

NEW AMERICA FOUNDATION

EARLY EDUCATION INITIATIVE

Issue Brief #4

October 19, 2006

TEACHER QUALITY IN GRADES PK-3: CHALLENGES AND OPTIONS

By Justin King and Lindsey Luebchow*

EXECUTIVE SUMMARY

1) The PK-3 Workforce is Subject to an Array of Entry Standards. Public school teachers in grades K-3 must meet the quality standards of the No Child Left Behind Act of 2001 (NCLB). Pre-kindergarten (PK) teachers in Title I-funded programs also are regulated by NCLB. But Head Start teachers have their own separate entry standards. In some state PK programs, all teachers must possess a bachelor's degree and have engaged in additional early childhood or PK-3 training. In others, only a Child Development Associate certificate is required.

2) There are Approximately 1.5 Million Teachers in the PK-3 Workforce. New America estimates that some 80 percent of the overall PK-3 teaching workforce holds a bachelor's degree. Only 39 percent of *PK teachers*, however, hold a four-year degree in comparison to almost all K-3 teachers. Of note, three out of four state-funded PK program teachers hold a bachelor's degree. Elementary school teachers are paid more than double their PK counterparts (\$47,000 v. \$23,000 per year), except those in state-funded PK programs who, in keeping with their comparable credentials, are paid salaries comparable to, but still lower than, their elementary school counterparts. PK-3 teacher turnover rates are inversely related to salary.

3) Pre-Service and In-Service Training Standards for PK-3 Educators Vary Considerably Across States and Programs. The National Association for the Education of Young Children sets standards for early childhood teacher education programs. However, not all colleges of education meet or are required to meet applicable standards. In fact, colleges of education have limited capacity to offer quality PK-3 teacher training programs. Substantial federal funding exists for in-service Head Start and K-3 training, but surveys suggest that states pay little systematic attention to in-service training quality or content in K-3 education. Instead there is an emphasis on participation hours.

Recommended is that NCLB Title V funding be dedicated to early education expansion, conditioned on an assurance that all publicly supported PK-3 lead teachers meet a new "highly qualified early educator" standard. Competency may be evidenced through completion of a four-year early childhood education post-secondary program or by passing a new, national "high, objective, uniform standard of evaluation" that is a performance-based measure of knowledge, skills and disposition.

Recommended is that over a phased-in period of time, Head Start's minimum teacher quality standards be aligned with a new, NCLB "highly qualified early educator" definition. A portion of Head Start's increased future appropriations should be dedicated toward improved Head Start educator quality and pay.

Recommended is that Title II of the Higher Education Act (HEA) be targeted to support integrated PK-3 teacher preparation and certification programs. Further recommended is that HEA's college of education accountability standard be revised to reflect the percentage of students who begin and complete programs, including improved disaggregation of certification data, such as PK-3 certification success.

Recommended is that Title II of NCLB expressly authorize and encourage integration of PK and K-3 in-service training and alternative certification pathways for non-traditional early educators, including for example new college graduates who might participate in a Teach for America Early Childhood Initiative or similar local efforts.

* Justin King is a Senior Policy Analyst with the Education Policy Program at the New America Foundation. Lindsey Luebchow is a Research Associate with New America's Early Education Initiative. This report was funded through a generous grant from the Foundation for Child Development. The opinions expressed herein are those of the authors and do not necessarily reflect the views of the Foundation for Child Development.

PK-3 TEACHER QUALITY STANDARDS

The pre-kindergarten (PK) through third grade early education workforce is subject to a wide array of qualification or entry standards. These standards depend on whether a relevant program serves PK or elementary school children and whether it is funded by the federal government, state government, or privately. All public school teachers in grades kindergarten through three (K-3) must meet the quality standards of the No Child Left Behind Act of 2001 (NCLB).¹ Likewise, the qualifications of PK teachers in NCLB Title I-funded PK programs are regulated by NCLB.² But Head Start teachers, governed by separate legislation, need not meet NCLB's teacher quality requirements.³ In some state programs, all early educators must have earned a bachelor's degree and engaged in additional early childhood or PK-3 training. Others require only a Child Development Associate (CDA) certificate.⁴ A majority of states require no more of private center program PK teachers than having earned a simple high school diploma.⁵

Defining the PK-3 workforce is a difficult task given the vast number and types of environments, programs, and teachers for young children. For the purposes of this paper, the PK-3 workforce is comprised of early educators who teach children ages three to eight and in programs that are school-based or focused on improving school readiness of children. Examples include teachers in kindergarten, first, second or third grade, Head Start and state-funded PK programs. Privately funded PK programs may also qualify. Though a private program may be center-based, such a program may very well serve as a child care center and not a PK program. It is important to note that many data sources do not make this distinction.

NCLB Early Education Teacher Quality Standards

NCLB constitutes the federal government's first broad attempt to regulate teacher quality. But it does not regulate teacher quality in most PK programs, nor does it require integrated PK-3 training of early educators. This is to be expected, as federal and state policy makers have traditionally viewed PK experiences separately from K-12 education.

NCLB requires that all K-12 teachers of core academic subjects be "highly qualified" by the end of the 2005–2006 school year.⁶ According to the statute, highly qualified teachers are those who:

- (1) have earned a bachelor's degree,
- (2) are fully licensed or certified by the state, and
- (3) are competent in every core academic subject that they teach.

States determine whether competency has been demonstrated in two key ways. Teachers may be deemed competent if they have completed an undergraduate major degree program in the relevant core academic subject taught. Alternatively, teachers may be deemed competent if they have passed a state test or "High, Objective, Uniform State Standard of Evaluation" (HOUSSE) for the relevant subject taught. Each state develops its own standards for HOUSSE assessments, which require different combinations of subject knowledge, teaching experience, and professional development. Current teachers can use the HOUSSE alternative to demonstrate competence in a subject area without having to take a test or undergo additional training.⁷

NCLB funding is contingent upon states submitting an annual report, detailing the qualifications of its teachers and progress made toward ensuring a 100 percent highly qualified teacher workforce.⁸ NCLB, however, does not require states to include PK teachers when calculating teacher quality statistics, unless "[the] state includes early childhood [education] or pre-kindergarten as part of its elementary and secondary school system."⁹ Irrespective of state law, if a local school district chooses to use NCLB funding for a local program, then that school district's relevant PK teachers are subject to the law's general teacher quality requirements.

Of note, NCLB's teacher quality standard does not address what is meant by core academic subject for early childhood educators. Essentially, NCLB is silent on the specifics of PK educator quality, and does not begin to address successful integration of PK and elementary school teacher quality standards. As a result, NCLB provides no assurance that all early educators have the necessary knowledge and skills to engage children from PK through grade 3.

State, Head Start, and Private Program Early Education Teacher Quality Standards

State-funded PK programs not subject to NCLB standards have a range of minimum training requirements. Requirements vary across states and even within some states that fund more than one PK program. In certain states, such as Arizona, Colorado, and Virginia, only a CDA certificate is required. In others, such as Illinois, Maryland and Texas, a bachelor's degree in early childhood education or a related field is required.

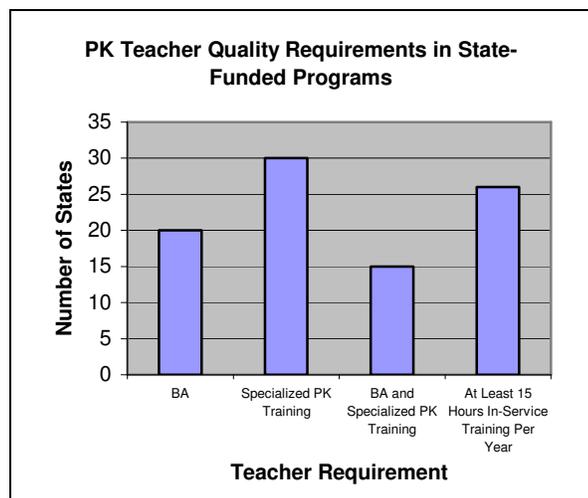
A “Child Development Associate” (CDA) certificate requires:

- 120 hours of classroom training in early education;
- 480 hours of direct experience with young children; and
- demonstrated proficiency in early childhood education as per a performance-based assessment.

A CDA performance-based assessment consists of a written and oral examination and required competency portfolio, including feedback from supervisors and parents.

Of 38 states with PK initiatives in 2004–2005, 15 required a bachelor’s degree and specialized training in early childhood education as prerequisites for teachers in a state-funded PK program.¹⁰ The remaining states required lesser qualifications.¹¹

Head Start programs have lower teacher quality requirements than state programs with the highest PK teacher entry standards. Head Start’s reauthorization in 1998 required that at least half of Head Start teachers nationwide have at a minimum an associate’s degree in early childhood education or a related field by September 30, 2003.¹² Head Start met that mandate.¹³ In 2005, 69 percent of Head Start teachers held at least an associate’s degree, an increase from 34 percent in 1997.¹⁴ But the minimum credential for Head Start teachers remains a CDA certificate.



