: Interventions and Supports for Low-Performing Schools/Transparency and Public Reporting/School District Accountability and Improvement

Type of indicator: Access/Engagement
Age range: Birth to age five

Considerations:

- Quality rating and improvement systems (QRIS) combine financial incentives, quality ratings, and professional development services with the goal of improving quality in early care and education.

- QRIS are not a single indicator; they are separate state systems for early childhood programs, which can overlap with school-based systems in the case of school-operated Pre-K, though some states exempt this type of program from QRIS.

- State QRIS standards vary in the degree to which they measure effective school-readiness or teaching and learning quality. QRIS standards tend to favor observable inputs, such as health and safety measures and staff credentials, but newer QRIS in states that received Race to the Top Early Learning Challenge grants often include classroom observation measures such as Classroom Assessment Scoring System CLASS or Early Childhood Environmental Rating Scale ECERS.

- QRIS ratings for community-operated and school-operated early childhood programs could serve different purposes in the context of state plans:

  o In states where school-based preschool programs are included in QRIS, incorporating QRIS in school ratings or school improvement efforts could help to align accountability across early childhood and K-12 systems and encourage schools to improve quality in preschool classrooms they operate.

  o Community-operated preschool program ratings could be used as part of a community needs assessment, and could inform strategy for a district-wide kindergarten-readiness improvement effort or school and district partnerships with community early childhood programs.

Potential measures:

- Access to top-rated early childhood programs in the school community
- QRIS ratings for school-based Pre-K programs

Use cases:

- In New York, field testing for the QUALITYstarsNY QRIS prioritized school districts with low-performing schools.
- Washington state's QRIS, called Early Achievers, requires all state Pre-K and childcare programs receiving a public subsidy to meet a certain quality standard.

Key research:

- James Elicker and Kathy R. Thornburg, "Evaluation of Quality Rating and Improvement Systems for Early Childhood Programs and School-Age Care." Research-to-Policy, Research-to-Practice Brief OPRE 2011-11c, *Office of Planning, Research, and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services*, April, 2011.

  o Summarizes key measurement and design considerations for effective QRIS.

- BUILD Initiative, Rising to the Challenge: Building Effective Systems for Young Children and Families, 2015.

  o Uses interview from state leaders to profile lessons from early QRIS efforts, including systems-building at the state and local level, integrated data systems, and trends in workforce improvement.

9. School climate measures

ESSA Opportunities: Interventions and Supports for Low-Performing Schools/School District Improvement

Type of indicator: Engagement
Age range: Pre-K through grade 12

Considerations:

- School climate is an overarching term for the experience of students and staff in a school beyond explicit academic offerings and outcomes, including five key dimensions: safety, relationships, teaching and learning, institutional environment, and school improvement processes.

- Research indicates that strong performance on school climate measures is positively associated with a range of academic and behavioral outcomes.

- School climate measures usually involve staff, student, and/or family surveys, and may integrate other measures such as discipline and attendance.

- Measuring school climate could balance out perceived over-emphasis on assessments, focus on student and family engagement, and encourage holistic approach to school improvement.

- Most student surveys are designed for grades three and up; Pre-K to second grade surveys must be administered one-on-one or in small groups. Parent or staff surveys, or other measures, could be used in early grades.

- Survey responses could be altered if high-stakes are applied, and measures may not be sufficiently reliable for public reporting, school-to-school comparison, or disaggregation by student subgroup.

Potential measures:

- There are several survey instruments publicly available or on the market that measure school climate, varying in time, cost, and design. Most are designed for third grade and up. Additionally, some states and districts have designed their own surveys or composite measures of school climate.

Use cases:

- As part of its Maine Schools for Excellence initiatives, Maine developed its own school climate survey tools. These include a K to grade two student survey component and K to grade two school climate resources.

Key research:

- Amrit Thapa, Jonathan Cohen, Shawn Guffy, and Ann Higgins-D'Alessandro, "A Review of School Climate Research." *Review of Educational Research* v83 n3, (2013).

  o Reviews 206 studies on school climate and recommends a whole-school approach to improvement plans for low-performing schools aligned to multiple measures of school climate quality.

- Ming-Te Wang and Jessica L. Degol, "School Climate: A Review of the Construct, Measurement and Impact on Student Outcomes." *Educational Psychology Review* v28 n2, (2016)

  o Proposes a multidimensional school climate framework focused on how school climate impacts student outcomes, and reviews research and available measures of school climate.

10. Social and emotional learning (SEL)

ESSA Opportunities: Interventions and Supports for Low-Performing Schools/School District Improvement

Type of indicator: Engagement
Age range: Birth through grade 12

Considerations:

- The Collaborative for Academic, Social, and Emotional Learning identifies five core social-emotional learning (SEL) competencies: self-awareness, self-management, social awareness, relationship skills, and responsible decision-making

- Research indicates that students with strong SEL skills do well in other academic and long-term life outcomes. SEL development is particularly crucial for students during early childhood, when brain development is most rapid and students build foundations for future learning.

- SEL in interrelated with school climate.

