



## **TRENDS IN STATE FUNDED PRESCHOOL PROGRAMS: SURVEY FINDINGS FROM 2001-2002 TO 2011-2012**



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## KEY FINDINGS

1. Enrollment increased dramatically for 4-year-olds over the decade, but funding did not keep pace. State expenditure per child fell by more than \$1,100, adjusting for inflation.
2. Enrollment at age 3 changed little, and much of the enrollment growth at this age may have been due to increased preschool special education enrollment.
3. Variability across the states is extreme. Ten states do not fund pre-K. Among those that do fund pre-K, enrollment, standards, and funding differ dramatically. Without federal action these interstate inequalities are likely to persist.
4. The recession dealt a serious blow to progress. It is important to repair this damage, but states will continue to be affected by the economic downturn for some time.
5. The long-term trend has been toward improvement in early learning standards and program standards more generally. The least progress has been made in raising staff qualifications; state requirements for both providing meals and maintaining site visits have lost ground over time.
6. Teacher and teacher assistant qualifications requirements and pay are often low. Yet, many teachers' qualifications exceed requirements. Requiring a BA degree of all teachers would affect relatively few teachers and minimally impact average per pupil cost. Teacher pay parity with K-12 education would be more costly. However, just restoring pre-K per pupil expenditure to its real level of a decade ago would suffice to raise pre-K teacher salaries to parity with kindergarten.
7. English language learners and Hispanic children benefit greatly from good preschool education. However, they tend to be concentrated in states with particularly low standards, despite the greater difficulty of teaching children with a home language other than English.
8. Expansion of state pre-K has created greater opportunities for identifying children with special needs early and integrating children with special needs into mainstream preschool programs. However, the low standards and inadequate funding of many state pre-K programs may prevent them from adequately serving children with special needs. States have little data on the extent to which integration of children with special needs actually occurs.
9. States have far less detailed data available to inform policy regarding their preschool programs and the children they serve than they do for K-12 education. For example, many states cannot report total funding for programs, including the contributions of the local schools, or breakdown enrollment by ethnicity, home language, or family income.
10. Most states report conducting evaluations, but these are not always rigorous; and funding for monitoring and evaluation, tenuous in the best of times, was hurt by the recession. Limited state capacity to oversee and support program quality is a cause for concern.

## INTRODUCTION

For the last decade, NIEER has tracked the policies of state-funded preschool programs through its *State Preschool Yearbook*. The report, which started with the 2001-2002 school year, provides annual data on enrollment, policies relating to access and quality, and expenditures through the 2011-2012 school year. The goal of the *Yearbook* is to improve the public's knowledge and understanding of state efforts to educate young children.

Our data document tremendous change in state pre-K over the decade, some of it good, and some not. The most dramatic change has been that states now serve nearly 30 percent of 4-year-olds, slightly more than 30 percent when preschool special education is included. State pre-K now serves more than twice as many 4-year-olds as Head Start and more children than Head Start serves at all ages. In this report we detail major trends in state pre-K over the last decade and discuss their implications.<sup>1</sup>

As already noted, state funding for pre-K is just one public support for early education. The federal government funds Head Start to serve children in poverty. In addition, local school districts and some communities support preschool programs including directly providing preschool through public schools, with or without state support. Preschool special education is an entitlement for children with special needs and receives federal, state, and local funding. The public sector also supports child care programs that can provide education to preschoolers through the child care subsidy system and tax credits to parents. And, parents pay for a variety of preschool and child care programs on their own.

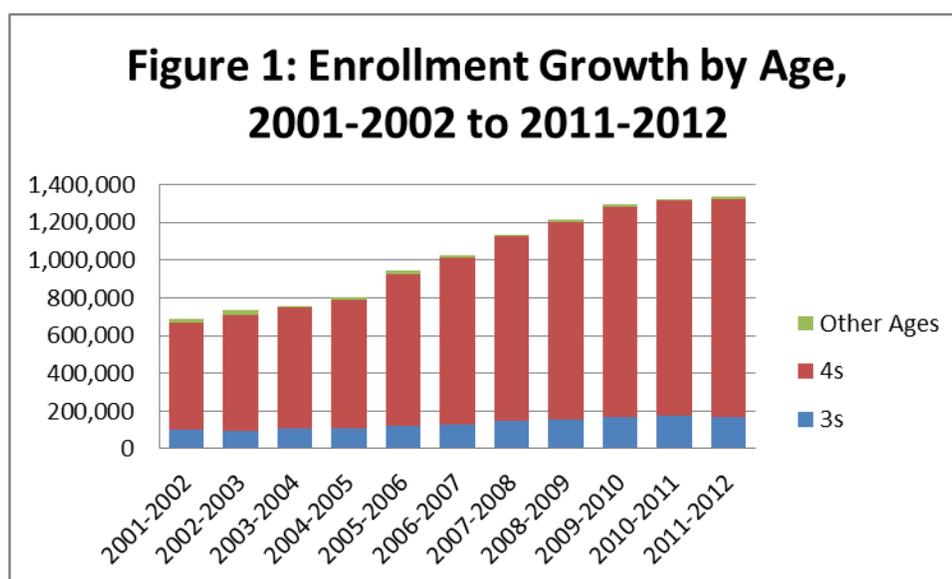
Over the past decade, state prekindergarten programs have grown faster than any other sector in early childhood and play an increasingly important role as part of the larger array of early learning programs. The *State Preschool Yearbook* series provides information on the availability and quality of services offered through these programs to children at ages 3 and 4 and serve as a resource to policymakers and educators seeking to start all young learners on the right foot. In what follows we seek to provide policymakers, the general public, and others with key insights into this decade of change and its implications for the future.

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<sup>1</sup> This report was prepared with partial support from the Foundation for Child Development (FCD) to assist in their strategic planning process by examining trends in pre-K over the last decade. FCD is a national, private philanthropy supporting “research, policy development, and advocacy to ensure that all families have the social and material resources to raise their children to be healthy, educated, and productive members of society.” For more information on FCD, please visit <http://fcd-us.org/about-us>.

## ENROLLMENT

In 2001-2002, 690,891 children enrolled in state-funded pre-K programs, 14 percent of the nation's population of 4-year-olds and 3 percent of 3-year-olds. By 2011-2012 this had nearly doubled to 1,332,663 children, 28 percent of 4-year-olds and 4 percent of 3-year-olds. Figure 1 displays enrollment for each year by age, and shows that enrollment at age 4 more than doubled, accounting for the vast majority of growth in state pre-K. By age, enrollment increased by 589,533 at age 4 and 68,455 at age 3 over 10 years. Note that a period of steady growth from 2004 to 2008 appears to have been halted by the impact of the Great Recession on state revenues. Enrollment growth barely kept up with population growth in 2011-2012. Yet, because many programs target eligibility based on income, and the recession pushed more families into poverty, the percentage of the population eligible for state pre-K likely increased even more.



States increased enrollment by both expanding enrollment in existing programs and, to a lesser extent, creating new programs. Over the decade, the nation went from 42 programs in 37 states to 52 programs in 40 states as well as two in Washington, D.C. States create multiple programs for a variety of reasons that include differences in eligibility requirements, standards, funding sources, and provider types (e.g., public schools, private nonprofits, and faith-based). This proliferation of programs within states can create confusion for the public regarding just what a state offers for both children and taxpayers.

Florida offers one interesting example of how states build programs. For two decades Florida had a program for disadvantaged children that served 20,000 annually. This program was disbanded and the funds sent to county organizations, so that when we began the *Yearbook*, Florida officially had no program. Subsequently, when Florida voters required the state to provide universal pre-K by ballot initiative, the state legislature created Voluntary Pre-K (VPK) to comply with the voters' mandate, using this county structure. Florida is one of the largest programs in the nation, so enrollment growth at the national level in the 2005-2006 year was largely due to the start of their program, rather than expansion of existing programs.

Other states creating new programs include Alaska and Rhode Island, which both started small-scale programs in 2009-2010 that meet all ten quality standards benchmarks, though they reach very small percentages of children. Most recently, Mississippi created a new program in 2013 that will begin serving children in 2014-2015 school year (at which time it will be included in our survey). Arizona is the only state that completely eliminated its program during the recession (in 2010), but Arizona's First Things First Prekindergarten Scholarship adapted to fill in to some extent. This program was covered in the 2012 *Yearbook* survey.