Adapted from NIEER 2005 State Preschool Yearbook¹⁵

For privately supported early childhood programs, a majority of states have no teacher quality entry requirements, even for PK teachers in licensed centers. In these states, each private center sets its own standards for teachers. In a minority of other states, a minimum

requirement for employment must be met in order to obtain licensure.¹⁶

In 2003, only 18 states had education requirements for PK teachers in licensed private programs. Four of those required only a specific number of clock hours of training and no specific early childhood education coursework.¹⁷ Most states simply required a high school diploma of private PK educators.¹⁸ There are a few states with higher standards: California and Wisconsin required some college coursework, while Delaware, Massachusetts, Michigan and New Hampshire required completion of a vocational child care program.¹⁹ But these states constitute rare exceptions. Private programs in all states are free to exceed the minimum state standards; however, the cost of employing higher-credentialed individuals is not insignificant and is a major factor in the current wage disparity between PK and K-3 educators.²⁰

THE PK-3 EARLY EDUCATOR WORKFORCE

Corresponding with the pattern of varying entry requirements, the early educator workforce also varies widely in size, training, salary levels, and stability. K-3 public school teachers represent the largest segment of the early educator workforce. In contrast, the large majority of the PK workforce is employed in private programs, although the number of PK teachers in state-funded programs is growing. PK teachers have a more diverse demographic profile than K-3 teachers, with Head Start employing the most diverse workforce.

Public school K-3 teachers have the highest average levels of education in the early educator workforce. State-funded PK programs tend to employ the best-educated early educator workforce outside of K-3 teachers, while teachers in Head Start and private programs are much less likely to hold a four-year degree. Of the approximate 305,000 current PK teachers who do not possess a four-year degree, 80 percent staff private PK programs.

Compensation levels for early educators in state-funded PK programs are lower than K-3 teacher compensation levels. Head Start and private programs lag further behind in wages and benefits. The provision of generally higher wages and benefits to teachers in state-funded PK programs has helped keep teacher turnover at levels similar to the K-12 workforce. Early educator workforce instability is most pronounced in private programs.

PK-3 Workforce Size

Statistics on the K-3 workforce are often hard to separate from general data on elementary school teachers. In 2005, 161,690 kindergarten teachers were employed in public elementary schools and 1,466,440 teachers were employed in grades 1 through 5.²¹ If equal numbers of teachers were employed at each grade level, approximately 1,029,500 teachers staffed grades K-3.²² Public K-3 teachers serve almost 16 million children.²³

From 2001 to 2004, the student population enrolled in state-funded PK programs increased by 16 percent, reaching more than 800,000 students in the 2004–2005 school year.²⁴ When staff to child ratios and the enrollment numbers in each state program are considered, the New America Foundation estimates approximately 94,500 teachers staffed state PK programs in 2004–2005.²⁵

There were 48,512 Head Start classrooms in 2001–2002, a number that increased slightly to 49,235 classrooms in 2004–2005.²⁶ Almost 900,000 children are enrolled in Head Start each year.²⁷ The Head Start Bureau does not publish statistics on the number of teachers employed by the program, but the National Institute for Early Education Research (NIEER) has estimated the number of Head Start teachers to be around 50,000 in recent years.²⁸

Early childhood educators working in private programs are difficult to track with certainty given the absence of infrastructure in the field. Private program statistics often include both child care centers and PK programs. A 2004 study, however, estimated that 352,447 teachers were working in private early childhood centers.²⁹ Approximately 4.8 million children ages three to five were enrolled in center-based programs in 2001.³⁰

In sum, the New America Foundation estimates the PK-3 teacher workforce to number approximately 1.5 million when considering public K-3 teachers, state-funded PK program teachers, Head Start teachers, and private center-based PK teachers.

Demographics

K-3 public school teachers are predominantly female and white. A 2001 National Education Association survey found that 90 percent of public school teachers were white, five percent were African-American, and five percent reported being of Hispanic origin.³¹ The demographic profile of kindergarten teachers is even less diverse: in 1998, 98 percent were female and 98 percent were white.³²

Although PK teachers are also overwhelmingly female, the PK workforce is more diverse than the K-3 workforce. In state PK programs, 62 percent of PK teachers are white, 17 percent are African-American, and 10 percent are Hispanic.³³ The Head Start teacher demographic is even more varied: 47.5 percent of Head Start teachers are white, 35 percent are African-American, and 6.4 percent are Hispanic.³⁴ While there is little comprehensive demographic information on the private PK workforce, a study led by Gitanjali Saluja of the National Institute for Child Health and Human Development estimated that teachers in private non-profit, religious, and for-profit programs are approximately 80 percent white, 5 to 10 percent African-American, and 3 to 8 percent Hispanic teachers.³⁵ The PK workforce is more reflective than the K-3 workforce of the population of children ages three to

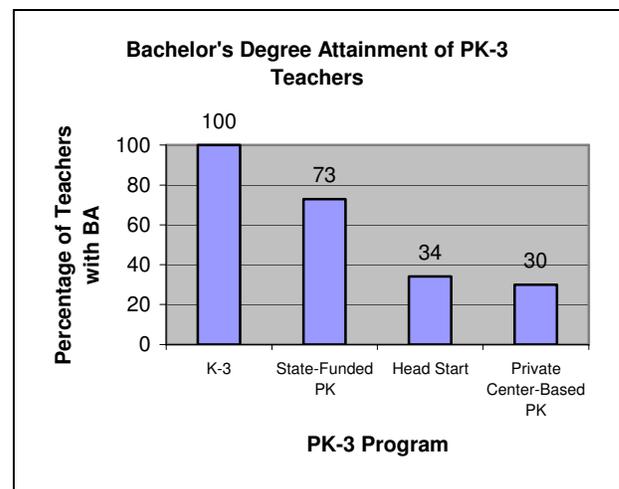
eight, which is approximately 65 percent white, 13 percent black, and 18 percent Hispanic.³⁶

Educational Attainment

Virtually all K-3 teachers have complied with the NCLB teacher quality provision requiring teachers to have earned a bachelor's degree. Of public elementary school teachers, 40 percent have earned a master's degree and 1 percent have earned a doctorate.³⁷

In 2004, 73 percent of teachers in state-funded PK programs held at least a bachelor's degree. Of teachers without a bachelor's degree, approximately half had earned an associate's degree whereas half had only completed high school.³⁸

Head Start still lags behind state PK and K-3 programs in the employment of teachers with a four-year degree. In 2004, only 34 percent of Head Start teachers held a bachelor's degree.³⁹ National figures, however, mask regional variation in Head Start teacher degree levels. Less than 50 percent of teachers in 2002 held an associate's degree in three Head Start regions located in the South and Midwest, with one region at only 40 percent. In the region with the most highly educated workforce (Region 2—which includes New Jersey, New York, Puerto Rico and the Virgin Islands), 76 percent of Head Start teachers held an associate's degree.⁴⁰



Adapted from various sources⁴¹

Of note, private center-based programs have experienced a *decline* in the educational attainment of their teachers. Approximately 30 percent of private PK program teachers held a four-year college degree or higher in 2004, a decline from 43 percent in 1983.⁴² Only 25 percent of younger teachers, ages 26 to 36, held a degree in comparison to 36 percent of teachers ages 40 to 50, and 43 percent of teachers over 50.⁴³

In sum, the New America Foundation estimates that approximately 80 percent of the current PK-3 teaching workforce holds a bachelor's degree. Of PK teachers in

particular, 39 percent of the PK teaching workforce holds a four-year degree. Approximately 305,000 current PK teachers do not possess a bachelor's degree. Some 80 percent of those teachers staff private PK programs.

