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Subprime Learning

Early Education in America since the Great Recession

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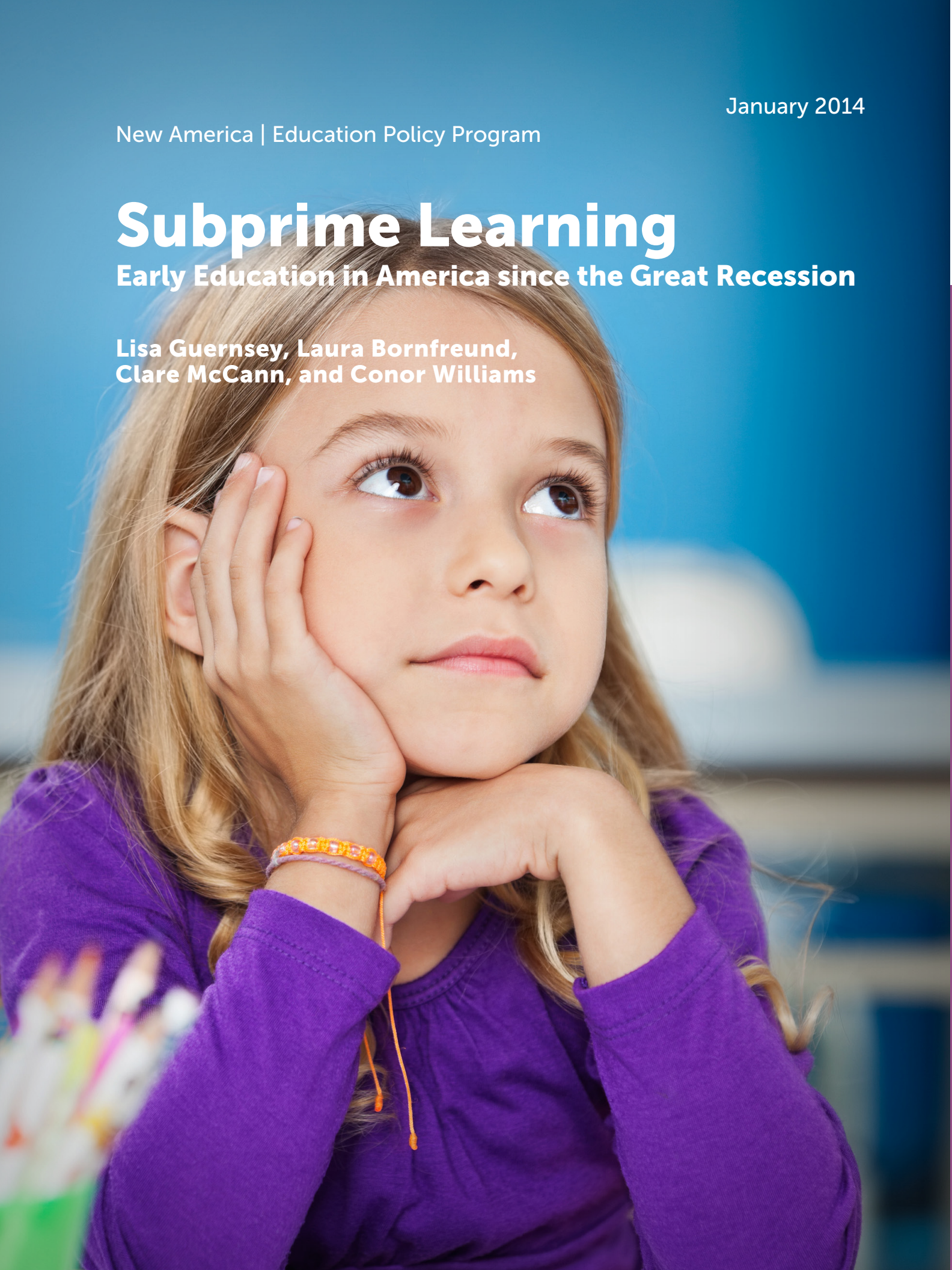

About New America
New America is a nonprofit, nonpartisan public policy institute that invests in new thinkers and new ideas to address the next generation of challenges facing the United States.

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Symbology

This paper uses five symbols to depict broad trends in early education over the period 2009 to 2013:

Improving
Evidence of tangible progress

In flux
Up and down developments

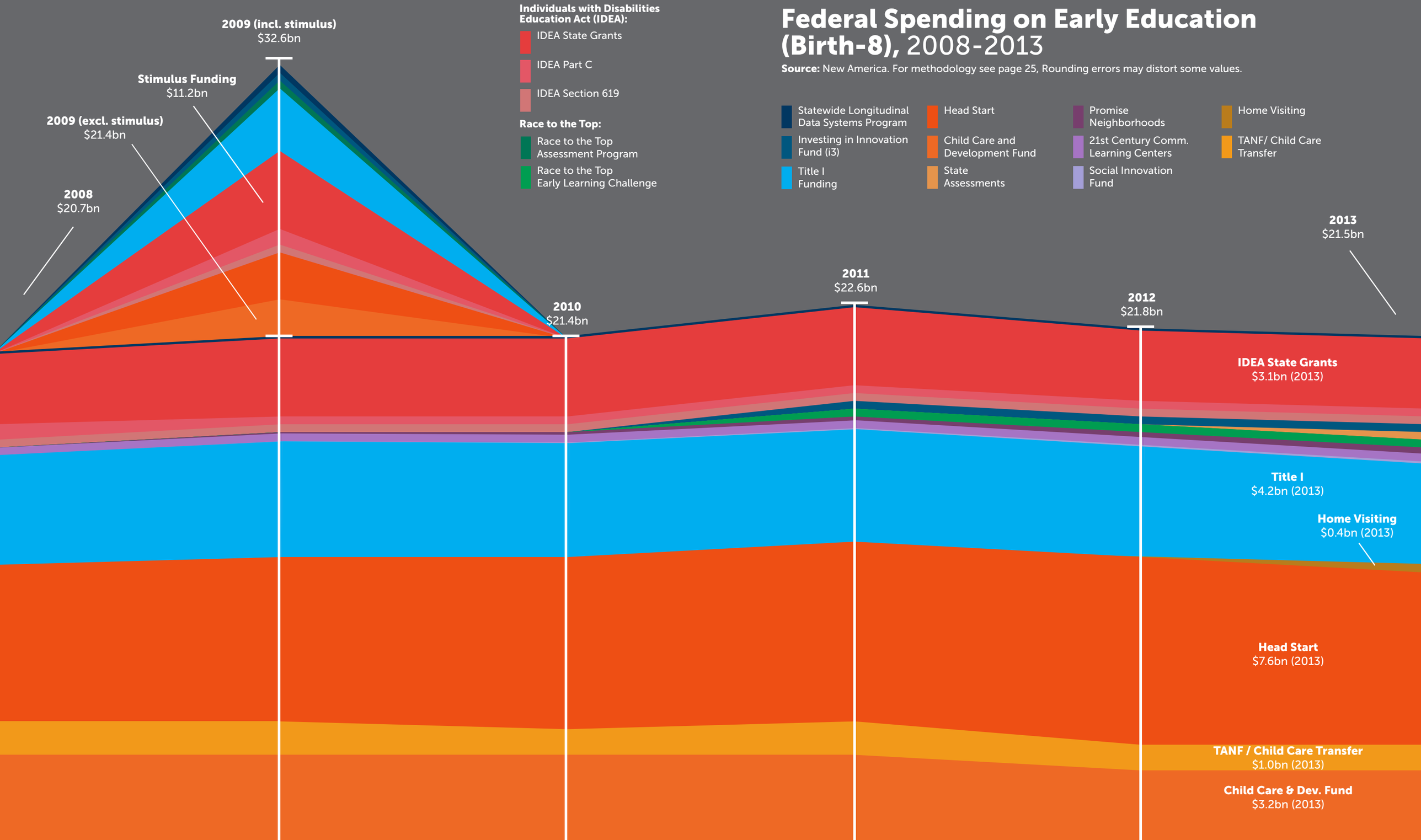
In stasis
The situation has remained static

Ignored
Largely neglected by policymakers

Imperiled
Evidence of deterioration

Federal Spending on Early Education (Birth-8), 2008-2013

Source: New America. For methodology see page 25, Rounding errors may distort some values.