States that already fund one preschool program may create additional programs for several reasons. One is to serve a different population, typically with different standards. For example, Iowa added its Statewide Voluntary Preschool Program to expand eligibility to all children, while maintaining its Shared Visions program targeting at-risk students. In addition, new programs may be created to facilitate provision through faith-based and other private programs, if the existing program is designed to serve children in public schools. Clearly, there is no one model for states to follow in creating or expanding a program, but it does create a somewhat chaotic landscape in a field where separate silos (preschool, special education, Head Start, and child care) already present challenges.

One of the strengths of American public education has been that it permits some localities and states to move ahead, even when others are not ready to do so. Examining enrollment on a state by state basis, 30 states and the District of Columbia increased enrollment, including 15 states plus D.C. that more than doubled the number of children served. Three programs – Nebraska, North Carolina, and Pennsylvania – had more than a tenfold increase in enrollment over the decade. This implies that 20 states did not significantly increase enrollment and six (Arizona, Minnesota, Michigan, Massachusetts, Missouri, and Ohio) saw enrollment fall over the decade, ranging from a 15 percent drop in enrollment in Minnesota to a 76 percent decrease in Ohio. It is worth noting that both Arizona and Ohio operated programs in 2011-2012 that differ significantly from the programs originally profiled for 2001-2002.

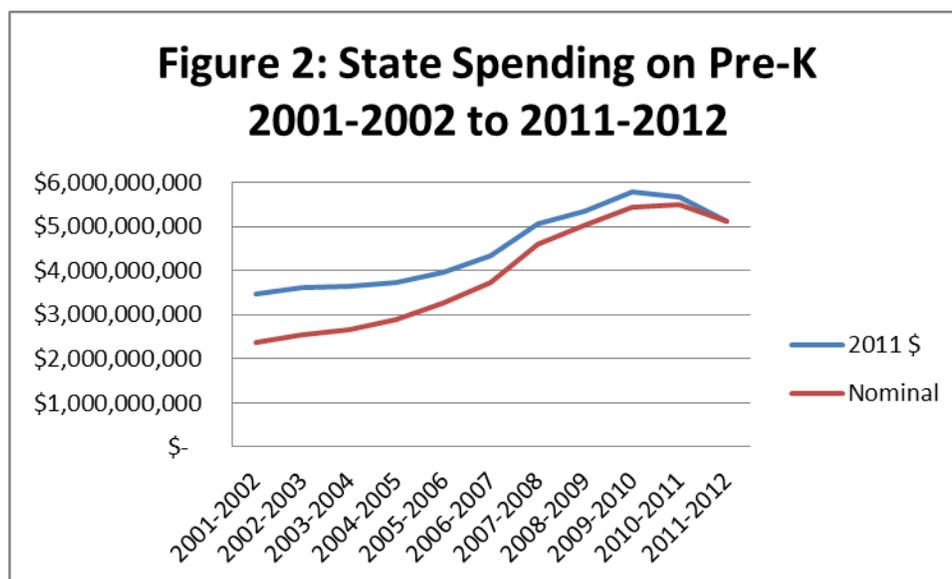
By the beginning of this decade, eight states and the District of Columbia served more than half of their 4-year-olds. D.C., Oklahoma, and Florida offered pre-K to virtually every 4-year-old, albeit at extremely low standards in Florida, as we discuss later. Several other states have proposed serving all children at age 4, including Georgia, New York, West Virginia, Iowa, and Illinois. In several of those states, budget woes exacerbated by the Great Recession appear to have derailed progress. And, despite the overall progress, 20 states still served fewer than 1 in 10 preschoolers at age 4 and half those provided no support for pre-K.

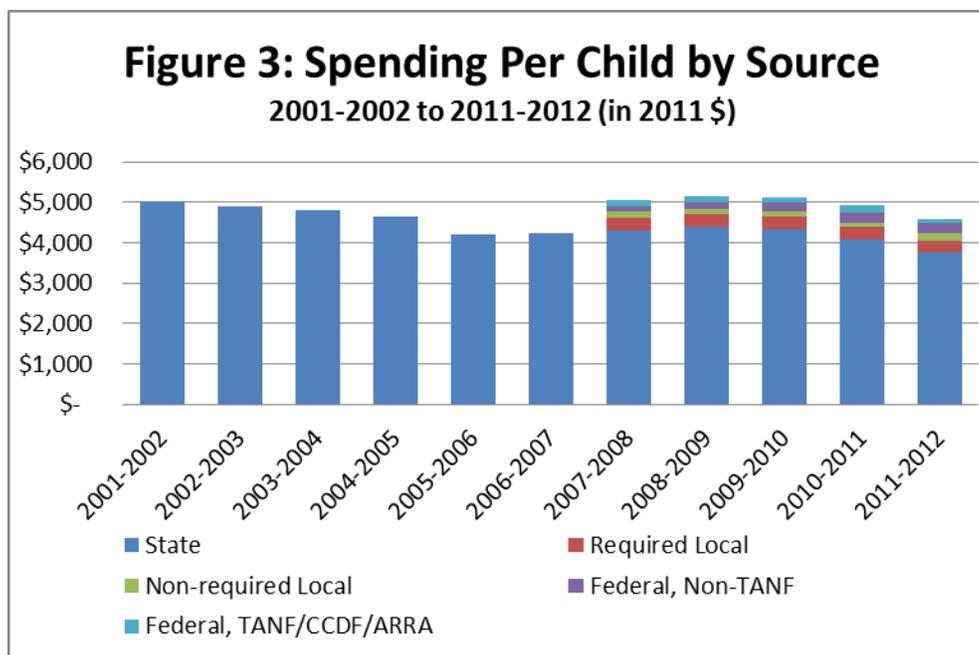
## **RESOURCES**

In inflation-adjusted 2011 dollars, state spending increased from \$3.47 billion in 2001-2002 to \$5.12 billion in 2011-2012, a 48 percent increase. Figure 2 displays annual spending in constant 2011 dollars, as well as nominal dollars for each year. Growth in total spending was slow at the beginning of the decade and picked up mid-decade, during that period of more rapid enrollment

growth, before dropping as the recession reduced state revenues. As Figure 2 shows, the recent decline in real spending was the first we recorded. Indeed, the drop was so steep that even nominal dollar (unadjusted for inflation) spending by states dropped in 2011-2012, and this was not made up by increases from other sources. Federal stimulus funds were drying up, and local governments were cutting back spending. A return to trend that makes up for lost ground will require a substantial increase in spending as Figure 2 also makes clear.

Despite the \$1.65 billion increase in state funding, enrollment growth outpaced spending growth over the decade. As a result, the amount spent by states per child decreased in constant dollars from \$5,020 to \$3,841, a drop of \$1,179 per child, or 23 percent. This is a huge decline and not just the introduction of efficiencies. Annual spending per child is reported below in Figure 3. As shown, some effort had been made to reverse the decline before the nation entered the recession. As state revenues faltered, policies shifted and spending fell by more than \$500 million from 2010-2011 to 2011-2012 alone.





Beginning with 2007-2008, we obtained more reliable data from states on funding from other sources. This remains incomplete, as many states cannot report funding fully or, sometimes, at all. Yet, it is important to understand that state pre-K is not entirely state-funded everywhere. In fact, the majority of states rely on local funding to some extent. In some states, funding basically operates in the same way for pre-K as it does for K-12 with state and local governments both assuming substantial shares. In a small number of states, it is largely or entirely state supported. Other funding streams tapped to help pay for early education programs include federal funds under state or local control--Temporary Aid for Needy Families (TANF), Child Care Development Fund (CCDF), and Title I of the Elementary and Secondary Education Act (ESEA), for example. Some states require formula-based matching contributions from local schools. In others, local school districts do not have a mandated contribution. Recognizing that the numbers are incomplete, Figure 3 shows that non-state spending per child was reported to be about \$740 in the 2007-2008 year and rose to \$845 in the 2011-2012 year. This change may represent better reporting as well as states turning more to other sources of funds during the recession. Required local funding is the largest reported source of non-state spending.

### PROGRAM STANDARDS

Funding per child is one important indicator of state support for high quality pre-K. States also support quality by setting standards. The *Yearbook* surveys states regarding a wide range of program standards and NIEER highlights information on 10 quality standards in that annual report. As a guide to how well states perform in this regard, NIEER compares state standards against 10 benchmarks. These benchmarks are based on evidence from research on the full range of early childhood education programs and the positions of professional groups such as the National Association for the Education of Young Children.