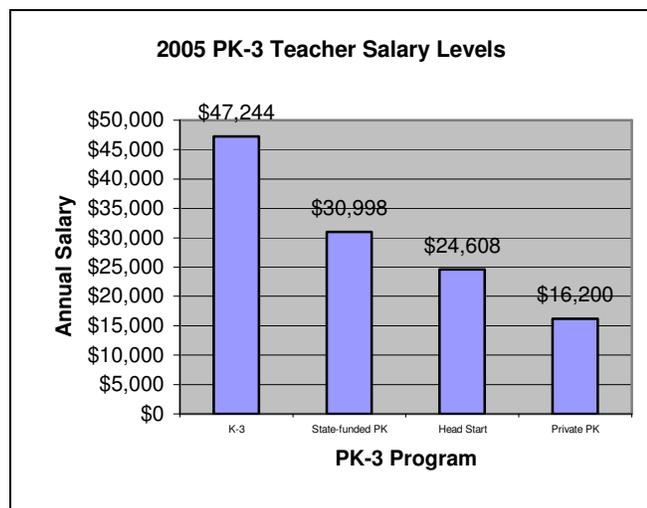
Salary Levels

In 2005, the median salary for elementary school teachers was \$47,203, comparable to the median salary for kindergarten teachers, which was \$47,285.⁴⁴ In state PK programs, teachers worked an average of 36.8 hours a week at a median hourly wage of \$19.18 per hour, which equated to a median salary of \$30,998.⁴⁵

Head Start and private programs offer much lower compensation levels on average than K-3 and state PK positions, particularly those formally linked to public schools. The average salary of Head Start teachers was only \$24,608 in 2005. Head Start teachers with a bachelor's degree earned only \$26,522 on average.⁴⁶ Wages have been increasing slightly over time for Head Start teachers: the current average salary has risen from \$21,287 in 2001 but remains comparable to the \$24,211 average in 2004.⁴⁷

Private center-based teachers earned a median wage of only \$10 per hour in 2004.⁴⁸ If private PK teachers work similar hours to state-funded PK teachers, an average of 36.8 hours a week for 44 weeks a year, their median annual salary would be approximately \$16,200.

One recent study by the Economic Policy Institute took into account the highly female nature of the early education workforce and compared those earnings to the average earnings of female college graduates (\$19.23 per hour in 2004).⁴⁹ Compensation levels for teachers in private centers have not improved at rates equivalent to those of the rest of the female workforce. In 1983, their median wage was 55 percent of female college graduates' median wage; in 2004, it had decreased to 52 percent.⁵⁰



Adapted from various sources⁵¹

Turnover

Teacher turnover for the K-12 workforce averaged 16 percent between the 1999–2000 and 2000–2001 school years. This includes the 8 percent of teachers that transferred to a different school and the 8 percent of teachers that left the teaching profession.⁵²

The 2002 Center for the Childcare Workforce (CCW) study surveying five states found that annual turnover in state-funded PK programs averaged 12 percent, ranging from a low of 4 percent in California to a high of 24 percent in Texas.⁵³

In 2004, the Head Start teacher annual turnover rate equaled 15 percent. Of teachers who left Head Start in 2004, 28 percent report they left for other early childhood education jobs with better compensation and benefits, while fewer—20 percent—left for another occupational field.⁵⁴

The 2002 CCW study also found that private program annual turnover averaged 29 percent.⁵⁵ According to CCW, the private PK system is serving as a training ground for unqualified teachers who use private programs to become qualified and later move into public programs.⁵⁶ As class size is reduced in K-3 elementary schools and more early childhood-trained teachers are needed in both K-3 and state-funded PK programs, teacher instability in private programs may grow in the coming years.

PK-3 EARLY EDUCATORS: PRE-SERVICE PREPARATION & IN-SERVICE TRAINING

There are two ways that early childhood educators develop the knowledge and skills they need to work with young children: through pre-service education (i.e. before a future teacher enters the field) and in-service training (i.e. continuing education for teachers working in the field). Pre-service preparation includes coursework and clinical internships toward a degree in early childhood education. Examples of in-service training opportunities include education toward the CDA credential, conferences, workshops, other coursework at institutions of higher education, instructional supervision and mentoring.

CURRENT STATE OF PRE-SERVICE PROFESSIONAL PREPARATION

It appears the pre-service preparation programs chosen by early education candidates are affected by the hiring standards of programs that employ PK-3 teachers, as well as other issues, including affordability and prior work experience. Differing expectations of employers lead candidates to pursue varied pre-service experiences. Reflecting the many options for future early educators, Title II of the Higher Education Act of 1965 (HEA)

provides federal funding for a variety of early education pre-service activities.

Funding Support for Pre-Service Professional Preparation

Under Title II of HEA, states and partnerships of local education agencies and institutions of higher education compete for \$60 million a year in “Teacher Quality Enhancement Grants.”⁵⁷ State grants can be used for activities, such as implementing institution of higher education teacher preparation accountability systems or improving teacher certification requirements. Partnerships can use funds for scholarships that recruit high-quality teachers to teach at high-poverty schools or in-service professional development activities. Title II of HEA specifically provides that partnerships can include PK programs, but does not require their inclusion or integrated PK-3 professional preparation.

In addition to targeting teacher preparation program quality, Title IV of HEA provides over \$200 million a year in student loan forgiveness to students who become full-time teachers at low-income schools or in subject areas such as special education, math, science, foreign language, and bilingual education.⁵⁸ Up to 100 percent of Perkins loan debt may be forgiven over five years.⁵⁹ Stafford loan forgiveness requires five years of full-time teaching after which time the government will forgive up to \$5,000 for teachers in low-income schools, and up to \$17,500 for math, science, and special education teachers in low-income schools.⁶⁰ Head Start staff members are eligible for loan forgiveness as well, but PK teachers are eligible only if the state identifies the PK program as part of its elementary education system.⁶¹

Pre-Service Professional Preparation of PK-3 Teachers

For pre-service professional preparation provided by institutions of higher education, there are national standards meant to ensure a consistent level of quality: The National Association for the Education of Young Children (NAEYC) developed pre-service standards, revised in 2001, which professional preparation programs in institutions of higher education must meet in order to become accredited. NAEYC’s assessment system is performance-based and peer-reviewed.

NAEYC’s and the National Board for Professional Teaching Standards’ (NBPTS) pre-service standards are focused on teacher knowledge, skills, and dispositions. NAEYC’s standards emphasize five areas: knowledge of child development, understanding and valuing family and community relationships, using assessment responsibly, knowing how to teach young children, and professional responsibility. NBPTS’ PK-3 standards include understanding children’s backgrounds and learning how to integrate the curriculum across disciplines.⁶²

NAEYC accredits associate’s, bachelor’s and graduate degree programs. In Spring 2006, NAEYC launched the

first accrediting body for early childhood education associate’s degree programs. As of October 1, 2006, there were five accredited associate degree programs.⁶³ The number is expected to rise as programs apply for accreditation.

At the bachelor’s and graduate degree level, NAEYC collaborates with the National Council for the Accreditation of Teacher Education (NCATE) to recognize and accredit programs. NAEYC and NCATE jointly determine whether programs and institutions deserve accreditation. In recent years, nearly 225 bachelor’s and graduate degree programs, approximately 60 percent of those that applied for accreditation, were found to meet all necessary standards.⁶⁴

NAEYC’s and NBPTS’s standards appear to represent a desirable, high-standard for teacher quality. Researchers at the National Center for Early Development and Learning have found for example that “children made academic gains in classrooms where the teacher engaged them in interactions that encouraged communication and reasoning, was sensitive and responsive in her or his interactions with children, and constructed an atmosphere of respect, encouragement, and enthusiasm for learning.”⁶⁵

Separate from voluntary PK pre-service preparation standards, NCLB attempted to bring a measure of uniformity to the pre-service preparation process for K-3 educators by establishing a “highly qualified teacher” definition. But a flexible statutory definition and lax Department of Education implementation have undermined the goal. NCLB and the Department allow states to use “high objective uniform state standards of evaluation,” or HOUSSSE assessments, to determine competency. States have embraced low HOUSSSE standards in order to expand their pools of “high-quality” teachers.⁶⁶ In 2004, 39 states had approved a HOUSSSE plan. An assessment by the National Council on Teacher Quality assigned a grade of “C” or lower to 30 of the state plans based on their poor quality and low rigor.⁶⁷

Capacity of Colleges of Education to Train PK-3 Early Educators

There is reason to suspect the quality and capacity of colleges of education in general. Numerous reports have documented the low quality of schools of education.⁶⁸ A recent study by Arthur Levine, President of the Woodrow Wilson National Fellowship Foundation, for example, found colleges of education have low standards for admission and graduation. The verbal and quantitative GRE scores for college graduates entering elementary education programs between 2001 and 2004 were 96 points below the national mean. Levine also found that teacher candidates’ clinical experience is limited and not well incorporated into coursework requirements. Of 15,468 teacher education alumni surveyed in the study, 76

percent had only one semester or less of student teaching experience.⁶⁹

Diane Early and Pam Winton from the National Center for Early Development and Learning (NCEDL) conducted a national survey of over 1,200 colleges of education that reported housing early childhood teacher preparation programs. Early and Winton found that early childhood programs had a 60 percent higher student to full-time faculty ratio than parent institutions of higher education. In addition, 54 percent of the faculty at early childhood programs was part-time, in comparison to 45 percent of the faculty at the parent institutions.⁷⁰ While most institutions had associate's degree tracks, only 40 percent offered a bachelor's degree in the early childhood field.⁷¹

Once they enter the classroom, early educators report a lack of preparation in specific areas as well. In a study of New Jersey's state-funded PK program, for example, over half of early educators reported that they did not feel adequately trained to work with limited English-proficient or special needs children.⁷² In the 2004–2005 school year, 14 percent of K-12 students were limited English-proficient (LEP) in *Abbott* districts.⁷³ Approximately 8 percent of students in *Abbott* PK programs had individual education plans.⁷⁴

College of education accountability outcome measures are more disheartening than input indicators. In general, the college of education accountability system operated by Title II of HEA is widely recognized as ineffective. The 2005 Teacher Quality Report from the Secretary of Education notes that Title II of HEA required reporting of “pass rates” continues to be an unreliable indicator of the quality of teacher preparation programs. According to the Secretary's report, the minimum passing score is often set lower than the national median score.⁷⁵ The current national pass rate is 95 percent.⁷⁶ Of more than 1,300 teacher preparation schools in the U.S. in 2004, only 20 were identified as “at risk of being low performing” or “low performing,” according to the Title II of HEA accountability standard.⁷⁷

Other Educational Pathways For PK Teachers

There are a variety of opportunities for PK teachers to undergo pre-service professional preparation outside of four-year colleges of education. Two-year community colleges offer early childhood classes toward an associate's degree or CDA certificate. Specialized education schools provide options such as graduate-level programs in early childhood development. Universities also have departments of child and family development that prepare students to teach in PK programs. The University of Georgia, for example, offers undergraduate and graduate degrees in child and family development that qualify students to enter PK classrooms.