1 Overview

Five years ago, the United States was in the thick of the Great Recession, coping with a stock market crash and loss of jobs that would send aftershocks throughout early education. Yet early 2009 was also a time of great hope among advocates for young children. President Barack Obama, newly sworn in, had called attention to early education throughout his campaign, aiming for $10 billion in public investments for children from birth to age five, educational infrastructure grants for states, and improvements in teaching.[1] Many states already had been making investments in public preschool.[2] Given this mix of promise and severe financial insecurity, would the nation be able to address the needs of children in these formative years?

This report, which examines learning from birth through third grade, provides some answers. Starting with 2009 as our baseline, we examined objective indicators across the birth-through-eight age span that pertain to student achievement, family well-being, and funding. We also provide subjective but research-based assessments of policies for improving teaching and learning and the creation of more cohesive systems. The aim is to provide a clearer picture of where America stands today by highlighting what is improving, in stasis, in flux, imperiled, or ignored.

Our analysis finds that in the wake of a financial crash triggered by subprime lending, too many children in America have been experiencing subprime learning. While bright spots are visible in some states, funding has fluctuated wildly, millions of children still lack access to quality programs, the K–3 grades have received little attention, and achievement gaps in reading and math have widened between family income levels. Meanwhile, child poverty rates have shot up. Congress helped President Obama make good on his $10-billion pledge, but most of it came from the fiscal stimulus bill of 2009.[3] After that one-time infusion of extra spending, the federal government has barely managed to maintain its baseline investment year after year. Indicators do show improved infrastructure throughout the country, but the question now is: When will more children be able to benefit from it?

Redefining Early Education: Birth Through Third Grade

Many advocates, policymakers, and researchers now recognize that a strong start requires more than just a year of pre-K.[4] Research shows that promoting children's success starts with helping parents recognize the importance of loving interactions and "conversations" with their babies.[5] It includes the provision of affordable, high-quality child care and continues with the immersion of children in nurturing, language-rich learning environments before and after entry into school,[6] including pre-K* and the K–3 grades.[7] Developmental science shows that by age nine, when children have entered middle childhood, they are able to accomplish complex intellectual tasks, provided they had opportunities to build a good foundation in those first eight years.[8]

* Some notes on terminology: We use "early education" to encompass the learning that happens in the birth-through-eight years. As much as possible we will note specific age ranges or grade levels (birth-through-5 or K–3, for example) when policies pertain to those specific age spans. Also throughout this report, when we use "pre-K" as a stand-alone word, it is an abbreviation for pre-kindergarten settings. New America's definition of a pre-kindergarten setting is one that employs trained teachers to lead educational experiences in a classroom or learning center for children who are a year or two away from kindergarten. This includes Head Start for three- and four-year-olds and many other programs known as "preschool." For more definitions, see our Edcyclopedia at http://www.edcentral.org/edcyclopedia/.

2 Children and Families

Academic Skills

Test scores improving

Achievement gaps widening

There is no national indicator of the status of children's cognitive and social development before age eight.[9] We can only examine data points that reflect academic skills at the end of the age spectrum. The National Assessment of Educational Progress (NAEP), which starts with tests in fourth grade, shows average fourth-grade math and reading scores improving since 2009.[10] Scores remain very low for low-income students (20 percent of low-income fourth-graders were reading proficiently in 2013, up from 17 percent four years before[11]), and the achievement gap has widened between low-income and non-low-income students.[12] A national study of kindergartners in the 2010–11 school year shows that those in poverty scored the lowest in reading and math at the end of kindergarten compared to children from other income levels.[13]

Family Well-Being

More children in poverty

Lower- and middle-class families are facing stagnant wages, falling median incomes, and sluggish jobs growth.[14] The percentage of children living in poverty has risen by five percentage points in as many years, with young children experiencing higher rates still.[15] In fall 2010, 25 percent of kindergartners were from families living in poverty.[16] Disaggregation of the data reveals striking racial inequalities. Fully 40 percent of African-American children and 34 percent of Hispanic children live in poverty, compared with 14 percent of their white peers.[17] Also on the rise is the percentage of students who qualify for free or reduced-price lunch (which includes families above the poverty line). According to most recent data, at least 48 percent of all American public school students are in that category, a record high number.[18] More young students are coming to school with poverty-related challenges, which has short- and long-term consequences for their educational trajectories.[19]

Dual Language Learners

Research ignored

Stagnant scores

More than one in five young children are growing up in homes where English is not the primary language.[20] Some researchers project that by 2030, around 40 percent of American students will speak a language other than English at home.[21] Research over the past five years shows that young dual language learners (DLLs) need instruction in both their native languages and in English, with students enrolled in dual language programs doing better than students in English immersion programs over the long run.[22] Very few districts, schools, and teachers are prepared—or willing—to use these models.[23] Achievement data reflect the general neglect of DLLs: their NAEP reading scores in fourth grade have been flat since 2005, and the achievement gap between them and their non-DLL peers has widened slightly.[24]

Special Education

Flat spending and achievement

Special education policy in the U.S. has been on autopilot over the last five years. With the exception of a one-time doubling of funding through the stimulus bill, federal spending on special education from birth through secondary school remained steady until it fell last year with the onset of sequestration. The average special education math and reading scores on the NAEP have not changed significantly since 2009, maintaining a 40-point gap between students with disabilities and those without.[25]

3 Age-Targeted Programs

Home Visiting Programs

New program and funding

Passage of the Affordable Care Act in 2010 created the Maternal, Infant, and Early Childhood Home Visiting program (MIECHV), which helps states pay for programs that pair at-risk mothers with trained professionals who visit families' homes. Congress authorized $1.5 billion for five years. All states and four territories receive MIECHV funding and 10 states won additional funding through competitive grants.[26] Before the program began in earnest, a 2011 Pew study showed states were not spending home visiting dollars effectively.[27] Monitoring requirements in the MIECHV legislation are designed to rectify that. The creation of this new federal program to support children in the 0–3 age range, combined with the tight focus on accountability, makes home visiting one of the brightest spots of progress in early education over the past five years. In 2013, the program served about 15,000 families.[28]

Head Start & State Pre-K Programs

Funding and access in flux

Throughout the recession, pre-K funding was relatively anemic, culminating in 2012 with the first-in-a-decade decline in state spending on pre-K programs.[29] State spending per child has decreased by more than $600 since 2008–09, and some states are slipping in benchmarks of quality, according to the National Institute for Early Education Research.[30] However, cuts vary by state, most universal pre-K states such as Oklahoma and Georgia have increased access, and Mississippi started a small pre-K program this year.[31] Head Start, the federally funded program that provides pre-K for children in poverty, also experienced ups and downs (See Figure 1). It received a boost from the 2009 stimulus bill but then suffered cuts from sequestration in 2013 that meant the loss of Head Start slots for 57,000 children.