The only study providing direct observations of quality for a national sample of programs indicates that lack of quality is a serious problem. Only about 1 in 3 classrooms serving 4-year-olds was rated good or better on the Early Childhood Environment Rating Scale--revised edition (ECERS-R).<sup>1</sup> Recent studies indicate that quality has a larger impact on children's learning and development when it is good or better, while improvements from low to moderate quality contribute less.<sup>2</sup> Classrooms in public programs (which must meet higher standards) were more likely to be good or better, and less likely to be of low quality, than those in private programs.

Our information on program standards should be used and interpreted carefully. We would not assert that each and every benchmark must be met by a program to produce good results. Nor are all of the benchmarks equally important. We also recognize that it is possible to meet the letter of the law while violating its spirit (for example, if funding is too low to provide adequate compensation, teachers may obtain meaningless degrees from diploma mills). However, the preschool programs found to produce large gains in learning and development typically met or exceeded these benchmarks, while those that failed to produce substantial gains have not met them. Not all of the standards should be expected to produce detectable impacts on test scores. For example, the primary reason to provide disadvantaged children with a meal rather than a snack in a half-day program is to reduce hunger and improve nutrition.

NIEER's Quality Standards Checklist is best regarded as a set of minimum standards for programs that are intended to produce substantive improvements in learning and development. The checklist is not an exhaustive inventory of all of features of a high-quality program. However, states maintaining lax standards with respect to the program features covered, risk losing the expected gains from preschool programs. Benefit-cost analyses have indicated that the returns to preschool programs with standards that are much stricter and more costly than those set by our benchmarks far exceed their cost. Therefore, it is likely that states risk far larger losses in future benefits from lower standards, than they can expect to save through reduced costs now.<sup>3</sup>

Finally, we emphasize that the benchmarks are applied to state policies. Actual practice may vary from state policy (though if it is evident that programs widely violate policy with state knowledge we do not give credit). Where policies do not meet benchmarks, it is still possible for many, sometimes most, programs in a state to meet those benchmarks. Some states do not impose standards regarding some program features because of issues regarding local school district autonomy. Often, however, a lack of state standards or low standards reflects an unwillingness to adequately fund programs to meet the standards.

The *Yearbook's* 10 quality standards reviewed with their respective benchmarks are:

- Teacher degree: Must have a bachelor's degree;<sup>4</sup>
- Teacher training: Must have specialized preparation in preschool education;<sup>5</sup>
- Assistant teacher qualification: Must have a Child Development Associate (CDA) or equivalent credential;<sup>6</sup>
- Professional development: Teachers must receive at least 15 hours of annual in-service training;<sup>7</sup>

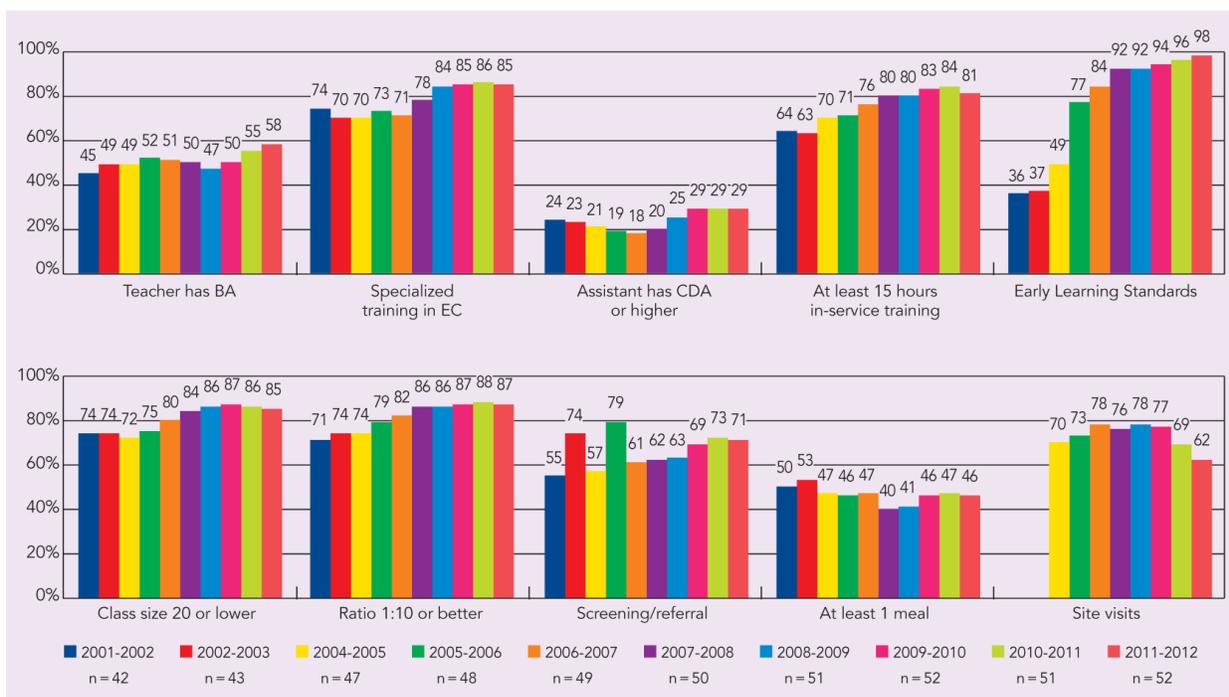
- Class size: May not exceed 20 children;<sup>8</sup>
- Ratio: May not exceed 10 children per staff member;<sup>9</sup>
- Early learning standards: Comprehensive standards as specified by the National Education Goals Panel for physical well-being and motor development, social/emotional development, approaches toward learning, language development, and cognition and general knowledge;<sup>10</sup>
- Comprehensive services: Vision, hearing, and health screenings and referrals as well as at least one service such as home visits, parent education, or nutrition information;<sup>11</sup>
- Nutrition: Provision of at least one meal;<sup>12</sup> and
- Monitoring quality: all sites are visited to assess program quality at least once every five years.<sup>13</sup>

As seen in Figure 4, states generally improved pre-K program standards over the last decade. In fact, the percentage of programs meeting NIEER benchmarks increased for 8 of the 10 policies even though the number of programs increased. Progress was more pronounced prior to the Great Recession, afterwards, progress tended to stall or even to be reversed. Most striking is the widespread adoption of comprehensive Early Learning Standards. While only 36 percent of programs had such standards in 2001-2002, by 2011-2012, Ohio was the only state (funding pre-K) that did not yet meet this benchmark. Ohio adopted comprehensive early learning standards for 2012-2013, making this the first benchmark with a 100 percent adoption rate.

With respect to two benchmarks, states ended the decade below where they started--meals and site visits. In 2001-2002, 50 percent of programs nationally required at least one daily meal for all pupils; that fell slightly to 46 percent by 2011-2012. The percent of programs requiring meals actually dropped to just 40 percent in the 2007-2008 year, so the current 46 percent is a slight increase over just a few years ago. Although this is at best a crude indicator of program support for nutrition, the decline took place despite an increase in need, as families experienced more food insecurity due to the impacts of the recession.

NIEER began tracking state pre-K program quality monitoring (defined as making site visits to assess quality, not safety, on a regular schedule for all sites) in 2004-2005. At that time, 70 percent of programs met the requirement. After rising to 78 percent of programs in 2008-2009, it fell to 62 percent of programs in 2011-2012. Conversations with state officials indicate that this decline can be directly linked to tightened state budgets due to the recession. Unfortunately, research indicates that classroom observation linked to coaching and professional development is a key element of a system for continuous improvement of quality. Without actual observation it is difficult for states to know whether standards are being implemented as intended, or to assess the extent to which resources are being effectively employed.

**Figure 4: Percent of State Pre-K Programs Meeting Benchmarks, 2002-2012<sup>14</sup>**



Also notable are the benchmarks on which progress stalled after earlier improvements. Requiring lead teachers to have specialized training in early childhood education was originally only a policy in 74 percent of programs; this had improved to 84 percent of programs by 2008-2009. However, in the three years since, this percentage has changed little. Requiring assistant teachers to have at least a CDA has fared even worse, starting at 24 percent of programs in 2001-2002, falling to just 18 percent in 2006-2007 year, and rising back to just 29 percent of programs.