Early educators are often non-traditional learners and two-year community colleges can be an appealing starting

point for them because they offer more for-credit coursework options, flexible locations and class times, and lower tuition.⁷⁸ However, articulation agreements for early education programs across two-year and four-year institutions are for the most part poorly-developed.⁷⁹ This makes the transfer process difficult and can prevent early educators from receiving credit for previous classes. The lack of articulation discourages movement from CDA or associate's level programs to bachelor's programs.⁸⁰

In summary, several professional organizations have developed pre-service professional preparation standards that are valuable for identifying effective teacher skills. NAEYC's accreditation process has been successful in identifying high-quality early childhood teacher preparation programs. The federal government's attempt to regulate pre-service professional preparation through NCLB did not succeed in standardizing quality across states. Nationally, early educators would benefit from more flexible, high-quality pre-service training opportunities. Finally, many colleges of education are not accredited and cannot be certified as offering students high-quality professional preparation, adequate degree options, or early education courses that prepare them for the challenges posed by diverse classroom settings.

CURRENT STATE OF IN-SERVICE TRAINING

Significant federal funding for in-service professional development is available through Title II of NCLB for teachers in K-12. Head Start and some states provide funding for in-service training, often towards reaching higher education childhood degree requirements. Yet despite substantial funding, research on professional development is often not put into practice by states. Surveys show there is a greater emphasis on hours served than quality or content.⁸¹ Head Start has been the most successful in providing its teachers with effective high-quality in-service training opportunities.⁸²

Funding Support for In-Service Training

Title II of NCLB makes available to states and local school districts over \$3 billion in funding each year for in-service training. Recipients have virtually unlimited flexibility in their use of funds. Title II of NCLB does not specify whether education agencies or agency-higher education institution partnerships can or must include PK teachers in training activities, much less that training be integrated for educators PK through grade 3.

There is a small amount of dedicated NCLB funding for in-service training of early educators. Subpart 5 of Title II, Part A of NCLB, championed by Senator Chris Dodd (D-CT), authorizes specific teacher training programs, including one for early childhood educator professional development. In fiscal year 2006, the program awarded \$15 million in competitive grants to partnerships that included state and local education agencies, Head Start agencies, institutions of higher education, and other

organizations with experience in early education pre-service training. Grantees used funds for a range of professional development activities that specifically support early childhood educators in high-poverty communities, such as a partnership between a university and an early childhood program to provide classes to early educators on children with disabilities, behavioral challenges, or limited English proficiency. Of 126 eligible applications, five grants were awarded in fiscal year 2006, averaging \$3 million each.⁸³

After its 1990 reauthorization, Head Start began dedicating a portion of new funds to in-service training. Initially one in three new dollars—that is funds allocated above the 1990 aggregate level—were dedicated to in-service training of Head Start personnel. Today, it is one in eight new dollars that must be dedicated.⁸⁴ The amount dedicated to in-service training has fluctuated annually as appropriated amounts have changed. In 1997, Head Start received \$412 million more than the previous year, with one in three new dollars (approximately \$137 million) dedicated to in-service training.⁸⁵ In 2006, Head Start received no new programmatic funding (in fact, funding was cut by \$55 million from the previous year) voiding the dedicated stream of in-service training dollars.⁸⁶ However, as a result of dedicated funding, Head Start provides more and better in-service training than most pre-school programs.

A number of states have started their own in-service training initiatives, most of which provide scholarships for professional development activities to early educators working in private centers. In 2003, 23 states funded a Teacher Education and Compensation Helps (TEACH) initiative, ten more than four years earlier. TEACH provides scholarships to personnel already working in the early childhood field to continue their education. The program aims to link professional development with increased compensation. Participants are eligible for a bonus or raise after completion of their training. Participants are not required to pursue a specific program or attain a college degree, although it is the ultimate objective of the program.⁸⁷

One state in particular has followed a promising path to improving early educator quality. The New Jersey Supreme Court's holding in *Abbott vs. Burke* charged the state with implementing specific reforms in the 30 poorest school districts. These reforms included the first court-mandated PK program for three- and four-year old children. The state has fully funded *Abbott* programs in most districts at almost \$13,000 per student, and 70 percent of approximately 55,000 eligible children were enrolled in 2005–2006.⁸⁸ The *Abbott* court stated that PK programs must be “well-planned” and “high-quality.” In a follow-up case in 2000, the New Jersey court elaborated that “high-quality” programs required teachers with bachelor's degrees and early childhood or PK-3 certification. In response, the state created a scholarship program that provides tuition assistance of up to \$5,000 a

year for in-service training towards a bachelor's degree or PK-3 certification.⁸⁹ Almost 100 percent of PK teachers in the *Abbott* districts have achieved the mandated qualifications.⁹⁰

In-Service Training Quality and Requirements

Optimal in-service training for early educators requires PK-3 teacher collaboration on standards, curriculum, and assessment.⁹¹ PK-3 in-service training develops the knowledge and skills required to teach all four grades. This comprehensive approach to professional development helps teachers align PK experiences with the skills needed to succeed in elementary school and enables them to better prepare their students for transitions between grades.⁹²

But as with professional standards for pre-service training, standards for early education in-service training are voluntary and broad. There is a consensus among early educators that in-service training is essential to improving the quality of the workforce, but the amount and type of in-service training remain open to debate.

Researchers have formed a consensus on what constitutes effective in-service training. A 2000 longitudinal study commissioned by the U.S. Department of Education found that in-service training was *ineffective* when it occurred as a one-time workshop, without follow-up, and absent classroom implementation feedback. Professional development was most valuable when it was on-going, on-site, and involved observation and evaluation of actual teacher-child interaction and classroom activities. The study found that participation of teachers from the same subject, grade, or school improved the experience.⁹³ Research on early education in-service training echoes these findings. A 1999 study by the High/Scope Educational Research Foundation found that effective in-service training for early educators requires sustained, on-site activities combined with mentor evaluation and feedback.⁹⁴

K-3 In-Service Training

Most states require some amount of in-service training for K-3 teachers to maintain licensure and most teachers participate, but the content of in-service training is poorly regulated. In 2001, 45 states included a specific number of hours of professional development in their re-licensure conditions.⁹⁵ A national survey conducted in 1993–1994 estimated the participation level of public school teachers in some type of in-service training to be 96 percent.⁹⁶ State and local education agencies, however, rarely take into account the quality of these activities. Of the 45 states that have professional development requirements, 35 do not control the type of activity, only the number of clock hours.⁹⁷

In most states, teachers can count almost any type of learning experience towards their clock hour requirement.

Over 80 percent of the in-service training that teachers encounter is sponsored by school districts. Given time and funding constraints, school districts often only offer one-time workshops that do not require active participation, on-site practice, and sustained feedback opportunities.⁹⁸

Early education in-service training

State-funded PK teachers may be subject to K-3 in-service training requirements if a state requires that PK teachers obtain state licensure. Otherwise, each program determines its in-service training requirements. Often there is no formal requirement. In order to meet the minimum quality benchmark issued annually by NIEER, programs must require teachers to engage in at least 15 hours of professional development every year. Of the 38 states with PK programs in 2004–2005, 33 met this standard in at least one program, and 30 met the standard in all state programs.⁹⁹ State PK teachers reported an average of 32.9 clock hours of in-service training.¹⁰⁰

Spurred by its dedicated funding stream for professional development, Head Start has had more success implementing in-service training opportunities than other early education programs. The High/Scope Educational Research Foundation reports that Head Start teachers engage in an average of 62 hours worth of professional development activities each year, whereas public school teachers average 45 hours and private program teachers average only 27 hours.¹⁰¹ High/Scope also concluded that the nature of Head Start’s in-service training was superior. Head Start programs use in-house personnel familiar with local teachers and needs and provide ample opportunity for feedback from supervisors.