Meanwhile, annual enrollment for both state pre-K and Head Start has increased slightly. In 2012, 1.2 million four-year-olds were in state pre-K and 424,000 were in Head Start.[32] With the addition of federally funded special-education preschool enrollments, the total comes to 1.7 million or about 42 percent of American four-year-olds, according to NIEER.[33] That is up from 40 percent of four-year-olds in 2009.[34]

School Improvement Programs

Mixed evidence of impact

"School turnaround" is a buzzword of the past five years but policies such as the federal School Improvement Grant (SIG) program did not require improvements to the K–3 grades or the inclusion of pre-K.[38] So far, evidence on school turnarounds is mixed and contested, and too often turnarounds aim to provide targeted responses to school dysfunction without addressing deeper systemic issues.[39] Worse, limited data make it difficult to connect successful turnarounds to specific strategies. For instance, while SIG allows districts to expand access to full-day kindergarten or pre-K, the Department of Education's data do not help determine whether schools are using, and succeeding with, these strategies.[40]

Full-Day Kindergarten

Only one new state with full-day kindergarten as statutory requirement

Kindergarten is typically overlooked by policymakers, though research shows children benefit from high-quality, full-day kindergarten and kindergarten is the starting point for the rigorous expectations of the Common Core State Standards.[35] Only 11 states and the District of Columbia statutorily require all school districts to provide publicly funded full-day kindergarten; six states do not require districts to provide kindergarten at all and the rest at least require a half-day of kindergarten to be provided. Estimates for the percent of children who attend some type of full-day kindergarten range from roughly 58 to 77 percent,[36] but in some cases, the second half of the day may be supplemented by parent tuition payments. Even among those students who are able to access a "full-day" of learning, the length of the school day can range from four to seven hours. Kindergarten funding also varies; even full-day programs are not always funded at the same level as first grade, and in some states, there is no guaranteed annual funding. In recent years, some states—including Minnesota, Oklahoma, Washington, and Nevada—have begun to expand the provision of full-day kindergarten.[37]

4 Public Funding

State & Federal Funding

Variable state funding

Federal funding cuts

Over the past five years, federal funding for early education from birth through third grade has fluctuated from a high of nearly $33 billion (with the infusion of 2009 stimulus funding) to a low of $21.5 billion in fiscal year 2013, based on our estimates of birth-through-third-grade spending (see graphic, page 3). Last year's across-the-board cuts of federal programs resulted in PreK–12 teacher layoffs and the aforementioned Head Start cuts, among other problems.[41]

The start of federal fiscal year 2014 was even less encouraging, with brinksmanship budget politics and a federal shutdown, though a two-year budget deal was ultimately reached that could avert sequestration in 2014 and 2015.[42] [43] As a result, states have had to fill in the gaps left by federal spending cuts and meet families' growing needs.

NIEER found that the 2011–12 school year was the "worst in a decade" for state pre-K programs, with a drop in per-child funding.[44] Stubbornly low state revenues, higher healthcare and other expenses, and the expiration of federal dollars under the American Recovery and Reinvestment Act, combined with other federal spending cuts, led to some states' decisions to cut funding. President Obama's 2013 budget request to Congress included a $75-billion infusion paid for with tobacco taxes, a follow-up to his preschool proposal in the 2013 State of the Union address. It was designed to help states pay for pre-K but the tobacco tax idea has been ignored by Congress. On the bright side, despite limited revenue increases in states, a recent report from the Education Commission of the States found that more than half of states will increase funding for early childhood education in the 2014 fiscal year.[45]

5 Federal & State Policymaking

Policies & Legislation

Improving infrastructure

The last five years have yielded no movement on core federal education laws, such as No Child Left Behind. But Congress, and to a larger degree, federal agencies, have been actively pushing improvements in birth-to-five programs. To shore up programs during the recession, the American Recovery and Reinvestment Act of 2009 included roughly $11.2 billion for early education (that number includes the K–3 grades; $6.3 billion went to birth-to-five programs).[46] The Department of Health and Human Services set tighter standards for the financing of Head Start centers and implemented a requirement for evidence-based professional development for all Head Start teachers, and proposed new regulations with basic quality controls for child care.[47] The passage of the Affordable Care Act provided a new source of funding for state home-visiting programs with good track records.[48] Some states and localities have benefited from small Obama-era programs such as Promise Neighborhoods and Investing in Innovation, or programs such as Striving Readers, and Enhanced Assessments, which were reshaped by Obama officials. Finally, the Administration's competitive Race to the Top program, which includes Early Learning Challenge grants to states, has prompted—and supported—considerable reforms in building data infrastructure, the quality rating of birth-to-five programs, and the evaluation of teachers in states across the country.[49]

At the state level, governors want to play a greater role in improving education, and many are putting young children on their radar screens.[50] States spend far more than the federal government on public schools, and over the past five years, they have had tried to exert greater control over how to improve accountability and standards in public schools and in birth-to-five settings. That control is demonstrated in the creation of the Common Core State Standards in 2010; plans for waivers that would enable states to avoid sanctions under No Child Left Behind; the trend toward creating rating systems for child care and pre-K programs; and the push to create kindergarten-entry assessments and data infrastructure that enables more collaboration between birth-to-five programs and elementary schools.

6 Teaching & Learning Policies

Evaluating & Improving Teaching Effectiveness

Increased attention

Implementation in Flux

A series of studies over the last five years strengthens the case: Quality instruction is the most important school-based variable in determining student outcomes.[51] Unfortunately, the current state of pre-K[52] and K–3 teacher quality is troubling.[53] In pre-K programs, concerns about teacher effectiveness are among the factors leading to Head Start reforms,[54] and are spurring changes in some states' rating systems for early childhood centers.[55] In elementary schools, concerns about teacher effectiveness have led to overhauls of teacher evaluation systems, including incorporating measures of student learning and growth even in the PreK–3rd grades. To date, 41 states include student achievement as a factor in a teacher's evaluation.

However, implementation is proving difficult. Teachers of children up through age eight are among the 70 percent in grades or subjects not covered by state standardized tests. Therefore, many states and districts are searching for other data points that show student progress or are creating tests for each year starting with kindergarten (or even pre-K, in some states).[56] Too often these tests have not been validated for their use in teacher evaluation; their purpose is diagnostic or formative. Inappropriate use of these assessments runs the risk of undermining the utility of the results. Observational tools used in states' teacher evaluation systems often have not been validated for use in the early grades as well. Several states are working to field test these tools and add specific examples of what competencies look like in PreK–3rd grade classrooms.

Also unclear is how well school districts and states are connecting teachers to quality professional development, including the chance to observe other master teachers or receive coaching based on their results of their evaluations. Recent studies show that observation-based measurement, especially when coupled with coaching,[57] can lead to improve teaching, but it requires a substantial investment of time and money. Policymakers appear to be paying far less attention to helping teachers improve their instruction than to evaluating it.