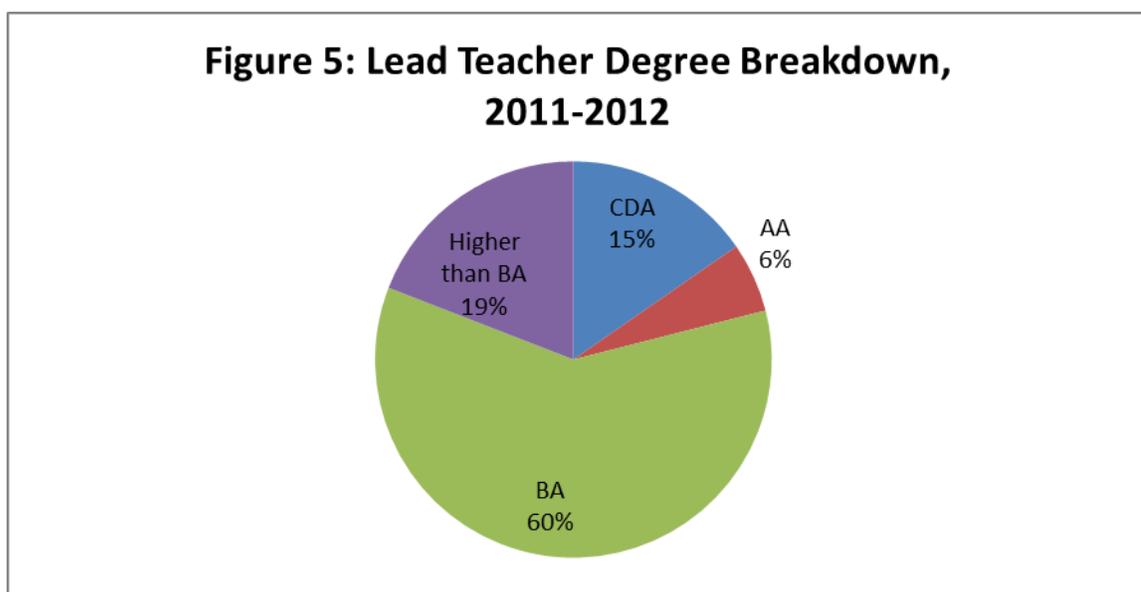
Although a number of factors including state philosophy about local control can determine state quality standards, cost looms among the most salient. Requirements for higher teacher credentials are particularly strong drivers of cost, so state policymakers are hesitant to increase these requirements when budgets are stretched thin. Many states report that while certain standards are not required through policy, the standards are met by most classrooms. For example, policies regarding meals often depend on the length of program day, with part-day programs only required to serve snacks, but part-day classrooms are said to exceed this requirement often. Similarly, even in some states that do not require all teachers to have a BA degree, the vast majority may have a BA or higher degree.

While it is encouraging to hear that classrooms often exceed the requirements set by the state, it is important to know which classrooms do not. It seems likely that the classrooms with the most severely disadvantaged children, in areas with the poorest families and most poorly funded schools, will be those who meet and do not exceed minimum standards. The rationale for high state standards is to ensure that all eligible children, particularly the most

disadvantaged, have access to programs with human and other resources that are sufficient to deliver a good preschool education.

### Teacher Qualification and Compensation

Although some progress has been made toward increasing the quality and qualifications of teaching staff, much remains to be done. More state pre-K programs now require lead teachers to have a bachelor's degree, increasing from 45 percent to 58 percent. Eighty-five percent of programs now require lead teachers to have specialized training in early childhood, up from 74 percent a decade ago.



For the first time, in the 2012 *Yearbook*, NIEER asked about the actual number of lead teachers holding each degree in the state-funded pre-K program, reflected in Figure 5. Thirty-two programs were able to report this breakdown for a total of 44,810 teachers, though assuming an average class size of 20, state-funded pre-K programs nationwide employ closer to 66,600 teachers. Of those teachers whose degree can be reported, 79 percent of lead teachers have a BA or higher. Of teachers who don't have a BA, more have a CDA than have an AA. Taking into account the numbers of children served by various states, it remains true that most children enrolled in state pre-K attend programs in which teachers are not required to have a bachelor's degree and assistants need only a high school diploma. The high percentage of teachers with a BA suggests that even in states that do not require the BA most teachers have the degree. So requiring a BA would affect a relatively small percentage of teachers.

Children also interact with assistant teachers in pre-K settings, and here much less progress has been made in improving education requirements. NIEER's benchmark for assistant teachers is that they must hold a Child Development Associate (CDA) or equivalent, a credential requiring coursework in early childhood education or a related field in addition to a high school degree. The percentage of programs requiring assistant teachers to have a Child Development Associate (CDA) credential has remained below 30 percent for a decade. This likely reflects the

lack of importance attributed to assistant teachers by policymakers (and others, as there is relatively little research on assistant teachers).

Perhaps the most fundamental issue relating to raising teacher quality is compensation. Without adequate pay, raising requirements for qualifications would do little to encourage acquisition of real knowledge and skills that would raise teacher productivity. In the market for good teachers, pre-K programs must compete with K-12 and preschool special education in the public schools, and other better-paying fields. Yet, teacher compensation is a big driver of cost per child.<sup>15</sup> According to 2009 data from the Bureau of Labor Statistics, the average annual salary for a Preschool teacher (not including special education) was \$27,450, compared to \$50,380 for a Kindergarten teacher and \$53,150 for Elementary School teachers generally.<sup>16</sup>

The 2008-2009 survey collected information from states about teacher pay. As shown in Table 1, in programs able to report salary range for Pre-K teachers in public settings, 83 percent were paid less than \$50,000; in nonpublic settings, 88 percent were below that level. The majority of programs were unable to report this information, which is why NIEER stopped collecting it. These data indicate that the median salary for teachers in public school settings was \$40,000 to \$44,999, while for those in private settings it was \$30,000 to \$34,999. This is similar to results from a 2010 survey of preschool teachers by NIEER, which found an average salary of just over \$40,000 for teachers in state and locally funded public pre-K programs.

**Table 1: Lead Teacher Salary Ranges in Public and Private Settings, 2008-2009**

Lead Teacher Salary Distribution (As of 2008-2009 School Year)	Public		Private	
\$20,000-\$24,999	1	2%	1	2%
\$25,000-\$30,000	1	2%	3	6%
\$30,000-\$34,999	3	6%	7	14%
\$35,000-\$39,999	4	8%	3	6%
\$40,000-\$44,999	3	6%	0	0%
\$45,000-\$39,999	7	14%	1	2%
\$50,000-\$54,999	2	4%	1	2%
\$55,000-\$59,999	1	2%	0	0%
\$60,000-\$64,999	1	2%	1	2%
<b>Data Not Available</b>	27	54%	33	66%
<b>In 7 of these programs, public and nonpublic teachers are paid on the same pay scale.</b>				

In 2009-2010, 31 percent of programs reported that teachers in the state-funded pre-K program were paid on the public school salary scale, as shown in Table 2. Another 39 percent reported that the public school pay scale applied to teachers in public schools but not in private settings. All but one of the others (27%) reported that the public school pay scale for K-12 teachers did not apply to pre-K teachers.

**Table 2: Pre-K Teachers Paid on Public School Salary Scale, 2009-2010**

Are teachers required to be paid on public school salary scale? (2009-2010 school year)		
<b>Yes</b>	16	31%
<b>No</b>	14	27%
<b>Yes (public); No (nonpublic)</b>	20	39%
<b>Not reported</b>	1	2%

Assistant teachers appear to be paid even more poorly than teachers, though most states could not report these data. In the 2008-2009 survey, no state reported an average starting salary for an assistant teacher above the \$25,000 to \$30,000 range. In all settings, the most commonly reported pay rate for assistant teachers was \$15,000-\$24,999. Only 8 programs reported the same pay scale applied in public and nonpublic settings funded by state pre-K.

### Length of Program Day

Policies regarding the length of preschool program day vary widely from state to state. As state policies do not even define half and full-day consistently, we impose the following definitions to discuss hours of service; Extended day: 8 or more hours; School day: more than 4 hours, fewer than 8; Part day: fewer than 4 hours. Just over 60 percent of state programs leave length of day entirely up to local discretion or offer a choice of schedules, usually part- or school-day. Another 19 percent offer only a part-day, 19 percent more require a school day, and 2 percent (one program) have an extended day.