Private early education programs establish their own in-service training standards. Most have no in-service training requirement. Training typically occurs only as per a private program leader or teacher’s individual initiative.¹⁰²

In summary, most states include some amount of in-service training in re-licensure requirements for K-3 teachers, but they do not regulate content or quality of activities. Participation by the rest of the early education workforce is normally voluntary and depends on each program’s commitment to professional development. Head Start has been the most successful in providing its teachers with high-quality training opportunities that are on-site and provide sustained feedback.

RESEARCH ON PK-3 TEACHER QUALITY

The uneven nature of teacher quality entry and consequently professional development standards across early education programs nationwide contributes to widely unequal outcomes for children involved in such programs. A simple assumption is that improved and equalized teacher quality standards would lead to improved and equalized child outcomes. But research

regarding minimal entry standards is complicated and provides conflicting findings. The mixed picture has led to sustained debate about what if any teacher qualifications should be required of PK-3 teachers.

K-3 Teacher Quality Research

Independent analysis of regulated K-3 teacher characteristics, such as years of post-secondary education, suggests a small association with improved classroom results. However, according to a study of third grade classrooms conducted by the National Institute for Child Health and Human Development Early Care Research Network, when other factors are considered, the relationship does not hold.¹⁰³ “It appears that features of formal educational settings under regulatory control have little or no relation to observations of the classroom environment.”¹⁰⁴ According to an analysis by Dan Goldhaber of the Urban Institute, “Only about 3 percent of the contribution teachers made to student learning was associated with teacher experience, degree attained, and other readily observable characteristics.”¹⁰⁵

PK Teacher Quality Research

The body of research on the relationship between early educator credentials and training and child outcomes is extensive, but inconclusive. Older studies of child care environments hold essentially that more pre-service, post-secondary education yields higher-quality classrooms and improved outcomes. However, other studies have questioned the role of factors beyond education attainment. The National Academy of Sciences recommends a bachelor’s degree and specialized training for new PK teachers, while recent research holds that in-service training and other learning environment characteristics are more influential to child outcomes than pre-service credentials.

The National Child Care Staffing Study (NCCSS) analyzed child care quality at centers in metropolitan areas of the United States. The survey established links between staff wages, staff stability and program quality.¹⁰⁶ NCCSS also examined the relationship between teacher characteristics, classroom quality, and child outcomes. NCCSS found that teachers with higher levels of education interact more effectively with children.¹⁰⁷ Children in programs with more “appropriate care giving” (i.e. sensitive, attached, actively involved with children, avoiding harsh interactions—qualities measured by assessments like the Caregiver Interaction Scale (CIS) and the Early Childhood Environment Rating Scale (ECERS)) scored higher on language assessments and showed other positive non-academic outcomes.¹⁰⁸

Controlling for other factors, NCCSS did not find clear differences between the improved classroom quality and child outcomes for student in classrooms led by a teacher with a bachelor’s degree as opposed to those led by teachers with an associate’s degree.¹⁰⁹ But, it does appear

that early educators with post-secondary training are *more likely* to have or exercise the skills associated with preferred child outcomes than educators with vocational or high school training.¹¹⁰

The Cost, Quality and Child Outcomes Study (CQCO) analyzed child care quality in a random sample of 400 centers in four states and reached similar findings to NCCSS.¹¹¹ Classroom quality (again as measured by the ECERS and CIS) was deemed higher in environments led by a teacher with a bachelor's degree.¹¹² But teacher education was not singularly correlated with classroom quality. Teacher experience, salary, and class size also are related to classroom quality.¹¹³ CQCO found that teachers with an associate's or bachelor's degree were more sensitive toward their students than teachers with other credentials, and those with a bachelor's degree and additional early childhood education training were most sensitive overall.¹¹⁴ More important, children in classrooms led by educators with at least an associate's degree had higher scores on verbal assessments.¹¹⁵

In 2000, the National Academy of Sciences Committee on Early Childhood Pedagogy was charged by the National Research Council with the task of reviewing available literature on early childhood teaching and learning, a field much larger than simply the NCCSS and CQCO. Specifically, the Committee was asked to distill the existing knowledge base and recommend practices for early education programs and teacher training. The resulting report, *Eager to Learn* made the following finding about early childhood education:

*The professional development of teachers is related to the quality of early childhood programs, and program quality predicts developmental outcomes for children. Formal early childhood education and training have been linked consistently to positive caregiver behaviors. The strongest relationship is found between the number of years of education and training and the appropriateness of a teacher's classroom behavior.*¹¹⁶

Eager to Learn recommended that "each group of children in an early childhood education and care program should be assigned a teacher who has a bachelor's degree with specialized education related to early childhood."¹¹⁷

Economist David Blau of the University of North Carolina reexamined CQCO and NCCSS data using additional efforts to attempt to control for the effects of previously unanalyzed differences in center quality. His analysis confirmed the previous research finding, that generally speaking, more teacher education is better.¹¹⁸ However, when controlling for unanalyzed differences in center quality, such as curriculum, philosophy, leadership skills of the director, pay and benefit schedule, Blau found the importance of teacher education beyond high school to be less significant than the role of in-service

training.¹¹⁹ Blau argues that the "more education is better" conclusion of NCCSS and CQCO may not be the appropriate guiding principle for teacher quality standards and that in-service training for early educators may be the most important focal point.¹²⁰

"Even if the entire early learning workforce had a four-year degree, it would still not be enough to ensure classroom quality and positive child outcomes, unless they also have some specialized training in early childhood development and how young children learn."

Jane Knitzer and Lisa Klein, National Center for Children in Poverty

According to researchers at the NCEdL, teaching credentials are not consistently related to classroom quality or improved language scores for children in pre-K classrooms.¹²¹ NCEdL has found that higher levels of teacher education lead to improved mathematics scores for children, but a bachelor-degreed teacher led classroom does not contribute improved skills or scores in other academic areas.¹²²

Like Blau, NCEdL researchers noted the importance that training can have in classroom quality. According to NCEdL, early childhood education teachers with lower-level credentials (i.e. an associate's degree or less) are able to create high quality environments and practices when they work with mentors and supervisors who "encourage reflection on practice."

A recent study, led by researchers from the Center for Advanced Study of Teaching and Learning at the University of Virginia, examined teacher characteristics and program quality in state-funded PK programs. They found little to no relationship between teacher characteristics and classroom quality. "The highest quality classrooms and poorest quality classrooms did not differ from one another on regulated features of programs like teacher education / certification."¹²³

Debate continues on the exact value of teacher certification requirements. But taken together, the research seems to suggest that a bachelor's degree is a highly-desirable certification due to the statement it makes about a teachers attitude and desire to teach. The *optimal*, as opposed to minimal, standard for PK-3 teacher quality is possession of a bachelor's degree with an early childhood education specialization and continuing obligation to participate in on-site, sustained, in-service professional development activities that prepare educators to teach children in grades PK through 3. Ideally, teachers know about what they teach and how their children learn and continue to improve their skills over time. Obtaining a bachelor's degree with early childhood certification is a

means, but not a guarantee that this will occur, nor the sole means to ensuring a qualified teacher.

RECOMMENDATIONS

PK teacher quality requirements vary widely across state and federal early education programs and are separated from elementary school requirements. These divisions lead to inefficient efforts at the PK level and a damaging lack of coordination between PK programs and elementary schools. New and existing federal-state partnership programs can set a new standard of early educator quality that will foster improved child outcomes through effective instruction and increased alignment from grades PK through three.

In general, federal educational policy should promote linkages between different educational levels. PK programs should be considered and supported in legislation that governs K-12 and post-secondary education. The development of a coordinated, seamless PK-16 system of education should be a priority for federal policy makers. The following are specific recommendations to further that goal.

Recommendation #1: NCLB Title V “2020 Grant” Funding Eligibility Should be Conditioned on Assurance that all PK-3 Teachers are “Highly Qualified Early Educators.”