Pre-K Teacher Pay Parity

Largely ignored

Current policies are not focused on improving compensation of teachers in pre-K settings or bringing their pay in line with elementary school teachers. In 2010, the median pay for a teacher of children aged three to five was $25,700.[63] For a family of four, that is barely above the federal poverty level. Congressional bills introduced in 2013 to enact the president's preschool proposal call for equitable wages but identified no funding source.[64]

Improving Leadership in Elementary Schools

Most of the focus on teachers, not principals

Principals play a critical role in early education. Not only could they work with feeder preschools to share data and techniques for teaching young children, they are responsible for hiring teachers across the PreK–3rd spectrum. Yet a 2012 study showed that principals place their more effective teachers in the upper grades of elementary school, a trend possibly spurred by NCLB accountability requirements that rely on test scores in the upper elementary grades.[65] It is unknown how many principals have received training on the relationship between instruction in the early grades and students' academic success in third through fifth grade.[66] To date, only one state, Illinois, requires prospective principals to take coursework in child development, but how well this requirement is being implemented is unknown.[67]

Teacher Credentials & Preparation

Minimal progress

Pre-K teachers are not always required to have a bachelor's degree, and the rigor of their training varies greatly depending on the state. Only 20 states (three more than in 2009) with publicly funded pre-K programs require lead teachers to have a bachelor's degree, regardless of setting.[58] Head Start has made progress in this area: 66 percent of its lead teachers now have bachelor's degrees.[59] But research suggests that postsecondary institutions bestowing those bachelor's degrees do a poor job of preparing teachers to work effectively with children in pre-K and the early elementary years.[60] In a recent review of preparation programs conducted by the National Council on Teacher Quality, only four programs in 1,130 education schools earned the highest rating, and few programs prepared prospective elementary teachers well for teaching reading and math.[61] While many states offer birth-to-8 teaching licenses or in a few cases, even a 0–3 license, teachers of infants and toddlers are rarely required to attain it. Education and training requirements for teachers of the country's youngest learners remains minimal.[62] And when prospective teachers do attain a birth-to-8 teaching license, there is little incentive for them to work in a child care setting where compensation is typically much lower than in a school setting.

Reading Proficiency by the End of 3rd Grade

Emphasis on literacy

Retention research ignored

A key moment in children's development occurs when they pivot from learning to read to reading to learn, a shift that should occur before or during third grade. Students who do not make this shift are at high risk of struggling in subsequent grades.[68] As of 2012, more than 30 states had a third-grade reading law in place that includes requirements for identification, intervention, and in some cases retention of third-graders who are not deemed reading-proficient. But few include a focus on children's literacy prior to kindergarten even though research indicates that language and literacy development prior to kindergarten is critical for later academic success.[69] In 2012 alone, 14 states passed bills focused on third-grade reading, and now students in 15 states and DC must show proficiency to be promoted to fourth grade. More states, such as Michigan and Nebraska, are considering similar provisions. The emphasis on preventing struggling readers from advancing beyond third grade has worried education experts; research has shown that retention policies can be more harmful than beneficial to students because of wide differences in ages of classmates.[70]

Child Care Quality

Awaiting quality and funding upgrade

When child care improves in quality, it can have benefits for children's learning and development. The Child Care and Development Block Grant (CCDBG) has languished on Capitol Hill for 17 years since its last reauthorization, and has withstood modest cuts in recent years. Despite more than $5 billion spent annually on 1.6 million children per month, many low-income families have few choices of high-quality programs, and in many states, new policies are reducing access for low-income families.[71] In addition, more than one in five children attend home-based care.[72] A recent federal survey found that virtually no African-American children in a national sample of pre-K programs received high-quality care in settings where child care providers worked out of their homes. And, among Hispanic and white children, only 4 percent and 15 percent, respectively, were in high-quality, home-based settings.[73] New HHS regulations[74] and a recent bipartisan Senate bill[75] would improve program standards by enhancing the use of Quality Rating and Improvement Systems (see description of QRIS below) and requiring early childhood classrooms to meet a battery of new quality metrics, but provide no funding for states to do so.

7 System-Building Policies

Birth-3rd Grade Reforms

Increasing attention

To erase the artificial divide between "birth-to-five" and "K–12" education, early childhood experts have promoted an approach that includes linked components such as: home visiting and high-quality child care available when parents need it; full-day pre-K for three- and four-year-olds; full-day kindergarten; aligned standards; sequenced curriculum, instruction, and assessments; and regular joint planning and shared professional development among all pre-K, kindergarten, and first- through third-grade teachers and staff.[76]

More states are thinking about transitions and alignment between birth to age five and kindergarten, as well as what it means to be "school ready." According to an analysis by Education Week, in 2009 only 19 states had a formal definition of school readiness; in 2013, 26 states had one. In recent years, researchers and organizations have identified and developed resources, frameworks, and evaluation tools to assist states and school districts plan, implement, and evaluate their approaches.[77] In 2010, Secretary of Education Arne Duncan appointed the first senior advisor on early learning to the Secretary of Education. Additionally, Secretary of Health and Human Services Kathleen Sebelius appointed the firstHHS liaison to the Department of Education. Together, these officials lead an interagency policy board focused on birth through third grade. The following year the first Office of Early Learning was established to work on policies across that age span. One of its first publications was new guidance on Title I funding, describing how school districts could spend Title I dollars on pre-K and other early education programs if desired.[78]

Thus far, the Office's focus has been predominantly birth to age five, partnering with the Department of Health and Human Services on programs like the Race to the Top—Early Learning Challenge. The two agencies are also partnering with the National Academies in establishing a committee on the science of children birth to age eight, which will focus on the early learning workforce. The Office added an early education focus to Administration initiatives, such as Investing in Innovation.

Governance

Growing focus on coordination

The oversight of programs, birth through age eight, is typically spread across multiple agencies, often including departments of welfare or human services, education, and workforce. To promote coordination, a few approaches have emerged, including independent state departments of early learning (MA, GA, WA, and others). Others have created similar offices in Departments of Human Services (CO, AR, and others). Still others have established offices of early learning in state departments of education (MN, NC, MD, OH, and others). The programs grouped in these offices vary greatly. North Carolina's Office of Early Learning focuses on supporting children's success PreK–3rd grade. In Massachusetts, the stand-alone department oversees childcare and pre-K, with a focus on bringing the fragmented birth-to-five programs together. Catalysts for new governance structures include PreK–3rd reforms, Early Childhood Advisory Councils, calls for more and better early childhood data, the federal Office of Early Learning, inter-agency collaboration between the federal Departments of Education and Health and Human Services, and the Race to the Top—Early Learning Challenge.[79]

Early Childhood Advisory Councils

Money ran out

In 2009, Congress funded the early childhood advisory council (ECAC) grant program to help states build comprehensive systems of birth-to-five programs.[80] The Obama Administration further amplified the councils by making them a key piece of its Race to the Top—Early Learning Challenge program in 2011. HHS has awarded grants to 45 states, plus the District of Columbia and three U.S. territories. However, the money has run out. States were required to develop sustainability plans to prepare for the end of federal funding, but it is likely that some states will dissolve, defund, or scale back the work of the councils.

Quality Rating & Improvement Systems

Increasing development & implementation

For more than a decade, states have worked to build systems[81] to measure and make public the quality of child care settings and pre-K programs (assigning ratings such as three stars on a four-star system, for example). In 2009, just 17 states were operating a quality rating system (QRS) and some were just starting to add a system for helping pre-K programs to improve. Now, more than 35 states have fully implemented Quality Rating and Improvement Systems (QRIS), and every other state except Missouri is planning, developing, or implementing one.[82] Across the country, QRIS have rated more than 13,000 early education programs.[83] The Early Learning Challenge (see below) encouraged states to increase participation in QRIS and to validate whether the ratings predicted better learning outcomes for children. Until recently, states' QRIS measured teacher qualifications, class size, and staff-to-child ratios, but did not examine what happened in the classroom. A 2013 study in *Science* found that pre-K sites rated highly under a hypothetical state QRIS did not necessarily have attributes that lead to higher academic outcomes for children and suggested states could use other available indicators—such as observation-based scores of teacher-child interactions—that are more closely related to student academic outcomes.[84] Some states already include – and others are considering the inclusion – of these measures.[85]

Race to the Top - Early Learning Challenge

Close to $1-billion provided

After trying for two years to establish an Early Learning Challenge, the Obama Administration was successful in May 2011, with $500 million carved out of a new appropriation for the Race to the Top grant program. The competition encouraged states to promote kindergarten readiness, coordinate early education programs, and increase access to high-quality programs among high-need children. States could earn the largest number of points for improving, expanding, and validating tiered QRIS.[86] In the latest round, implementing PreK–3rd approaches was elevated to a competitive priority, so that states that develop high-quality PreK–3rd grade plans will receive extra points. So far, the program has provided close to a $1 billion, spent across 20 states, to improve early education infrastructure.[87]