States often can report the operating schedules their children experience; the percentage of children experiencing each schedule is displayed in Table 3. Even where programs can determine their own schedules locally, states are often able to report the actual operating schedules provided. Of the 1.3 million children enrolled in state-funded pre-K in 2011-2012, nearly 40 percent were in a program operating only on a part-day schedule, with another 25 percent on a full school-day schedule. Only 5 percent of students were reported to have extended-day schedules, though administrators note that if extended-day services are provided in conjunction with a partner, states may not have that information. Nineteen percent of pre-K students have daily schedules that are determined locally and not reported to the state.

**Table 3: Enrollment by Operating Schedule, Fall 2011**

Enrollment by Schedule, Fall 2011	
<b>Extended Day</b>	5%
<b>School Day</b>	25%
<b>Part Day</b>	39%
<b>Determined locally</b>	19%
<b>Not available</b>	12%

## Program Evaluation

Of the 54 programs (including two in the District of Columbia) profiled in the 2011-2012 *Yearbook*, 31 (57 percent) reported that their program had recently undergone a formal evaluation of program quality and/or effectiveness. As can be seen from Table 4 below, the majority reported that programs had been evaluated for both the quality of education they provide and the effectiveness of that education in terms of improving children’s learning and development. However, over 40 percent had not been evaluated recently.

**Table 4: Factors Measured in Pre-K Program Evaluation**

Percent measuring program quality and/or effectiveness		
<b>Both process quality and program impact/child outcomes</b>	23	43%
<b>Process quality</b>	4	7%
<b>Program impact/child outcomes</b>	4	7%
<b>Not evaluated</b>	23	43%

NIEER has asked about program evaluations since the 2006-2007 *Yearbook*, but it is a topic for needing more refinement in questions. NIEER does not specify what constitutes an evaluation or what counts as “recent.” Most programs provide additional details with clarifications. As a result, we know that many programs report the collection of descriptive statistics compiled for an annual report as an evaluation. Few specify a research design or methodology, or report specific measures used for evaluation. Hence, it is difficult to draw conclusions regarding the rigor of program evaluations; our best judgment is that few permit strong conclusions about program impacts on learning and development.

Of the 31 programs with an evaluation, 29 percent reported that evaluations were “ongoing and/or planned,” and another 23 percent reported that they conduct evaluations annually. As seen in Table 5, another 36 percent reported conducting evaluations since 2010. This indicates that evaluation is an active concern for about half of state pre-K programs. Eighteen programs (58 percent of those conducting evaluations) indicated that the evaluation was mandated by the state, while another 13 (42 percent of those with evaluations) indicated it was not.

The percent of programs reporting that an evaluation was conducted has actually gone down in recent years. It was 80 percent in 2006-2007 and it declined steadily to 57 percent in 2011-2012. To some extent, the decline could reflect the impact of the recession. However, it also may reflect a better understanding by states as to what really constitutes an evaluation.

These data indicate the need for additional supports to states regarding pre-K program evaluation. States could benefit from technical assistance pertaining to best practices in conducting and using program evaluation. Undoubtedly, states could also benefit from

additional funds to support rigorous evaluations. The cuts to site-visit requirements coupled with a decline in programs reporting a recent evaluation indicates that state monitoring is slipping, creating a lack of meaningful information on how well programs actually operate.

**Table 5: Most Recent Evaluation by Year**

Year	Number of Evaluations	Percent of Evaluations Conducted by Year
<b>2003</b>	1	3%
<b>2004</b>	1	3%
<b>2007</b>	1	3%
<b>2008</b>	1	3%
<b>2010</b>	3	10%
<b>2011</b>	3	10%
<b>2012</b>	5	16%
<b>Annually</b>	7	23%
<b>Ongoing/Planned</b>	9	29%

## **BROADER POLICY AND SYSTEMS ISSUES**

### **English Language Learners and Hispanic Students**

High quality early education has been found to be particularly effective in improving the learning and development of English Language Learners, the vast majority of whom are Hispanic in the United States.<sup>17</sup> One in 7 children starting kindergarten has a primary language other than English.<sup>18</sup> Limited English language proficiency at kindergarten entry is associated with low achievement and other poor schooling outcomes for Hispanic students. Only 18 percent of Hispanic children demonstrate proficiency in reading and 24 percent in math at fourth grade, and only 63 percent of graduate from high school.<sup>19</sup> Despite their greater need, Hispanic children attend preschool at much lower rates than children from other ethnic groups, even though surveys show Hispanic parents eager to enroll their children in preschool education if it is available.<sup>20</sup>

Over half of Hispanic 3- and 4-year-olds nationwide reside in just three states: California, Texas, and Florida. Thus, the preschool policies of these states are particularly important for Hispanics. Florida offers virtually universal coverage at age 4 between state funded pre-K and Head Start. Texas enrolls about half of all 4-year-olds and a small percentage of children at age 3. California enrolls fewer than 1 in 5 children at age 4, and half that many at 3. So, access varies greatly across the states and is worst in the largest state. However, of even greater concern, is that all 3 states programs meet fewer than half of the quality standards benchmarks, and in key respects their standards are abysmal. Florida requires no educational qualifications of teachers beyond a high school diploma. Texas has no limits on class size or ratio, and teachers in private programs need no college degree or specialized training. California requires teachers to have a two-year degree and limits the ratio of children to adults, but does not limit class size.

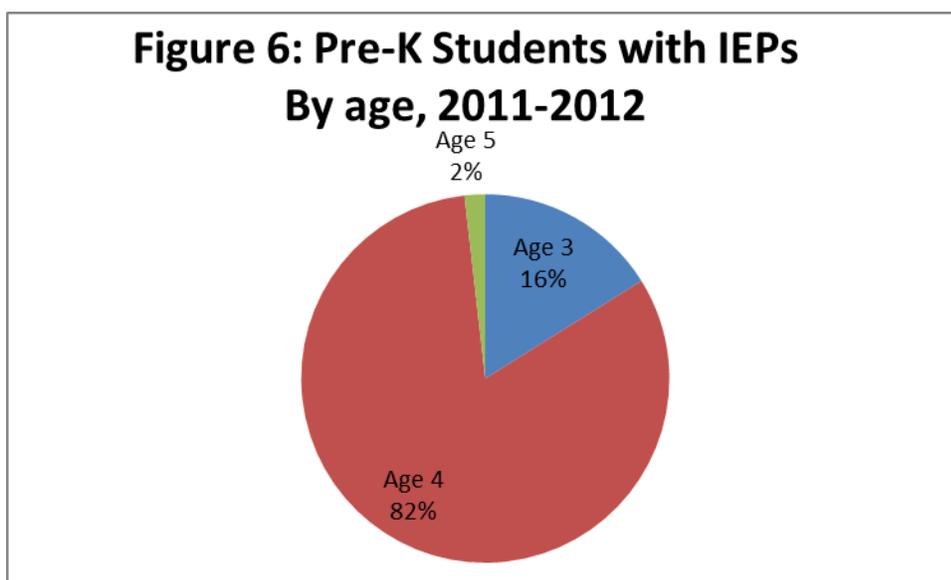
The *Yearbook* asks for information on enrollment of ELL children in preschool. Twenty-five of the 40 states with state-funded pre-K programs, plus D.C., are able to report the number of ELLs enrolled. They report that 21 percent of their enrollment is ELL students, higher than the roughly 14 percent of kindergarteners who had a primary language other than English in 2010-2011.<sup>21</sup> The relatively high percentage of ELL children compared to kindergarten likely results from the high percentage of such families with low incomes and that fact that having “Non-English-speaking family members” is an eligibility criterion for 18 programs in 15 states. That many states could not report enrollment by language (including states with large Hispanic populations such as Arizona, Colorado, Florida, New Mexico, New Jersey, and New York), is one indication of the need for greater attention to this issue. State-funded pre-K programs must keep pace with the changing demographics of the United States.