To reward and promote expanded access to quality early education programs for children in grades stretching from PK-3 and help close multiple achievement gaps, the New America Foundation proposes a new, “2020 Grant” partnership between federal and state governments. In exchange for NCLB Title V matching funds, states should phase-in high quality, universal PK programs aligned with quality elementary school programs.¹²⁴ In over 15 years of existence, there is no evidence that the existing NCLB Title V block grant program systematically has raised student achievement.¹²⁵ In contrast, a rich body of literature suggests high quality early education programs offers a cost efficient means of raising achievement over the long term.¹²⁶

Longitudinal studies of the landmark High/Scope Perry Preschool, Abecedarian Project, and Chicago Parent-Child Centers indicate an essential component of a high quality early education program is the presence of a highly qualified teacher.¹²⁷ Teachers in those three programs possessed a bachelor’s degree and specialized training in early education.¹²⁸ Additional research indicates that the mere presence of early childhood educators with a bachelor’s degree, however, does not ensure high quality instruction and improved child outcomes. Core skills and teacher attitudes along with aligned instruction from grades PK through 3 support improved child outcomes.¹²⁹

As with NCLB Title I recipients, NCLB Title V 2020 Grant recipients should be required to assure that early education programs are staffed with highly qualified teachers. Though flawed in implementation, NCLB’s two-tiered highly qualified teacher definition offers a model structure. Teachers leading early education classrooms should be deemed highly qualified if they hold a bachelor’s degree in early childhood education or meet a separate, alternative standard indicating early childhood education competency. A bachelor’s degree with early childhood education certification is a strong indicator that educators have or will gain necessary core skills and attitudes correlated with improved child outcomes.

Early educator quality, however, can be evidenced through other means in addition to completion of a bachelor’s degree in early education. Recommended is an alternative, supplemental certification standard for early educators that would function similarly to the HOUSSSE option available to K-12 teachers under NCLB. An optimal early childhood competency standard would require a post-secondary education degree and performance-based demonstration of core skills and knowledge for teachers in PK. When combined with the presence of a bachelor’s degree, a PK-3 highly qualified designation would allow educators to move among grade levels, foster equity in pay scales, and increase stability in the early education labor force.

NCLB’s current K-12 HOUSSSE standard allows states to set their own standards for educator quality and is silent on PK teacher minimum standards.¹³⁰ The state-by-state approach creates inherent inequalities. In order to avoid structural and implementation problems that have plagued the K-12 HOUSSSE, the highly qualified teacher standard for PK-3 teachers should be set nationally. A national high, objective, uniform standard of evaluation (HOUSE) for PK-3 teacher certification in federally funded programs would set a clear bar for early educator quality, foster PK-3 alignment and teacher mobility across jurisdictions, and also provide an alternative pathway to elementary school certification.

This alternative pathway would be available to individuals new to the profession and as a means to allow current early educators to demonstrate their effectiveness and ability to achieve improved child outcomes. The current early educator workforce does not possess a high-level of credentialing, but many participants possess valuable skills and come from diverse backgrounds reflective of and valuable to the current early childhood student population.¹³¹ Creating a separate national standard for highly qualified teachers that is based upon skills, knowledge, and ability (and not simply a four year post-secondary education degree) would leave the early childhood education occupational field open to many capable, committed, and diverse current teachers in early education programs.

Further, providing highly qualified teachers certified as competent PK-3 in all NCLB Title V 2020 Grant programs will have benefits that stretch beyond the PK years. Aligning early educator requirements with the NCLB definition of highly qualified will support greater professional coordination with early elementary grades. Teachers at PK and K-3 levels will operate from a similar educational and professional platform. Increased professional equality will foster collaboration and communication between children's earliest teachers. Extended certification will support alignment and coordination of curriculum across grade levels and thereby further children's learning and social development.¹³²

But, given the difficulty that public education is experiencing in meeting the NCLB K-12 teacher quality requirements and the preparation and compensation levels of the existing early education workforce, requiring all PK-3 teachers to be highly qualified is an exceptionally challenging mandate for public and private providers that might be supported through proposed NCLB Title V 2020 Grants. In order to focus quality improvement efforts on practical and effective goals, it is recommended therefore that a reasonable phase-in period for any minimum early educator standard be allowed in conjunction with a differentiated staffing model.

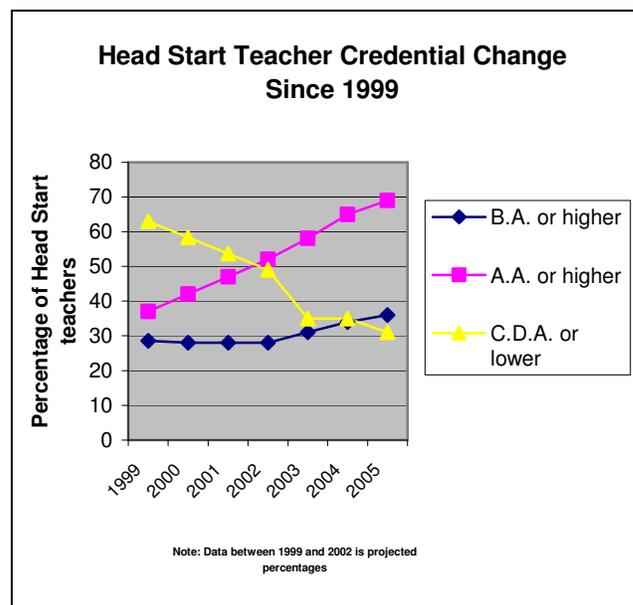
A differentiated staffing approach allows lesser-credentialed teachers to work alongside lead highly qualified early educators in the same classroom, maintaining overall quality and limiting operational costs. High quality standards in early childhood education practice limit teacher-to-student ratios to 10 to 1 or smaller.¹³³ These small ratios often result in multiple staff teaching in the same classroom with a larger number of children in order to efficiently use space. The structure allows more than space to be used efficiently as lead teachers can bring the benefits of relatively high skill and knowledge levels to more children in a differentiated staff setting than if a highly qualified teacher taught alone in a classroom. Further, a differentiated staffing model also provides flexibility to early education program employers and cost savings without sacrificing the benefits of highly qualified teachers.

Recommendation #2: Head Start Teacher Requirements Should be Aligned with a new NCLB “Highly Qualified Early Educator” Definition.

Requiring a highly qualified teacher in PK-3 programs supported by NCLB Title V “2020 Grants” will also demand improving the credentialing of Head Start lead teachers. Head Start’s original purpose was not to serve solely as an education program, but also as part of the War on Poverty.¹³⁴ The program has evolved to promote children’s cognitive development more as the understanding of children’s capacity to learn has changed, and the program should continue to evolve. To leave current Head Start teacher quality standards in place

would cause Head Start programs to fall behind in quality to expanding state and federal PK programs designed for other student populations.

Head Start’s past success in upgrading teacher quality standards when accompanied with a dedicated funding stream suggests it can phase-in a heightening of lead teacher requirements. Over a six year period from 1999 to 2005, Head Start nearly doubled the percentage of lead teachers with at least an associate’s degree from 37 percent to 69 percent.¹³⁵ The program achieved that increase in personnel credentials, because Congress set-aside a portion of new money—funds over the prior year’s funding level—as dedicated for program quality improvement. In 1999, Head Start programs were required to dedicate 60 percent of new money to staff quality improvement.¹³⁶ Half of set-aside funds were dedicated toward in-service training and half were dedicated toward increased staff compensation and benefit levels.¹³⁷



Adapted from CLASP Head Start Brief¹³⁸

Recommended is a reinvigorated commitment in the Head Start Act to heightening the credentials of Head Start personnel so that over time, they match heightened public PK-3 levels. A similar glide path and set-aside as included in Head Start’s 1998 reauthorization, but this time directed toward a new highly qualified early educator definition aligned with that of NCLB, would help insure that the most disadvantaged children are not further disadvantaged because they are supplied with lower-skilled educators. For many Head Start teachers, who were formerly Head Start parents, if not children, it would also facilitate higher earnings and accelerate their mobility up from poverty.¹³⁹

Recommendation #3: Reform Title II of HEA to Support PK-3 Certification Programs and an Accompanying Credential and Revise the Current College of Education Accountability Standard.

Title II of HEA lacks focus, funding, and positive results. Appropriations have declined from a high of \$98 million in fiscal year 2000 to a low of \$60 million in fiscal year 2006.¹⁴⁰ Recommended is to focus Title II of HEA on supporting aligned, discrete, and effective training and certification programs at institutions of higher education and revise the current college of education program accountability standard.

States and institutions of higher education should move toward achieving the high standards of teacher preparation recommended by non-profit organizations (such as NAEYC and NBPTS) that specialize in early education and teacher excellence to create high quality pre-service training programs that are tailored to meet the educational and developmental needs of students in PK and early elementary levels. Currently, certification programs that cover PK are often separate from and unequal to those which prepare teachers to teach in grades K-8.¹⁴¹ This second-class status is compounded by the lack of articulation between two- and four-year colleges.¹⁴² Title II should promote integration of PK and K-3 preparation and certification programs. Integrated PK-3 teacher preparation programs help produce teachers with a deeper knowledge base that will help improve classroom performance and help to meet the growing demand for highly qualified PK teachers.