Child Assessment

Kindergarten Entry Assessments incorporating multiple domains of learning

Early childhood assessments are an important tool for informing teachers' instruction, improving program quality, and driving decisions about investments in early education. However, concerns abound about using assessment results to deny kindergarten entry, label children, or hold programs or teachers accountable.[88] Still, over the past several years, several states have started using kindergarten entry assessments (KEA) to provide a picture of each year's kindergarten class. According to Education Week, in 2013, 22 states required districts to assess students' school readiness. Nearly every state with a KEA uses measures of early literacy and numeracy, but some states have moved in the last five years to incorporate domains such as social-emotional development or physical development. According to a 2010 Child Trends report, only 15 use or encourage the use of multiple domains.[89]

The Early Learning Challenge favored the use of KEAs, and even states that did not win grants are developing them. Some are getting help from an "enhanced assessment" grants competition held by the Department of Education in 2013. Also in recent years, Head Start has been using assessments to track children's progress toward school readiness goals.

Promise Neighborhoods and More

New investments

The Obama Administration's signature education initiatives include Race to the Top, Investing in Innovation, and Promise Neighborhoods. All three include early education with preferences for system-building.[90] With Promise Neighborhoods grants, the work is community-centered. The majority of grantees under this program begin serving families in early childhood, improving parents' and children's access to early education, health and wellness services, adult education (including parent education), and other much-needed supports for overall family success.[91] Federal investment in Promise Neighborhoods is much smaller than for Head Start or CCDBG, but the program has helped states smooth transitions between pre-K and the early grades of elementary school.

Status of Common Core & Early Learning Guidelines

Increasingly aligned to Common Core

The Common Core State Standards Initiative has substantially changed the landscape of American educational standards. Implemented correctly, assessments geared to these standards could offer educators, administrators, policymakers, and researchers an honest look at how students measure up against the high expectations of college and the 21st-century economy. With that in mind, states have begun aligning their early learning guidelines to the Common Core.[92] Until recently, this would not have been possible, since some states did not have content standards for three- and four-year olds. Not only do all states now have these standards, but many have also adopted infant and toddler guidelines.[93]

Early Educational Data Systems

Grants increasing but fundamental gaps in data remain

Federal grants for state databases—known as statewide longitudinal data systems (SLDS) grants—have provided a boost to upgrade current systems. To date, most states can incorporate child-level data into their statewide data systems except for Head Start children. However, few include individual-level child care data, few collect the most critical data points, and most cannot link the data across programs and state and federal funding streams.[94] With guidance from the Early Childhood Data Collaborative, states are determining the types of data most essential for parents, teachers, policymakers, and researchers.[95] Currently, the exclusion of many key data points from state data systems mean that inequities in early educational opportunities are hidden.[96] Both the House and Senate pre-K bills introduced in November 2013 included provisions to address how to count the time children spend in pre-K and other issues.

Harnessing Technologies to Improve Systems

Technology barely considered in advocacy or policy

As systems develop, rapid advances in information technology could enable far more data-sharing, e-book- and curricula-sharing, and professional development provided via teleconference and remote coaching.[97] Beneficiaries could include school districts, birth-to-five programs, K-3 classrooms, libraries, museums, after-school programs, teacher preparation programs, adult education, and health services. But technology is barely mentioned in federal early education programs and is not part of most advocacy efforts.[98] Many organizations that provide early education are held back by outdated or non-existent technology. Many Head Start centers, for example, are not allowed to access the federal government's E-rate discounts to pay for broadband access.[99]

Enabling Parents' Success Across the Age Spectrum

New programs helping parents

Education leaders have long recognized that parenting in the early years has a large impact on children's educational future. New programs such as the Reach Out and Read program in pediatricians' offices; the University of Chicago's Thirty Million Words Initiative; Washington, D.C.'s Sing, Talk, Read; new community workshops based on the best-selling book Mind in the Making; and others are working to help parents develop their children's linguistic, social, and cognitive capacities. The Promise Neighborhoods Initiative and various community school programs offer support to parents through health and dental care, adult education, and career training services, as well as cultural events. These programs offer a "two-generation" strategy: supporting student success while also helping parents build social capital in their communities and better professional prospects.[100]

8 Politics, Advocacy, Philanthropy, and Research

Political Climate

Federal States

While the last five years have seen a considerable increase in political interest in early education, action has been slow to follow. For instance, President Obama's 2013 State of the Union support for expanding pre-K access to low-income families added to early education's political prominence,[101] but corresponding legislative action has lagged. At the end of 2013, early childhood advocates were cheering the election of Bill de Blasio as mayor of New York City, who had made pre-K a central campaign issue. And some good news has come at the state level, where bipartisan action has brought public funding for early education. Republican governors like Michigan's Rick Snyder joined Democratic governors like Delaware's Jack Markell in expanding and improving their states' pre-K programs.[102] On a host of public-schooling issues, however, political camps have become increasingly polarized. Congress seems unwilling to complete basic, critical tasks, such as reforming and reauthorizing No Child Left Behind.[103]

Advocacy

Broadening community of early ed champions

Since 2009, the constellation of advocacy groups for early education has grown to include organizations as varied as the American Federation of Teachers, Mission Readiness (a group of retired senior military leaders), and the U.S. Chamber of Commerce. Some of the most recently formed groups include ReadyNation, which focuses on state-level engagement by business leaders, and Too Small to Fail, which aims to improve parent engagement. The Business Roundtable, an association of chief executive officers who promote policies to improve the workforce, recently named early education and effective teachers among its top priorities. The Committee for Economic Development, long a champion of early childhood education, recently published Unfinished Business: Continued Investment in Child Care and Early Education is Critical to Business and America's Future, which provides policy recommendations that extend up through third grade.[104]

Philanthropy

Growing investments

Large philanthropies have contributed millions in policy analysis and advocacy related to early education. The Pew Charitable Trusts closed the Pre-K Now Campaign in 2011 but has since built out its Home Visiting Campaign. The Annie E. Casey Foundation funded child care and parent-support initiatives and was instrumental in jump-starting the loose affiliation of local leaders and advocacy groups that comprise the Campaign for Grade-Level Reading, which is advocating for policies that support early literacy and reading by third grade. The Buffett Early Childhood Fund and Irving Harris Foundation have contributed to a wide range of early childhood projects. Some of the newest parent-awareness efforts are funded by the Bill, Hillary & Chelsea Clinton Foundation, the Pritzker Children's Initiative and the Bezos Family Foundation. In summer 2013, the individual investor J. B. Pritzker combined forces with Goldman Sachs and the United Way of Salt Lake City to invest $7 million toward a Utah pre-K program as part of what is being called a "social impact bond" for early childhood.[105]

A growing number of philanthropies are explicitly focused on system-building and policy analyses through age eight. The Birth to Five Policy Alliance expanded its reach to include children ages six through eight, changed its name to the Alliance for Early Success, and created a framework for state advocacy and policy focused on health, family support, and learning.[106] (The Alliance funded this report.) The Foundation for Child Development has emphasized PreK–3rd alignment, as has the Evelyn and Walter Haas Jr. Fund, the McKnight Foundation, and the W. Clement and Jessie V. Stone Foundation, and in Washington the Bill & Melinda Gates Foundation. Other funders covering topics across the birth-through-eight spectrum include the Joyce Foundation, the W. K. Kellogg Foundation, and the David and Lucile Packard Foundation.