- Research in this area is emerging; comparable, reliable measures of SEL skills and knowledge are still in development. Measures may not be sufficiently reliable for public reporting, school-to-school comparison, or disaggregation by student subgroup. In addition, many existing measures are time-consuming and labor-intensive to administer.

Potential measures: There are many measurement tools available for SEL skills (see Denham, below), but most are designed to measure one or more specific social-emotional skills or domains of social-emotional skills, rather than "social-emotional learning" as a broad concept. As such, schools, districts, or states would need to select measures aligned with students' age groups, as well as with intervention and specific skills they are focused on building/improving among students.

Use cases:

- States could encourage schools to include SEL interventions in their school improvement plans, and offer a recommended list of evidence-based interventions and measures of progress by age group.
- School districts, like the CASEL partner districts, could conduct SEL needs assessments in their schools and design a comprehensive SEL plan focused on early grades. This could include specific SEL curriculum changes, professional development, out of school time offerings, school climate initiatives, counseling services, etc.

Key research:

- Joseph A. Durlak, Roger P. Weissberg, Allison B. Dymnicki, Rebecca D. Taylor, and Kriston B. Schellinger, "The Impact of Enhancing Students' Social and Emotional Learning: A Meta-Analysis of School-Based Universal Interventions." *Child Development* v.82 n. 1. (2011): 405-432.
  - o Meta-analysis of 213 different schoolwide SEL initiatives from K-12 students finds improved SEL skills, attitudes, behavior, and academic performance.
- Joseph Durlak, Celene Domitrovich, Roger Weissberg, and Thomas Gullotta (Eds.), Handbook of Social and Emotional Learning: Research and Practice. New York: Guilford Press, 2015.
  - o In-depth book examines conceptual, scientific basis for SEL, and provides guidance on implementing and evaluating school and district SEL approaches.

- Susanne A. Denham, Peter Ji, and Bridget Hamre, "Compendium of Preschool Through Elementary School Social-Emotional Learning and Associated Assessment Measures," *University of Illinois at Chicago and CASEL*, 2010.
  - Summarizes available measurement tools for SEL in early grades, aligned to various SEL skills and competencies.

11. Kindergarten-readiness assessment results

ESSA Opportunities: Interventions and Supports for Low-Performing Schools/Transparency and Public Reporting/School District Improvement

Type of indicator: Academic/Access
Age range: Administered in kindergarten, measures Pre-K and early childhood

Considerations:
- Most states are in some stage of development or implementation of a kindergarten-readiness assessment (KRA, also called kindergarten entry assessments or school-readiness assessments).
- Generally these assessments are intended to inform kindergarten teachers and schools about the skills of incoming kindergarteners and provide information to families and policymakers at a community and system level about early childhood system performance.
- Most tools have not been validated or designed to hold schools, early childhood programs, or teachers accountable for student-readiness skills. Measures may not be sufficiently reliable for public reporting, school-to-school comparison, or disaggregating by student subgroup.
- In the context of school improvement efforts, KRA results could inform school leaders about the incoming skills of their students, encourage the use of resources on Pre-K quality and other early childhood efforts, and inform professional development and resources allocation decisions.

Potential measures: KRA assessment tools across states are included in this CEELO Fast Fact publication. They include commercially-available assessments, interstate consortia, and state-created assessments.

Use case examples:
- In New Jersey, KRA participation is voluntary for school districts, and results are not aggregated or publicly reported. Instead, the state emphasizes using results as a formative tool in classrooms and as a professional development tool for principals and teachers.
- In Maryland, a KRA has been in place since 2001. KRA results are reported at a state level, and are used to drive improvement; inform families and teachers about students' skills; and advise early learning programs, community leaders, and policymakers on achievement gaps and trends.

Key research:
- Elliot Regenstein, Maia Connors, Rio Romero-Jurado, and Joyce Weiner, "Uses and Misuses of Kindergarten Readiness Assessment Results," *The Ounce Policy Conversations*, February 2017.
- GG Weisenfeld, "Implementing a Kindergarten Entry Assessment (KEA) System." *Center on Enhancing Early Learning Outcomes*, January 2017.
- National Research Council, Early Childhood Assessment: Why, What and How. Washington, DC: National Academies Press, 2008.

ESSA Opportunities: School Quality Ratings/Interventions and Supports for Low-Performing Schools/Transparency and Public Reporting/School District Accountability and Improvement

Type of indicator: Academic
Age range: Birth through grade 12

Considerations:

- Some teacher observations, instructional quality reviews, teacher/student interaction measures have a strong research base linking them to teacher quality and student achievement, and evidence of reliability and validity at the classroom or program level.

- These indicators emphasize instructional quality and teacher-student interaction, which are particularly important domains in early grades, where learning outcomes are harder to measure.

- Instructional quality and teacher-student interaction is under direct school control.

- These indicators could be used to measure and improve teacher quality equity between grades.

- They are not appropriate for public reporting or school quality ratings unless rigorously implemented using valid and reliable measurement tools.

- Rigorous, widespread implementation could be costly and time consuming.