### **Enrollment of Children with Special Needs in Pre-K**

High quality preschool education is particularly important for children with disabilities. Enrollment in a good preschool program increases the likelihood that special needs will be identified early and appropriate services will be provided. In addition, state pre-K programs are an important means for serving children who have special needs in the least restrictive environment, together

with peers who provide increased opportunities for language and social development. Early education also provides an opportunity to improve the school readiness of children with special needs. Research from the Tulsa pre-K program specifically found that high-quality pre-K had a positive impact on the early literacy scores of children with special needs.<sup>22</sup>

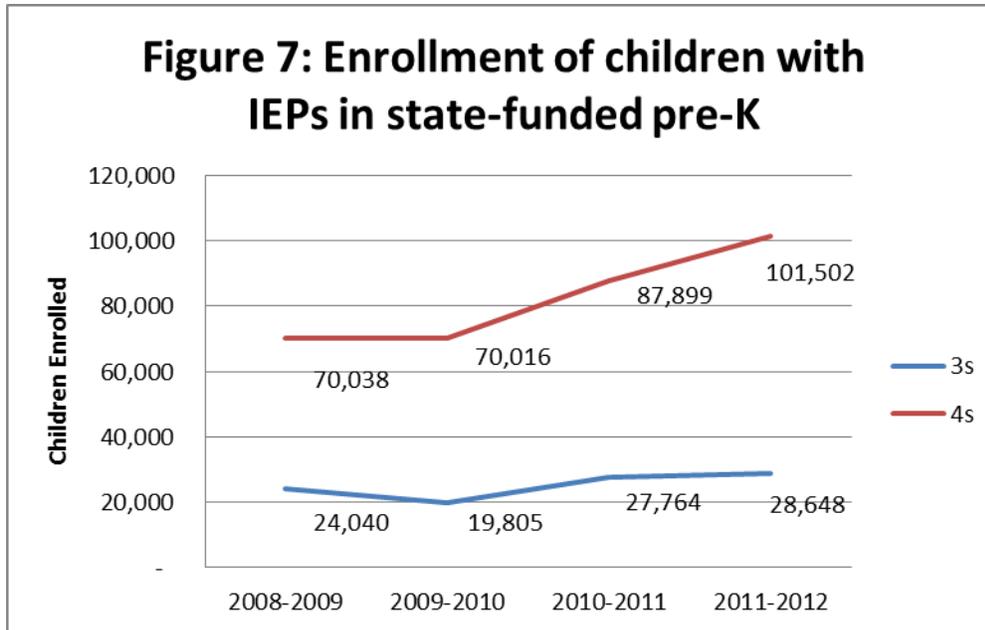
In 2011-2012, programs reported serving at least 196,349 students with special needs (requiring Individualized education plans or IEPs) in state-funded pre-K, though they could provide age breakdowns for only about half of these children. These age breakdowns, displayed in Figure 6, indicate that it is largely 4-year-olds who receive both special education services and state-funded pre-K.



Three-year-olds comprise 16 percent of pre-K students who have IEPs. Two percent are 5-year-olds, with many states permitting children with special needs to enroll in pre-K at this age.

In 2011-2012, 14 programs (26%) reported that while children with IEPs were enrolled in state-funded pre-K, the state could not provide the exact number of children served. Another 3 programs (6%) can report the total number of special education students served in the program, but cannot confirm the age breakdown. We estimated the numbers of 3- and 4-year-olds with special needs served in state pre-K across all states by assuming that the states not reporting these numbers had the same patterns of enrollment as those who were able to report this detail. Figure 7 displays those estimates beginning with 2008-2009.

It appears that state pre-K has increased the enrollment of students with special needs over the years, particularly for 4-year-olds. The enrollment of 4-year-olds who have IEPs increased by over 30,000 from 2008-2009 to 2011-2012. That enrollment in state pre-K has not changed much for 3-year-olds with special needs is not surprising, given that regular state pre-k services at that age have remained rare. There is some effort to prioritize enrolling children with special needs; of the 30 programs that use risk factors to determine eligibility, 70 percent reported in 2011-2012 that child developmental delay or disability was one of the risk factors.



The number of children with IEPs who are served in state-funded pre-K programs has also increased slightly as a proportion of total enrollment, as shown in Table 7. About 1 in 6 3-year-olds in state-funded pre-K has an IEP, as do nearly 1 in 10 4-year-olds. This raises two questions relating to the adequacy of those programs to meet children’s needs, given the low standards of many programs and the decline in funding per child over the decade. First, to what extent are children with special needs attending programs that do not serve them well, despite the additional services that might be provided by special education personnel? Second, to what extent are children with special needs not enrolled in state pre-K, but served separately, because state pre-K programs are inadequate to meet their needs?

**Table 7: Percent in State Pre-K with IEPs by Age**

Percent of Children with IEPs		
Year	3-year-olds	4-year-olds
<b>2008-2009</b>	16%	7%
<b>2009-2010</b>	12%	6%
<b>2010-2011</b>	16%	8%
<b>2011-2012</b>	17%	9%

### Progress Toward Educational Alignment

As state-funded pre-K has among its chief goals preparing young learners for school success, efforts to align early education with children’s later educational experiences in the elementary grades are important. Each year we have asked states whether they require their programs to provide “transition to K activities” (Table 8). States don’t provide specific details of what these

services involve, but the percent of states requiring transition services increased from 65 percent to 77 percent over the last decade.

**Table 8: Transition-to-Kindergarten Policies**

School Year	Percent with Required K-Transition Services
2002-2003	65%
2003-2004	70%
2005-2006	75%
2006-2007	73%
2007-2008	70%
2008-2009	76%
2009-2010	77%
2010-2011	78%
2011-2012	77%

Children in the United States move remarkably frequently across schools, districts, and even states. The educational desirability of educational alignment as children progress through school is one reason most states have adopted the Common Core Standards. Beginning with 2011-2012, NIEER asked programs to report the status of their early learning standards with respect to the Common Core standards. In that year, 19 programs (35%) reported their standards were aligned with the Common Core, 5 programs (9%) reported they were not, and 29 (54%) reported they were in the process of aligning their standards.

## CONCLUSIONS AND IMPLICATIONS FOR POLICY

The past decade of state pre-K policy in the United States has been characterized by both dramatic change and remarkable stability. Enrollment increased for 4-year-olds over the decade, doubling from 14 percent to 28 percent of the population. The federal Head Start program was for decades the most salient public support for preschool education, but it has been eclipsed by state-funded pre-K which now serves far more children, especially at age 4. In some states, preschool is virtually universal at age 4; 8 states and the District of Columbia serve the majority of 4-year-olds. Yet, there is tremendous variability across the states. Interstate inequalities have increased as some states moved forward toward serving all children, while others continue to offer no program at all. One aspect of pre-K policy that has been highly consistent over time, and varies surprisingly little among the states, is services to 3-year-olds. Enrollment at age 3 has changed very little, and what little enrollment growth occurred at this age may have been due to increased preschool special education enrollments.

Perhaps the most negative trend over the decade was the decline in state expenditure per child of more than \$1,100 adjusting for inflation, a decline of 23 percent. This is partly due to a long-term tendency to expand enrollment faster than expenditure, but the problem was exacerbated by the Great Recession. Half of the decline in state spending for pre-K took place in 2011-2012 after federal economic stimulus funds were largely gone. As state revenues recover, it will be important to track state progress in restoring pre-K funding to adequate levels. This poses a serious challenge because: it is likely to be some years before state revenues fully recover; states must repair other damage including pension fund payments and infrastructure repairs that were delayed; economic growth is likely to remain low by historical standards; and, rising costs in other areas, including health care, will continue to squeeze budgets.<sup>23</sup>

Despite the decline in funding per child, for most of the decade there was a strong trend toward improvement in developing and implementing early learning standards and moderate improvement in developing program quality standards generally. This trend continues with respect to early learning standards, which are being aligned with the Common Core in most states. Policymakers seem to recognize the need for continuity across the years. In the United States, disadvantaged children in particular have high mobility rates and it is difficult to provide them with educational continuity without some consistency in curriculum from place to place.<sup>24</sup> However, progress with respect to some more costly program standards stalled or was reversed during the recession.

Teacher and assistant teacher qualification requirements and compensation in state preschool programs remain low relative to other professions and compared to that in the public schools. There is considerable debate over the value of raising qualification requirements, with some arguing that this will have no effect on program effectiveness, and others arguing that highly qualified teachers are one key ingredient of a highly effective program.<sup>25</sup> Policymaker reluctance to raise qualifications is primarily due to cost. However, many state pre-K teachers already exceed the qualification requirements of their programs. Requiring a BA degree of all

teachers would affect relatively few teachers, and bringing all teachers up to that level might have only minimal impact on average per pupil cost.

However, simply raising teacher qualifications requirements without increasing compensation to more competitive levels is likely to fail to accomplish the ultimate goal of attracting and retaining high performing teachers. Providing teacher pay parity with K-12 education would address the underlying problem. How much would this cost? Just returning the per pupil expenditure to its level a decade ago would add about \$20,000 to pre-K teacher compensation per classroom. Considering that a preschool teacher earns \$27,450, compared to a Kindergarten teacher's \$50,380 salary<sup>26</sup>, this would be a crucial step in addressing the parity issue.