Research

Research output

Growing awareness of the science on children's cognitive and social development is helping to make the case for change as well. Hot areas in developmental science include: executive functioning and self-regulation,[107] the links between chronic stress and development,[108] teacher-child interactions,[109] the role of digital media in children's learning,[110] mental health and social-emotional growth,[111] language acquisition in dual language learners,[112] and studies on how these variables affect literacy, math, and science learning.[113] Now the challenge for policymakers and educators is in keeping up with the research and using new findings to reconsider current methods. To help, some institutions have opened new dissemination channels. The Harvard Center on the Developing Child, which has focused on the impact of "toxic stress" on young children, uses videos and animations to pass on information. New advocacy campaigns, such Too Small to Fail, funded by the Clinton Foundation, employ social media to reach parents. Still, the chasm between research, policy, and practice remains vast.

9 Conclusion

Our analysis shows some real progress in home-visiting programs, infrastructure-building, standards, and accountability across many states and federal policies, and PreK–3rd alignment within a small but growing number of places. Yet we also see more child poverty, a dearth of attention to the growing population of dual-language learners, and widening achievement gaps between rich and poor. Given those problems, as well as years of reduced state funding, sequestered federal funding, lackluster growth in the number of children with access to good public pre-K and full-day kindergarten, and neglect of K–3 teacher preparation, the past five years have not worked in the favor of young children who need access to environments and opportunities that would give them a strong start in school and life. Lawmakers, education policymakers, and philanthropists will need to become more strategic about the policies and investments that address the income gap and immerse more children in better learning experiences over the next five years. In a report this spring we will suggest future directions for the field.

Notes

1 At a campaign stop in Flint, MI on June 15, 2008, presidential candidate Barack Obama gave a speech titled "Renewing American Competitiveness" in which he stated: "We can start by investing $10 billion to guarantee access to quality, affordable, early childhood education for every child in America." The speech also mentioned the need to recruit new teachers and mentor existing teachers. (The Flint, MI speech can be accessed on USA Today's website at http://i.usatoday.net/news/mmemmottpdf/obama-6-16-2008.pdf.) The desire to improve the infrastructure of early education by creating Early Learning Grants was noted in the text of a February 2008 memo from the Obama campaign that was posted on Education Week's K-12 blog (http://www2.edweek.org/media/obama_vouchers_response.pdf).

2 W. Steven Barnett, Dale J. Epstein, Allison H. Friedman, Judi Stevenson Boyd, and Jason T. Hustedt, The State of Preschool 2008 (Newark, NJ: National Institute for Early Education Research, 2008). On page 4, the authors wrote that state programs had "made major progress in expanding enrollment and continued to raise quality standards." http://nieer.org/sites/nieer/files/2008yearbook.pdf.

3 See Page 3 for federal funding that touches children from birth through age eight. New America also conducted an analysis using the same data and methodology (see endnote 114) to describe federal funding for programs specific to birth to age five, the age range that Obama referred to in his campaign pledges on early childhood education. In that analysis, we found that over the past five years, Congress has appropriated an additional $10.7 billion over 2008 levels to birth-to-five programs. More than $6 billion of that five-year amount came from the 2009 American Recovery and Reinvestment Act. Birth-to-five spending in 2013 totaled $17.5 billion. Another recently published analysis of birth-to-five spending, conducted by the Build Initiative, found that in fiscal year 2011, the federal government spent nearly $128 billion on children from birth to age five, including $21.3 billion on education. For more, see: Charles Bruner, Early Learning Left Out: Building an Early-Learning System to Secure America's Future (Boston, MA: Build Initiative Child and Family Policy Center, October 2013). http://www.buildinitiative.org/WhatsNew/ViewArticle/tabid/96/smid/412/ArticleID/661/Default.aspx.

4 The science of learning in infancy and toddlerhood shows how deeply cognition and social-emotional development is associated with children's environments from birth and even prenatally. (See the September 2013 issue of Zero to Three titled "Early Brain and Child Development" at http://www.zerotothree.org/about-us/areas-of-expertise/zero-to-three-journal/34-1-ednote-toc.pdf). Meanwhile, new studies of pre-K have added to an already substantial base of research showing that good pre-K can make a significant impact on children's academic and social learning in the short-term and also provide positive effects that last through adulthood. (See a summary of dozens of studies at Investing in Our Future: The Evidence Base on Preschool Education, the 2013 report published by the Foundation for Child Development and the Society for Research on Child Development at http://www.srcd.org/sites/default/files/documents/washington/mb_2013_10_16_investing_in_children.pdf). But a few studies also show what is sometimes called "fadeout" but more accurately termed "convergence," in which academic scores may be higher at the end of a pre-K year but are not statistically different by the third grade when compared between children who attended a specific pre-K program and those who did not. (See the Third Grade Follow-up to the Head Start Impact Study Final Report published by the Administration for Children and Families' Office of Planning, Research and Evaluation in 2012 at http://www.acf.hhs.gov/sites/default/files/opre/head_start_report.pdf).This convergence has sparked efforts to ensure not only that pre-K is of high-quality but also that adequate attention is paid to high-quality teaching environments in the K-3 grades of public schools. These new research findings put together have led experts to recognize the need for policies that help pregnant women, continue throughout a child's infancy and toddlerhood, and include high-quality pre-K and K-3 instruction coupled with family support throughout the K-3 grades. A sign of this recognition is evident in the newly named Alliance for Early Success, which has expanded its focus from birth-to-five policies to birth-through-eight policies and changed its name from The Birth to Five Policy Alliance.

5 Pamela C. High, "Why Should I Read to My Baby? The Importance of Early Literacy," Zero to Three 34:1 (2013): 41-43; Keith Topping, Rayenne Dekhinet, and Suzanne Zeedyk, "Parent-Infant Interaction and Children's Language Development," Educational Psychology 33, no.4 (2013): 391-426.

6 For a thorough and extensive list of research to support policies across this continuum, see Kathryn Tout, Tamara Halle, Sarah Daily, Ladia Albertson-Junkans, and Shannon Moodie, The Research Base for a Birth Through Age Eight State Policy Framework (Bethesda, MD: Child Trends, 2013), http://earlysuccess.org/sites/default/files/website_files/files/B8%20Policy%20Framework%20Research.pdf.

7 Arthur J. Reynolds, Judy A. Temple, Suh Ruu Ou, Irma A. Arteaga, and Barry A.B. White, "School-Based Early Childhood Education and Age-28 Well-Being: Effects by Timing, Dosage, and Subgroups," Science 333, (2011): 360-364; Lisa Guernsey and Sara Mead, A Next Social Contract for the Primary Years of Education (Washington, D.C.: New America, 2010), http://newamerica.net/publications/policy/a_next_social_contract_for_the_primary_years_of_education_0; Ruby Takanishi, "PreK-Third Grade: A Paradigm Shift," Children of 2020: Creating a Better Tomorrow, eds. Valora Washington and J.D. Andrews (Washington, D.C.: Council for Professional Recognition and National Association for the Education of Young Children, 2010), http://fcd-us.org/sites/default/files/Takanishi%20-%20A%20Paradigm%20Shift.pdf; America's Vanishing Potential: The Case for PreK-3rd Education (New York, NY: Foundation for Child Development, 2008), http://fcd-us.org/sites/default/files/2008AmericasVanishingPotentialFINAL.pdf; "Promoting a Pre-K to Three Vision for Early Learning," State Education Standard (Arlington, VA: National Association for State Boards of Education, 2008).