Potential measures:

- The Classroom Assessment Scoring System (CLASS) is a widely used observational measure of teacher-student interaction. CLASS is available for infant through secondary grades, but it is primarily used in early childhood and elementary school settings. CLASS measures three domains: emotional support, classroom organization, and instructional support. Unlike other popular teacher observation models, CLASS has been validated for use in early childhood education settings.

- Several states have designed their own evaluation rubrics and frameworks for Pre-K through third grade teaching, aligned to state teaching standards.

Use case examples:

- See Louisiana and DC examples on in spotlight, above

- Head Start uses CLASS scores as a framework for high-quality classroom teaching practices and instructional quality, to guide professional development and coaching for grantees, and as a performance measure in the monitoring review process for grantees.

Key research:

- Jeff Archer, Steven Cantrell, Steven L. Holtzman, Jilliam N. Joe, Cynthia M. Tocci, and Jess Wood, Better feedback for better teaching: a practical guide to improving classroom observations, San Francisco, CA: Jossey-Bass, 2016.

- Andrew D. Ho and Thomas J. Kane, "The Reliability of Classroom Observations by School Personnel," Bill and Melinda Gates Foundation, 2013.

- Jana Martella and Lori Connors-Tadros, "Evaluating Early Childhood Educators: Prekindergarten through Third Grade." *Center on Great Teachers and Leaders at American Institutes for Research*, 2014.

13. Formative or diagnostic assessments of academic progress

ESSA Opportunities: Interventions and Supports for Low-Performing Schools/School District Improvement

Type of indicator: Academic
Age range: Birth through grade 12

Considerations:

- Formative assessments are designed to give immediate feedback to students and teachers on specific goals or lessons. Diagnostic assessments can screen for delays or disabilities, and give educators a sense of students' incoming skills and knowledge in a certain academic area. A comprehensive system of assessments could include informal teacher-designed tasks, as well as formal, standardized assessments.
- Assessments should be developmentally appropriate and use established norms and standards to determine whether a student is on-track.
- Assessments can provide valuable information to educators and help screen for difficulties, identify trends, inform instruction, and track progress.
- Putting too much weight or stakes on formative tests can undermine their purpose in the classroom.

Potential measures:

- There are many interim, diagnostic, and formative assessment tools available on the market. Some commonly used tools include NWEA MAP, SAT-10, and i-Ready.
- Teachers can also develop their own formative assessment tools, and some states have made their own tools and assessments aimed at Pre-K to third grade.

Use case examples:

North Carolina created a system of K to third grade formative assessments to inform instruction, starting with a kindergarten entry assessment and progressing through third grade. The kindergarten entry assessment launched in 2015-16, and the full system of formative assessments was piloted in 2016-17. The assessments will primarily be used to enhance teacher practice and classroom instruction; results will also be used to guide support, professional development, and targeted funding.

Key research:

- National Research Council, Early Childhood Assessment: Why, What and How. Washington, DC: National Academies Press, 2008.
  - o An in-depth and comprehensive publication on developmentally-appropriate early childhood assessments and their uses.
- Gregory J. Cizek, "An introduction to formative assessment: History, characteristics, and challenges" in *Handbook of Formative Assessment*, eds. Heidi Andrade and Gregory J. Cizek (New York: Routledge, 2010), 3–17.
  - o Defines formative assessment and its role in supporting teaching and learning as identifying students' strengths and weakness, assisting instruction, aiding students in reflecting and revising on their work, and fostering responsibility for learning among students.
- Robert Linquanti, "Supporting Formative Assessment for Deeper Learning: A Primer for Policymakers," *Council of Chief State School Officers*, 2014.
  - o Provides recommendations for policymakers to encourage the effective use of high-quality formative assessments without punitive measures or accountability consequences.

CONCLUSION

The early years of child development offer a still-untapped lever for states to address achievement gaps before children start to grow, and to accelerate school improvement efforts with evidence-based interventions. Depending on the state, there may be political and technical challenges that currently exist, but there are a variety of steps that every state can take today, aided by the flexibility and opportunities presented by ESSA.

ESSA presents few barriers for states, and they could use it as an opportunity to take small steps towards emphasizing early grades in school report cards and improvement plans, to pursue more ambitious, fully aligned birth to third grade strategies. No matter the level states are on as they embark on this work, they should design plans that carefully add elements over time, only after these elements have been piloted and monitored. Building in checks around data quality and stakeholder engagement will help ensure that states can make progress without letting policy efforts outpace implementation capacity or public support.

States should recognize the real opportunities for advancing early learning, school readiness, and creating a durable foundation for educational excellence that ESSA presents. Beyond federally mandated school improvement systems, a plethora of other state policies could also benefit from alignment with a statewide vision for high-quality early childhood education, such as educator licensure, quality rating and improvement systems (QRIS) for early childcare and education providers, school funding, and more. While this publication does not address these areas in depth, they are no less important and valuable. States have the flexibility to think creatively within and between state and local entities to build bridges and enhance alignment between early education providers and K-12 schools, and create more high-quality learning opportunities for all children, regardless of age. CCSSO and CEELO look forward to supporting states throughout this process.

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