College of education program accountability and PK-3 training can be improved by extending reported data to include not just those individuals who complete teacher preparation programs, but also those that begin and do not complete such programs. Further recommended is institutional reporting on the number and percentage of students who complete a PK-3 certification program and other extended disaggregation of reported data. Current “pass rate” data is broken down into five categories, but does not include information such as whether PK-3, K-3, K-8 or 8-12 certification is sought or achieved. Reporting on such will provide credibility to data that currently is easily manipulated, rendered without meaning, and fails to spur integration of training programs. Credible data may cause some programs to be subject to the accountability consequences included in the original Title II program, but institutions of higher education, teacher candidates, and children who are the students of teacher preparation program graduates would all benefit from real college of education accountability.¹⁴³

Recommendation #4: Reform Title II of NCLB to Emphasize Supporting PK-3 In-Service Training and Improve the Supply of Highly Qualified PK-3 Early Educators.

States and school districts should be expressly authorized and encouraged to use NCLB Title II funds to finance early educator professional development. In-service training of PK educators should be aligned with K-12 teacher professional development and specifically be integrated with elementary school teacher training. Aligning programs and funds to operate PK and K-12 teacher training will serve to break down communication and cultural barriers between PK and K-12 systems and in turn assist in improving coordination and alignment of curriculum, standards, and assessment from grades PK through 3.

As state and federal early education expansion programs increase in number, size, and standards, large numbers of highly qualified early educators will be needed to staff new classrooms. Colleges of education appear to lack capacity at present to supply fully a new cadre of highly qualified early educators.¹⁴⁴ Accordingly, NCLB Title II should be amended to explicitly authorize and encourage the use of funds for the embrace of alternative pathways for early educator certification. Current Title II NCLB policy allows states to use funds to operate programs that expand and improve alternative pathways for teachers and emphasizes alternative pathways for teachers of math and science programs. But given the need, early childhood educators should be explicitly added and emphasized as a target for alternative pathways as well.

One promising approach to the early educator quality issue is being offered by Teach for America (TFA). TFA is testing a pilot project that selects, trains, and assigns college graduates into early childhood education programs in low-income areas. Candidates with excellent academic records (individuals have bachelor’s degrees, demonstrated post-secondary achievement and leadership, an average SAT score of 1310, and an average college GPA of 3.5) are screened thoroughly before being selected into the pilot program and give a two-year commitment to working with vulnerable children in some of the nation’s lowest-income school districts. Upon selection, TFA Early Childhood Initiative candidates are trained in a PK-3 curriculum that emphasizes individualized instruction. They are trained in learning theory, the multiple dimensions of early childhood development, pre-literacy and pre-mathematics skill development, instructional planning and delivery, and assessment techniques, including work sampling and various observational assessments.

TFA’s Early Childhood Initiative is small; it is scheduled to bring 600 new early educators in to the field by 2010. But it offers an example of just one of the many alternative pathways that states and school districts might embrace in order to expand their pool of highly qualified early educators. NCLB Title II financial support and encouragement would further similar decentralized efforts nationwide.¹⁴⁵

CONCLUSION

Currently, there is an uncoordinated system of early care and education nationally. Federal, state, local, and private early care and education programs all have their own characteristics and educator standards. Often these characteristics and standards are suboptimal.

The New America Foundation submits that there is a federal role for harmonizing decentralized state, local, and private early care and education programs horizontally across jurisdictions and vertically across grade levels, particularly when it comes to teacher quality. All children deserve a quality teacher in grade school and PK, no matter their geographic or economic background.

ENDNOTES

¹ No Child Left Behind Act of 2001, H.R. 1, Part A, Subpart 1, Section 1119, *Qualifications for Teachers and Paraprofessionals*.

² U.S. DEPARTMENT OF EDUCATION, *Serving Preschool Children under Title I Non-Regulatory Guidance*, at 19 (March 4, 2004), available at <http://www.ed.gov/policy/elsec/guid/preschoolguidance.doc>.

³ Coats Human Services Reauthorization Act of 1998, P.L. 105-285, (1998), available at http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=105_cong_public_laws&docid=f:publ285.105.

⁴ Steven Barnett, Jason T. Hustedt, Kenneth B. Robin & Karen L. Schulman, *2005 State of Preschool Yearbook*, NATIONAL INSTITUTE FOR EARLY EDUCATION RESEARCH, at 9 (2005), available at <http://nieer.org/yearbook/pdf/yearbook.pdf>.

⁵ Sarah LeMoine & Sheri Azer, *Center Child Care Licensing Requirements*, NATIONAL CHILD CARE INFORMATION CENTER, (November 15, 2005), <http://nccic.org/pubs/cclicensingreq/cclr-teachers.pdf>.

⁶ Most states struggled to meet the teacher quality growth benchmarks. At the beginning of the 2005-2006 school year, the Department of Education pushed the accountability deadline back a year, as long as states showed good faith and progress towards reaching the 100 percent goal.

⁷ No Child Left Behind Act of 2001, *supra* note 1.

⁸ The Department of Education has not responded to criticisms that states were setting low, inadequate standards on HOUSSE evaluations in order to qualify more teachers. See Christopher O. Tracy & Kate Walsh, *Necessary and Insufficient: Resisting a Full Measure of Teacher Quality*, THE NATIONAL COUNCIL ON TEACHER QUALITY, (Spring 2004), http://www.nctq.org/nctq/images/nctq_report_spring2004.pdf.

⁹ U.S. DEPARTMENT OF EDUCATION, OFFICE OF ELEMENTARY AND SECONDARY EDUCATION, *Improving Teacher Quality, Non-Regulatory Guidance*, at Section C-12 (September 12, 2003), available at http://www.teach-now.org/Federal_Section/Title_II_Teacher_Qual_Guide.htm.

¹⁰ Barnett, Hustedt, Robin & Schulman, *supra* note 4, at 15.

¹¹ For an in-depth analysis of the uneven nature of state pre-kindergarten teacher requirements, see Justin King, *Issue Brief Number 3: Closing the Achievement Gap Through Expanded Access to Quality Early Education in Grades PK-3*, NEW AMERICA FOUNDATION, EARLY EDUCATION INITIATIVE, (July 25, 2006), <http://www.newamerica.net/files/Closing%20the%20Achievement%20Gap.pdf>.

¹² Coats Human Services Reauthorization Act of 1998, *supra* note 3.

¹³ U.S. GENERAL ACCOUNTING OFFICE, *Head Start: Increased Percentage of Teachers Nationwide Have Required Degrees, but Better Information on Classroom Teachers' Qualifications Needed*, Report to Congressional Requesters, at 3 (October 2003), <http://www.gao.gov/new.items/d045.pdf#search=%22gao%20head%20start%20increased%20percentage%22>.

¹⁴ Katie Hamm, *More than Meets the Eye: Head Start Programs, Participants, Families, and Staff in 2005*, CENTER FOR LAW AND SOCIAL POLICY, HEAD START SERIES, Brief No. 8, at 6 (August 2006), http://www.clasp.org/publications/hs_brief8.pdf#search=%22CLASP%2C%20More%20Than%20Meets%20the%20Eye%22.

¹⁵ Adapted from Barnett, Hustedt, Robin & Schulman, *supra* note 4, at 15.

¹⁶ LeMoine & Azer, *supra* note 5.

¹⁷ Debra J. Ackerman, *States' Efforts in Improving the Qualifications of Early Care and Education Teachers*, 18 EDUCATIONAL POLICY, at 316 (2004).

¹⁸ LeMoine & Azer, *supra* note 5.

¹⁹ Ackerman, *supra* note 17, at 316.

²⁰ See Marcy Whitebook, *Working for Worthy Wages: The Child Care Compensation Movement, 1970-2001*, INSTITUTE OF INDUSTRIAL RELATIONS, CENTER FOR THE STUDY OF CHILD CARE EMPLOYMENT, (Last updated December 2002), <http://www.iir.berkeley.edu/csce/pdf/worthywages.pdf>.

²¹ U.S. DEPARTMENT OF LABOR, BUREAU OF LABOR STATISTICS, *Occupational Employment and Wages, 25-2012 Kindergarten Teachers, Except Special Education*, (Last modified May 24, 2006), <http://www.bls.gov/oes/current/oes252012.htm>.

²² It is unlikely that equal numbers of teachers are employed in each grade given fluctuation in the population of children in grades one through three and variations in class size.

²³ U.S. CENSUS BUREAU, CURRENT POPULATION SURVEY, *Single Grade of Enrollment and High School Graduation Status for People 3 Years Old and Over*, at Table 2 (October 2004), <http://www.census.gov/population/socdemo/school/cps2004/tab02-01.xls>.

²⁴ Barnett, Hustedt, Robin & Schulman, *supra* note 4, at 5.

²⁵ *Id.* at 39.

²⁶ U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES, OFFICE OF HEAD START, *Head Start Program Statistical Fact Sheet*, (2002), at http://www.acf.hhs.gov/programs/hsb/research/factsheets/02_hsf.htm; U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES, OFFICE OF HEAD START, *Head Start Program Statistical Fact Sheet*, (2006), at <http://www.acf.hhs.gov/programs/hsb/research/2006.htm>.