8 See the dozens of references on the primary grades in Heather Biggar Tomlinson's chapter "Developmentally Appropriate Practice in the Primary Grades – Ages 6-8," in Carol Copple and Sue Bredekamp, eds., Developmentally Appropriate Practice in Early Childhood Programs: Serving Children from Birth Through Age 8 (Washington, D.C.: National Association for the Education of Young Children, 2009).

9 There is no National Assessment of Educational Progress for young children and no standardized tool that is accepted in the field of early education as a reliable indicator among of children's progress before age eight. There is, however, at least one data source that may help provide a clearer picture in the future: The National Center for Education Statistics in the U.S. Department of Education is collecting data from more than 18,000 students in a study called the Early Childhood Longitudinal Study-Kindergarten Class of 2010-11 (ECLS-K:2011). This will provide a window into the K-3 experience for children who started kindergarten in the 2010-11 school year by tracking them through fifth grade (expected completion 2016). http://nces.ed.gov/ecls/myeclsk2011/

10 See the Nation's Report Card 2013 Mathematics and Reading for evidence of upward progress among all students: In math, 42 percent of fourth-grade students performed at or above proficient in 2013, up from 39 percent in 2009. In reading, 35 percent of fourth-grade students performed at or above proficient in 2013, up from 33 percent in 2009. These numbers come from data on the following pages: http://nationsreportcard.gov/reading_math_2013/#/gains-percentiles; http://nces.ed.gov/nationsreportcard/pdf/main2009/2010458.pdf; http://nces.ed.gov/nationsreportcard/pdf/main2009/2010451.pdf. "Proficiency" is a term used in the NAEP to denote "solid academic performance," mid-way between "basic" and "advanced." In the 2011 report Double Jeopardy, which provided results of a longitudinal study, students who did not read proficiently by third grade were found to be four times more likely to leave school without a diploma than proficient readers. Some researchers and advocates use the term "grade-level" as a way of describing what is meant by "proficient" on the NAEP.

11 Based on data generated by the NAEP Data Explorer examining average scale scores and percentages at or above each achievement level for reading, grade 4 by National School Lunch Program eligibility in 2013 and 2009, http://nces.ed.gov/nationsreportcard/naepdata/report.aspx.

12 Based on the above data generated by the NAEP Data Explorer http://nces.ed.gov/nationsreportcard/naepdata/report.aspx; The average score in fourth-grade reading among students eligible for the school lunch program increased by one point from 206 to 207, whereas the average score for non-eligible students increased by four points from 232 to 236. In math, the fourth-grade average for eligible students increased by three points from 227 to 230 while non-eligible students' scores increased four points to 254.

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21 Wayne P. Thomas and Virginia P. Collier, A National Study of School Effectiveness for Language Minority Students' Long-Term Academic Achievement (Santa Clara, CA: Center for Research on Education, Diversity & Excellence, University of California-Santa Cruz, 2002): 10.

22 Linda M. Espinosa, PreK-3rd: Challenging Common Myths About Dual Language Learners, An Update to the Seminal 2008 Report, PreK-3rd Policy to Action Briefs, No. 10 (New York, NY: Foundation for Child Development, August 2013): 9-10. http://fcd-us.org/sites/default/files/Challenging%20Common%20Myths%20Update.pdf; Dina C. Castro, Eugene E. García, and Amy M. Markos, Dual Language Learners: Research Informing Policy (Chapel Hill, NC: University of North Carolina Frank Porter Graham Child Development Institute, Center for Early Care and Education—Dual Language Learners, May 2013), http://cecerdll.fpg.unc.edu/sites/cecerdll.fpg.unc.edu/files/imce/documents/%232961_ResearchInformPolicyPaper.pdf.

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Pre-K, Preschool Special Education, and Federal and State Head Start."

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Teachers and Caregivers: Initial Findings from the National Survey of Early Care and Education NSECE, (Washington, DC: Administration for Children and Families, 2013), http://www.acf.hhs.gov/sites/default/files/opre/nsece_wf_brief_102913_0.pdf.

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86 "Race to the Top – Early Learning Challenge," http://www2.ed.gov/programs/racetothetop-earlylearningchallenge/index.html; States could also explain how they plan to build a more cohesive PreK-3rd grade continuum of learning, but only as an "invitational priority," meaning that while funds could be used to support the work, no points were awarded.

87 In the first round, 35 states, DC, and Puerto Rico applied. California, Delaware, Maryland, Massachusetts, Minnesota, North Carolina, Ohio, Rhode Island, and Washington came out on top. A second round of the competition awarded funds to the next five highest scoring applicants from the first round: Colorado, Illinois, New Mexico, Oregon, and Wisconsin. In 2013, six previous winners received additional funds and six new states won grants: Michigan, Georgia, Pennsylvania, Kentucky, New Jersey, and Vermont. In 2011, early learning became a competitive priority with all winning grantees having written to the P-3 competitive priority.

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90 Some history and background: In 2011, the Department initiated the RTT—ELC (see above) and in 2012, expanded the Race to the Competition to school districts. In the first Race to the Top competitions, innovations for improving early education outcomes were not emphasized. Still, eight of 12 winners in the first round wrote about their efforts to promote early learning. The Investing in Innovation competition, on the other hand, made early learning a competitive priority, encouraging applicants to focus on the full birth-through-age-8 continuum in exchange for points. In three rounds, 23 winners wrote to the early learning priority, although it wasn't evident in all of the winners' applications how well the continuum was actually bridged, (For more: http://earlyed.newamerica.net/blogposts/2010/parsing_the_i3_projects_with_a_focus_on_early_learning-35301.)

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99 Sarah Morris, Danielle Kehl, and Lindsey Tepe, "Comments of New America Foundation's Open Technology Institute and Education Policy Program," submitted to the Federal Communications Commission on the matter of modernizing the E-rate Program for Schools and Libraries, November 8, 2013, p 29, http://newamerica.net/sites/newamerica.net/files/profiles/attachments/NAF_Erate_Reply_Comments_FINAL.pdf

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110 In October 2013, the New America Foundation hosted a research roundtable to support the efforts of the newly formed Alliance for Early Learning in a Digital Age. The aim was to examine research findings and find consensus among education, health and media researchers. For a summary of the roundtable, see Lisa Guernsey, "Roundtable on the Science of Digital Media and Early Learning," Early Ed Watch, October 25, 2013, http://earlyed.newamerica.net/blogposts/2013/roundtable_on_the_science_of_digital_media_and_early_learning-95341. In addition, here is a small sampling of recent reports: Rebekah A. Richert, Michael B. Robb, and Erin I. Smith, "Media as Social Partners: The Social Nature of Young Children's Learning From Screen Media," Child Development 82, no. 1 (2011): 82-95; Alexis R. Lauricella, Tiffany A. Pempek, Rachel Barr, and Sandra L. Calvert, "Contingent computer interactions for young children's object retrieval success," Journal of Applied Developmental Psychology 31, no. 5 (2010): 362-369. Also see the entire March 2013 issue Media in the Lives of Infants and Toddlers, Zero to Three http://main.zerotothree.org/site/MessageViewer?em_id=10421.0

111 A sampling of recent studies on early childhood mental health: Nicola Conners-Burrow, Lorraine McKelvey, Latunja Sockwell, Jennifer Harman Ehrentraut, Skye Adams, and Leanne Whiteside-Mansell, "Beginning to 'unpack' early childhood mental health consultation: types of consultation services and their impact on teachers," Infant Mental Health Journal 34, no. 4 (2013): 280-289; Thomas J. Dishion, Lauretta M. Brennan, Daniel S. Shaw, Amber D. McEachern, Melvin N. Wilson, and Booil Jo, "Prevention of Problem Behavior Through Annual Family Check-Ups in Early Childhood: Intervention Effects from Home to Early Elementary School," Journal of Abnormal Child Pyschology (September 2013).