As state pre-K programs often are not equal partners in state education systems, and there is no overall federal responsibility of any kind for such programs, much of the data we expect to be available on education programs are not collected for pre-K. Most obviously, total public expenditures on such programs are unknown in many states. In addition, states often cannot report enrollment rates by family income, ethnicity, or language, making it difficult to evaluate the extent to which the most disadvantaged children have access to such programs.

Even from the limited data available, it is apparent that access to good preschool education is highly variable and unequal within and among states. Some groups who might benefit most from such programs have the least access, such as English language learners and Hispanic children. They are concentrated in states with particularly low standards and poorly qualified teachers, despite the greater difficulty of teaching such children well. The highly variable quality of state pre-K also creates problems for educating children alongside their more typically developing peers, as too few teachers are currently capable of providing the high quality education expected for children with special needs.

States invest in preschool education with the goal of enhancing the learning and development of young children, particularly the most disadvantaged. However, most of them have no way of knowing the extent to which they achieve this goal. Many states report conducting evaluations, but these are not always rigorous, and funding for monitoring and evaluation, tenuous in the best of times, was hurt by the recession. In some states, policymakers appear to believe that simply testing children at kindergarten entry (or, less often at entry to preschool, as well) provides a basis for assessing the program's quality and effectiveness. Unfortunately, while such data may be useful, estimating the program's contribution to learning and development is more complex and difficult than simply looking at test scores or test score gains.<sup>27</sup> Most states have very limited capacity to oversee and support program evaluation, and during the recession this capacity was reduced. This is a cause for serious concern.

As states recover from the lingering effects of the recession, some are already responding with increased investment in early education programs. Michigan is investing an additional \$65 million in its Great Start Readiness Program, which will more than make up for its relatively minor cuts to the program during the recession. Minnesota approved significant funds to expand pre-K opportunities as well as provide full-day kindergarten statewide. Mississippi will provide

state-funded pre-K for the first time in the 2014-2015 year, through a small though high-quality program approved this year, while neighboring Alabama will provide additional funds to offer pre-K to more children in its program. While many states are struggling just to regain ground to pre-recession spending and enrollment levels, these states demonstrate that it is possible to prioritize pre-K programs.

Having examined changes over the past decade, we cannot help but consider what preschool policy in the states might look like a decade further on. Simple extrapolation from the last decade would yield the following for the year 2020:

- State preschool programs would enroll 42 percent of 4-year-olds, but only 5% at age 3.
- All or nearly all state programs would require specialized training in early childhood for teachers, and that class size not exceed 20 children.
- About 75 percent would require all teachers to have a BA and obtain at least 15 hours of professional development annually.
- Barely half would conduct regular site visits to assess quality.
- Funding would be \$3,000 per child in today's dollars.

We do not expect the future to actually look like this, particularly because some states have lowered funding per child to the point that it is hard to see how it could get any lower. However, we would not be at all surprised to see a continuing tension between enrollment expansion and adequate funding to maintain quality and effectiveness. As states emerge from the Great Recession the nation is at an important turning point for pre-K. Policy decisions made over the next several years will determine whether this tension is eased and how much public pre-K looks like the scenario above, by 2020.

We noted above that some states have already begun to expand the provision of higher quality pre-K. We take this as a hopeful sign. In addition, the Obama administration recently proposed federal support for state-funded pre-K that addresses many of the concerns raised by our review. This plan's vision for 2020 is one in which the states serve at least half of all children at age 4 (those under 200% of the federal poverty line) in programs where all teachers have 4-year-college degrees with specialized training and receive regular coaching to improve their practice based on observation of their classrooms. Matching federal funds that tip the scale in favor of both increased enrollment and higher quality is an obvious strategy for reversing the negative trends of the past decade while leaving states in control of preschool education overall.

The history of state pre-K over the last decade suggests that a brighter future will require a change in state policies, with or without federal help. To substantially benefit children and the larger society, pre-K must be of high quality.<sup>28</sup> As discussed earlier, this may cost less than might be naively supposed, but it will cost more than many states spend now. Some permanent federal incentive in the form of funding children from low-income families served by high-quality pre-K could make this much more likely. Whether or not the federal government acts, it will remain in the nation's interest for states to not only reverse the course set in recent years but to also embark on an entirely new path toward better quality, more effective pre-K.

## APPENDIX ON SURVEY METHODS

For inclusion in the annual survey of the *State of Preschool Yearbook*, programs must meet the following criteria:

- The initiative is funded, controlled, and directed by the state.
- The initiative serves children of preschool age, usually ages 3 and/or 4. Although initiatives in some states serve broader age ranges, programs that serve *only* infants and toddlers are excluded.
- Early childhood education is the primary focus of the initiative. Programs that focus on parent work status or programs where child eligibility is tied to work status are also excluded.
- The initiative offers a group learning experience to children at least two days per week.
- State-funded preschool education initiatives must be distinct from the state's system for subsidized child care. However, preschool initiatives may be *coordinated* and *integrated* with the subsidy system for child care.
- The initiative is *not* primarily designed to serve children with disabilities, but services may be offered to children with disabilities.
- State supplements to the federal Head Start program are considered to constitute *de facto* state preschool programs if they substantially expand the number of children served, and if the state assumes some administrative responsibility for the program. State supplements to fund quality improvements, extended days, or other program enhancements, or to fund expanded enrollment only minimally, are not considered equivalent to a state preschool program.

Additionally, to be included in the *Yearbook*, a state-funded program must serve at least 1 percent of the state's 3- or 4-year-old population.

The data for the *Yearbook* were collected primarily through surveys of state preschool administrators. Each summer, administrators receive a survey asking for information for the most recently completed program year (e.g., in July 2012, respondents were asked about the 2011-2012 program year). In terms of topics, the survey includes questions on access, operating schedule, child eligibility and reassessment, program standards, statewide early learning standards, personnel, resources, program monitoring and evaluations, and policy changes relating to the program since the prior year. While questions are largely kept the same from year to year to produce comparable data, changes have been made from time to time to reduce ambiguities and clarify questions, remove questions for which states do not have data, and to address new policy developments and issues. After the surveys are completed, our staff follows up with state administrators to clarify their responses when they may be unclear and to verify significant changes in responses from the previous year. After all of the data have been processed and summarized, we contact state administrators again to provide them with an opportunity to verify the results as we will be reporting them. At that time, we ask them to review a table with all of the data from their state survey. All of the state administrators' responses to our survey, including answers to items not covered in the state profiles or this report, are

provided in each *Yearbook's* Appendix A.<sup>29</sup> While most information in the *Yearbooks* are obtained from the state administrator surveys, some information including as data on Head Start and special education is obtained from other sources (primarily federal government reports).<sup>30</sup>

## Endnotes

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<sup>1</sup>Snyder, T.D., and Dillow, S.A. (2012). *Digest of Education Statistics 2011* (NCES 2012-001). Table 57. National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC. Harms, T., Clifford, R., & Cryer, D. (1998). *Early Childhood Environment Rating Scale (Rev. ed.)*. New York: Teachers College Press.

<sup>2</sup>Burchinal, M., Vandergrift, N., Pianta, R., & Mashburn, A. (2010). Threshold analysis of association between child care quality and child outcomes for low-income children in pre-kindergarten programs. *Early Childhood Research Quarterly*, 25(2), 166-176.

<sup>3</sup> See for example Barnett, W. S., & Masse, L. N. (2007). Early childhood program design and economic returns: Comparative benefit-cost analysis of the Abecedarian program and policy implications, *Economics of Education Review*, 26, 113-125.

<sup>4</sup> There is considerable debate within the field regarding the value of requiring preschool teachers to have a BA degree. Some correlational studies find little association between teacher qualifications and children's test scores. This is true in educational research generally where many studies find that no measured characteristics of teachers or classrooms matter. The difference in findings between randomized trials and correlational studies regarding class size, suggests that such correlational studies should not be viewed as dispositive. We give greater weight to the fact that the preschool programs producing educational large gains in randomized trials and other highly have all employed highly educated teachers. This does not mean that the degree per se matters, as degrees can vary greatly in what they represent, and teacher degree quality is likely related to other factors including compensation. Zigler, E., Gilliam, W., & Barnett, W.S. (2011). *The pre-K debates: Current controversies and issues*. Baltimore: Brookes.