112 Ruth A. Piker, "Understanding Influences of Play on Second Language Learning: A Microethnographic View in One Head Start Preschool Classroom," Journal of Early Childhood Research 11:2 (June 2013), 184-200; Karen N. Nemeth, Young Dual Language Learners: A Guide for PreK-3 Leaders (Philadelphia: Caslon Publishing, forthcoming-2014); Jo Ann M. Farver, Christopher J. Lonigan, Stefanie Eppe, "Effective Early Literacy Skill Development for Young Spanish-Speaking English Language Learners: An Experimental Study of Two Methods," Child Development, 80, no. 3 (May/June 2009), 703-719.

113 Greg J. Duncan and Katherine Magnuson, "The Nature and Impact of Early Achievement Skills, Attention Skills, and Behavior Problems," in Whither Opportunity? Eds. Greg J. Duncan and Richard Murnane Gropen et al, (New York: The Russell Sage Foundation, 2011); "The importance of executive function in early science education," Child Development Perspectives 5, no. 4, (2011), p. 298-304.

Funding Graphic Methodology (Page 3)

Page 3 provides New America's estimates for spending on early childhood education from birth through age eight. Arriving at these estimates is not clear-cut, so it requires that some assumptions be made. The notes provided here offer an explanation for how we arrived at each calculation about which there might be questions, and highlights the limited information available for many federal programs.

All federal dollars are included for Head Start; Maternal, Infant, and Early Childhood Home Visiting Program; Race to the Top – Early Learning Challenge; Individuals with Disabilities Education Act, Part B, Section 619 Preschool Grants; and Individuals with Disabilities Education Act, Part C, Infants and Toddlers. The remaining notes read from the bottom of the chart to the top, beginning with the Child Care and Development Fund.

Child Care and Development Fund: According to the Department of Health and Human Services, 33 percent of CCDF recipients in fiscal year 2010 were age six or older, meaning that two-thirds of funds went to children under six. The total number of children served that year totaled 1,697,300, indicating that approximately 560,109 of children were ages six to 13. Assuming those children aged six to 13 were distributed equally, we found that 210,040 of them were ages six-to-eight. We added that number to the number of children under six (1,137,191) and divided by the total number of children served to calculate that 79 percent of children served by CCDF were birth-through-eight. We multiplied that amount, 79 percent, by the dollar amount of funds provided in each year. "FY 2010 CCDF Data Tables (Final)," U.S. Department of Health and Human Services Administration for Children and Families (May 3, 2013), http://www.acf.hhs.gov/programs/occ/resource/fy-2010-data-tables-final.

TANF/Child Care Transfer: States may choose to transfer up to 30 percent of their funds under the federal Temporary Assistance for Needy Families program each year to the Child Care and Development Block Grant program, spending those dollars on child care. Figures under this program were calculated in the same way as CCDF funds. The Department of Health and Human Services publishes annually the dollar amount of each state's transfer. As of publication, figures for fiscal years 2012 and 2013 were not yet available, so we applied the average percentage of TANF funds transferred in fiscal years 2009 through 2011 to the total TANF dollars appropriated in those years. No funds provided under the American Recovery and Reinvestment Act were transferred to CCDBG in 2009, so no additional dollars are included in those years. "Expenditure Data: TANF Financial Data," U.S. Department of Health and Human Service Administration for Children and Families (August 9, 2013), http://www.acf.hhs.gov/programs/ofa/programs/tanf/data-reports.

Title I: The Department of Education estimated that in fiscal year 2000, between 2 and 3 percent of funds were used for early education prior to school entry. There are no official estimates on the use of Title I dollars for full-day kindergarten. Additionally, the Government Accountability Office estimated that in 2000, 17 percent of districts that received Title I chose to use it for children below school age, and most used less than 10 percent of their funds for those purposes. For this estimate, we reduce the Title I appropriation by 3 percent to account for Title I spending before school entry. We then add that amount to four-thirteenths of the remaining appropriation, assuming an even distribution across grade levels from kindergarten through 12th grade. This is likely a conservative estimate, given that Title I dollars tend to be front-loaded in elementary schools. Danielle Ewen and Hannah Matthews, Title I and Early Childhood Programs: A Look at Investments in the NCLB Era (Washington, D.C.: Center for Law and Social Policy, October 2007), http://www.clasp.org/resources-and-publications/publication-1/0379.pdf.

Social Innovation Fund: For the purposes of developing a conservative estimate, we assume that one-third of grants support early learning. The figure for fiscal year 2013 is an estimate based on a 5.0 percent reduction from the amount provided under the continuing resolution due to sequestration. As of publication, final figures for fiscal year 2013 were not available.

21st Century Community Learning Centers: According to data from the Department of Education-funded Profile and Performance Information Collection System (PPICS), about 39 percent of grantees under this program target pre-K through third grade (though the same grantees may also target other grade levels). Data on the PPICS site also show that grantees' award amounts follow a relatively regular distribution in award size, so we multiply the annual funding amount available by 35 percent to arrive at a conservative estimate. "Complete Report List," U.S. Department of Education Profile and Performance Information Collection System, http://ppics.learningpt.org/ppicsnet/public/default.aspx.

Promise Neighborhoods: According to the Department of Education, 93 percent of 2011 planning grantees addressed early learning, and 100 percent of implementation grantees did. Therefore, it is safe to assume a large percentage of awards go to early learning. We multiplied the annual funding amount provided for Promise Neighborhoods by 92 percent to provide a conservative estimate. "Promise Neighborhoods Grantees Emphasize Early Learning as Key to Success," U.S. Department of Education (December 21, 2011), http://www.ed.gov/oii-news/promise-neighborhoods-grantees-emphasize-early-learning-key-success.

State Assessments: The fiscal year 2013 competition for State Assessments funds was focused exclusively on Kindergarten Entry Assessments. Prior assessments were not early learning-focused, so only fiscal year 2013 funds are included in this analysis.

Investing in Innovation: A New America analysis found that about 18 percent of 2011 grantees under the Investing in Innovation competition were focused on early learning, with awards totaling $26.5 million. Assuming that distribution holds relatively constant from year to year, we multiplied each annual funding amount by 15 percent to calculate a conservative estimate. It is possible that the percentage in the fiscal year 2013 competition may be reduced, given that early learning was included only as an individual priority and not as a competitive priority, meaning that applicants did not receive points for addressing early learning in their applications. Laura Bornfreund, "5 Early Learning Winners in i3 Competition," Early Ed Watch (November 17, 2011), http://earlyed.newamerica.net/blogposts/2011/five_early_learning_winners_in_i3_competition-60524.

IDEA State Grants: IDEA state grants may be used for children ages 3-to-21, but because other special education programs are available for young children, for the purposes of this calculation we assume that most of the funds go to children ages 5-18 and use only those years in our calculations. Assuming funds are spent evenly for each age group, we divide the total appropriation by 14 (ages 5-18) and multiply by 4 (ages 5-8).

Statewide Longitudinal Data Systems: Because most of the dollars for SLDS have been dedicated to K-12 systems, with remaining funds used to develop early education and postsecondary/workforce connections, we include 25 percent of the appropriation as specifically related to early education and the early grades. The 2009 ARRA funds were specifically dedicated to P20 linkages, so we use 50 percent as the portion of dollars dedicated to early learning systems for that figure. "Grants for Statewide, Longitudinal Data Systems Under the American Recovery and Reinvestment Act of 2009," U.S. Department of Education Institute of Education Sciences (July 24, 2009), http://nces.ed.gov/programs/slds/pdf/2009_ARRA_RFA.pdf.

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