<sup>5</sup> Based on a review of the evidence, a committee of the National Research Council recommended that preschool teachers have a BA with specialization in early childhood education. Bowman, B.T., Donovan, M.S., & Burns, M.S. (Eds.). (2001). *Eager to learn: Educating our preschoolers*. Washington, DC: National Academy Press. Burchinal, M.R., Cryer, D., Clifford, R.M., & Howes, C. (2002). Caregiver training and classroom quality in child care centers. *Applied Developmental Science*, 6, 2-11. Barnett, W.S. (2003). Better teachers, better preschools: Student achievement linked to teacher qualifications. *Preschool Policy Matters*, 2. New Brunswick, NJ: National Institute for Early Education Research. Whitebook, M., Howes, C., & Phillips, D. (1989). *Who cares? Child care teachers and the quality of care in America* (Final report on the National Child Care Staffing Study). Oakland, CA: Child Care Employee Project.

<sup>6</sup> Preschool classrooms typically are taught by a team of a teacher and an assistant. Research focusing specifically on the qualifications of assistant teachers is rare, but the available evidence points to a

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relationship between assistant teacher qualifications and teaching quality. There is much evidence on the educational importance of the qualifications of teaching staff generally. Bowman, Donovan, & Burns (2001). Burchinal, Cryer, Clifford, & Howes (2002). Barnett (2003). Whitebook, Howes, & Phillips (1989). The CDA has been recommended to prepare assistant teachers who are beginning a career path to become teachers rather than permanent assistants. Kagan, S.L., & Cohen, N.E. (1997). *Not by chance: Creating an early care and education system for America's children* [Abridged report]. New Haven, CT: Bush Center in Child Development and Social Policy, Yale University.

<sup>7</sup> Good teachers are actively engaged in their continuing professional development. Bowman, Donovan, & Burns (2001). Frede, E.C. (1998). Preschool program quality in programs for children in poverty. In W.S. Barnett & S.S. Boocock (Eds.). (1998). *Early care and education for children in poverty: Promises, programs, and long-term results* (pp. 77-98). Albany, NY: SUNY Press. Whitebook, Howes, & Phillips (1989) found that teachers receiving more than 15 hours of training were more appropriate, positive, and engaged with children in their teaching practices.

<sup>8</sup> The importance of class size has been demonstrated for both preschool and kindergarten. A class size of 20 children is larger than the class size shown in many programs to produce large gains for disadvantaged children. Barnett, W.S. (1998). Long-term effects on cognitive development and school success. In W.S. Barnett & S.S. Boocock (Eds.). (1998). *Early care and education for children in poverty: Promises, programs, and long-term results* (pp. 11-44). Albany, NY: SUNY Press. Bowman, Donovan, & Burns (2001). Finn, J.D. (2002). Class-size reduction in grades K-3. In A. Molnar (Ed.). (2002). *School reform proposals: The research evidence* (pp. 27-48). Greenwich, CT: Information Age Publishing. Frede (1998). NICHD Early Child Care Research Network (1999). Child outcomes when child care center classes meet recommended standards for quality. *American Journal of Public Health, 89*, 1072-1077. National Association for the Education of Young Children (2005). *NAEYC early childhood program standards and accreditation criteria*. Washington, DC: Author.

<sup>9</sup> A large literature establishes linkages between staff-child ratio, program quality, and child outcomes. A ratio of 1:10 allows more children per teacher than in programs that have demonstrated large gains in disadvantaged children and is the lowest (fewest number of children per teacher) generally accepted by professional opinion. Barnett (1998). Bowman, Donovan, & Burns (2001). Frede (1998). NICHD Early Child Care Research Network (1999). National Association for the Education of Young Children (2005). 10 National Education Goals Panel (1991). *The Goal 1 Technical Planning Subgroup report on school readiness*. Washington, DC: Author.

<sup>11</sup> Early identification of disabilities and other developmental problems is necessary to provide appropriate early intervention. As the most important people in their children's lives, it is essential that programs involve parents in their children's early education. Guralnick, M. J. (2001). A developmental systems model for early intervention. *Infants & Young Children, 14*(2), 1-18.

<sup>12</sup> Good nutrition contributes to healthy brain development and children's learning. Shonkoff, J.P., & Phillips, D.A. (Eds.). (2000). *From neurons to neighborhoods: The science of early childhood*

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*development*. Washington, DC: National Academy Press. The most obvious benefit of providing a meal in programs often targeting children in poverty is that a meal reduces hunger.

<sup>13</sup> States that do not monitor quality have limited ability to assure that standards are followed or to design and provide supports for quality improvement. Classroom observation has been an important part of successful continuous improvement policy. Frede, E.C., Gilliam, W.S., & Schweinhart, L. J. (2011). Assessing accountability and ensuring continuous improvement: Why, how, who. In Zigler, E., Gilliam, W., & Barnett, W.S. (2011). *The pre-K debates: Current controversies and issues* (pp. 152-159). Baltimore: Brookes.

<sup>14</sup> Barnett, W.S., Carolan, M.E., Fitzgerald, J., & Squires, J.H. (2012). *The state of preschool 2012: State preschool Yearbook*. New Brunswick, NJ: National Institute for Early Education Research.

<sup>15</sup> Gault, B., Mitchell, A., & Williams, E. (2008). Meaningful Investments in Pre-K: Estimating the Per-Child Costs of Quality Programs. Washington, DC: Institute for Women's Policy Research.

<sup>16</sup> Occupational Employment and Wages, May 2009. Bureau of Labor Statistics 25-2011, 25-2012, 25-2021. <http://www.bls.gov/oes/2009/may/oes252011.htm> <http://www.bls.gov/oes/2009/may/oes252012.htm> <http://www.bls.gov/oes/2009/may/oes252021.htm>

<sup>17</sup> Figueras-Daniel, A. & Barnett, W.S. (2013). Preparing young Hispanic dual language learners for a knowledge economy. New Brunswick, N.J: National Institute for Early Education Research.

<sup>18</sup> Figueras-Daniel & Barnett, 2013.

<sup>19</sup> Figueras-Daniel & Barnett, 2013.

<sup>20</sup> Figueras-Daniel & Barnett, 2013.

<sup>21</sup> Figueras-Daniel & Barnett, 2013.

<sup>22</sup> Phillips, D.A. and Meloy, M.E.C. (2012). High-quality school-based pre-K can boost early learning for children with special needs. *Exceptional Children*, 471-490.

<sup>23</sup> Congressional Budget Office (2013). *The budget and economic outlook: Fiscal Years 2013-2023*. Washington, DC: CBO. <http://www.cbo.gov/publication/43907>

U.S. Government Accountability Office (2013). *State and local governments' fiscal outlook. April 2013 update*. Washington, DC: USGAO. <http://www.gao.gov/assets/660/654255.pdf>

National Governors Association and National Association of State Budget Officers (2013). *The fiscal survey of the states: Spring 2013*. Washington, DC: NASBO.

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<sup>24</sup> Rumberger, R.W. (2003). The causes and consequences of student mobility. *Journal of Negro Education*, 72(1), 6-21

<sup>25</sup> Zigler, E., Barnett, W. S., & Gilliam, W. (Eds.) (2011). *The Pre-K Debates: Current Controversies and Issues*. Baltimore: Brookes Publishing.

<sup>26</sup> Occupational Employment and Wages, May 2009. Bureau of Labor Statistics 25-2011, 25-2012, 25-2021. <http://www.bls.gov/oes/2009/may/oes252011.htm> <http://www.bls.gov/oes/2009/may/oes252012.htm>

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<http://www.bls.gov/oes/2009/may/oes252021.htm>

<sup>27</sup>Epstein, A.S., Schweinhart, L.J., DeBruin-Parecki, A., & Robin, K.B. (2004). *Preschool assessment: A guide to developing a balanced approach* (NIEER Policy Brief, Issue 7). New Brunswick, NJ: NIEER.

<sup>28</sup>Burchinal et al., 2010; Barnett, W.S. (2011). Effectiveness of early educational intervention. *Science*, 333, 975–978.

<sup>29</sup> Full *Yearbook* Appendices are available online only and can be accessed at

<http://www.nieer.org/Yearbook>.

<sup>30</sup> For a full explanation of the specific methodology used in collecting all data, please see the Methodology section of the 2012 report online at

[http://www.nieer.org/sites/nieer/files/Yearbook2012\\_methodology.pdf](http://www.nieer.org/sites/nieer/files/Yearbook2012_methodology.pdf).