²⁷ *Id.*

²⁸ NATIONAL INSTITUTE FOR EARLY EDUCATION RESEARCH, *Fact Sheet on Head Start Teachers*, (July 2003), at <http://nieer.org/resources/facts/index.php?FastFactID=12>.

²⁹ These numbers do not include home-based programs due to the difficulty of obtaining such information, and the difficulty of assessing the academic focus of such programs. Stephen Herzenberg, Mark Price & David Bradley, *Losing Ground in Early Childhood Education: Declining Workforce Qualifications in an Expanding Industry, 1979-2004*, ECONOMIC POLICY INSTITUTE, at 9-10 (2005), http://www.epinet.org/studies/ece/losing_ground-full_text.pdf.

-
- ³⁰ Thomas D. Snyder, Alexandra G. Tan & Charlene M. Hoffman, *Digest of Education Statistics 2005*, U.S. DEPARTMENT OF EDUCATION, INSTITUTE OF EDUCATION SCIENCES, NATIONAL CENTER FOR EDUCATION STATISTICS, at 74 (2005), available at <http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2006030>.
- ³¹ NATIONAL EDUCATION ASSOCIATION, *Status of the American Public School Teacher 2000-2001*, at 89 (August 2003), <http://www.nea.org/edstats/images/status.pdf>.
- ³² Elvira Germino Hausken, Jill Walston & Amy H. Rathbun, *Kindergarten Teachers: Public and Private School Teachers of the Kindergarten Class of 1998-99*, U.S. DEPARTMENT OF EDUCATION, INSTITUTE OF EDUCATION SCIENCES, NATIONAL CENTER FOR EDUCATION STATISTICS, Early Childhood Longitudinal Study, at 10-11 (March 2004), <http://nces.ed.gov/pubs2004/2004060.pdf>.
- ³³ NATIONAL CENTER FOR EARLY DEVELOPMENT & LEARNING, *NCEDL Pre-kindergarten Study*, FPG CHILD DEVELOPMENT INSTITUTE, 9 No. 1 EARLY DEVELOPMENTS, at 17 (Spring 2005), http://www.fpg.unc.edu/~NCEDL/PDFs/ED9_1.pdf.
- ³⁴ Gitanjali Saluja, Diane M. Early & Richard M. Clifford, *Demographic Characteristics of Early Childhood Teachers and Structural Elements of Early Care and Education in the United States*, 4 No. 1 EARLY CHILDHOOD RESEARCH & PRACTICE, at 9 (Spring 2002), <http://ecrp.uiuc.edu/v4n1/saluja.html>.
- ³⁵ *Id.* at 9.
- ³⁶ Adapted from U.S. CENSUS BUREAU, *National Population Statistics*, at <http://www.census.gov/popest/national/asrh/NC-EST2005-asrh.html>.
- ³⁷ Laurie Lewis, Basmat Parsad, Nancy Carey, Nicole Bartfai, Elizabeth Farris & Becky Smerdon, *Teacher Quality: A Report on the Preparation and Qualification of Public School Teachers*, U.S. DEPARTMENT OF EDUCATION, OFFICE OF EDUCATIONAL RESEARCH, NATIONAL CENTER FOR EDUCATION STATISTICS, at 10 (January 1999), <http://nces.ed.gov/pubs99/1999080.pdf>.
- ³⁸ Walter S. Gilliam & Crista M. Marchesseault, *From Capitols to Classrooms, Policies to Practice: State-Funded Prekindergarten at the Classroom Level; Part 1: Who's Teaching our Youngest Students? Teacher Education and Training, Experience, Compensation and Benefits, and Assistant Teachers*, YALE UNIVERSITY CHILD STUDY CENTER, The National Prekindergarten Study, at 4 (March 30, 2005), <http://nieer.org/resources/files/NPSteachers.pdf>.
- ³⁹ Hamm, *supra* note 14, at 6.
- ⁴⁰ U.S. GENERAL ACCOUNTING OFFICE, *supra* note 13, at 10.
- ⁴¹ Adapted from Gilliam & Marchesseault, *supra* note 38; Hamm, *supra* note 14; Herzenberg, Price & Bradley, *supra* note 29.
- ⁴² Herzenberg, Price & Bradley, *supra* note 29, at 8-13.
- ⁴³ *Id.* at 16-17.
- ⁴⁴ Salary.com, *Average Kindergarten Teacher Salary*, at http://swz.salary.com/salarywizard/layouthtmls/swzl_compresult_national_ED03000009.html; Salary.com, *Average Elementary School Teacher Salary*, at http://swz.salary.com/salarywizard/layouthtmls/swzl_compresult_national_ED03000010.html.
- ⁴⁵ Gilliam & Marchesseault, *supra* note 38, at 8-9.
- ⁴⁶ Hamm, *supra* note 14, at 6.
- ⁴⁷ Rachel Schumacher and Tanya Rakpraja, *A Snapshot of Head Start Children, Families, Teachers, and Programs: 1997 and 2001*, CENTER FOR LAW AND SOCIAL POLICY, HEAD START SERIES, Brief No. 1, at 3 (March 2003), http://www.clasp.org/publications/Head_Start_brief1.pdf.
- ⁴⁸ Herzenberg, Price & Bradley, *supra* note 29, at 20-22.
- ⁴⁹ *Id.*
- ⁵⁰ *Id.*
- ⁵¹ Adapted from Salary.com, *supra* note 44, Gilliam & Marchesseault, *supra* note 38, Hamm, *supra* note 14; Herzenberg, Price & Bradley, *supra* note 29.
- ⁵² Stephen Provasnik & Scott Dorfman, *Mobility in the Teacher Workforce: Findings from The Condition of Education 2005*, U.S. DEPARTMENT OF EDUCATION, INSTITUTE OF EDUCATION SCIENCES, NATIONAL CENTER FOR EDUCATION STATISTICS, at 13 (June 2005), <http://nces.ed.gov/pubs2005/2005114.pdf>.
- ⁵³ Dan Bellm, Alice Burton, Marcy Whitebook, Linda Broatch & Marci Young, *Inside the Pre-K Classroom: A Study of Staffing and Stability in State-Funded Prekindergarten Programs*, CENTER FOR THE CHILD CARE WORKFORCE, at 22 (2002), http://ccw.cleverspin.com/pubs/ccw_pre-k_10.4.02.pdf.
- ⁵⁴ *Id.* at 6.
- ⁵⁵ Bellm, Burton, Whitebook, Broatch, and Young, *supra* note 53, at 22.
- ⁵⁶ *Id.* at 23.
- ⁵⁷ U.S. DEPARTMENT OF EDUCATION, OFFICE OF POSTSECONDARY EDUCATION, *Teacher Quality Enhancement Grants Funding Status*, (Last modified May 8, 2006), at <http://www.ed.gov/programs/heatqp/funding.html>.
- ⁵⁸ CONGRESSIONAL BUDGET OFFICE, *Cost Estimate H.R. 5186: Taxpayer-Teacher Protection Act of 2004*, (October 18, 2004), at <http://www.cbo.gov/showdoc.cfm?index=5954&sequence=0&from=6>.
- ⁵⁹ U.S. DEPARTMENT OF EDUCATION, *Federal Perkins Loan Teacher Cancellation*, at <http://studentaid.ed.gov/PORTALSWebApp/students/english/cancelperk.jsp?tab=repaying>.
- ⁶⁰ U.S. DEPARTMENT OF EDUCATION, *Teacher Loan Forgiveness Program*, at <http://studentaid.ed.gov/PORTALSWebApp/students/english/cancelstaff.jsp?tab=repaying>.
- ⁶¹ THE STUDENT LOAN NETWORK, *Stafford Loan, Student Loan Forgiveness or Cancellation*, (2006), at <http://www.staffordloan.com/repayment/forgiveness.php>.

-
- ⁶² NATIONAL BOARD FOR PROFESSIONAL TEACHING STANDARDS, *Early and Middle Childhood Literacy: Reading-Language Arts Standards*, (2002), http://www.nbpts.org/the_standards/standards_by_cert?ID=23&x=32&y=8.
- ⁶³ Telephone Interview with Heather Biggar Tomlinson, Coordinator, Baccalaureate and Graduate Program Review, NATIONAL ASSOCIATION FOR THE EDUCATION OF YOUNG CHILDREN, (October 12, 2006).
- ⁶⁴ *Id.*
- ⁶⁵ Carollee Howes, Donna Bryant, Margaret Burchinal, Richard Clifford, Diane Early, Robert Panta, Oscar Barbarin & Sharon Ritchie, *Preschool: Its Benefits, and Who Should Teach*, NATIONAL CENTER FOR EARLY DEVELOPMENT AND LEARNING, at 3, <http://www.fpg.unc.edu/%7ENCEDL/pdfs/NCEDLPreschoolStatement.pdf>.
- ⁶⁶ Kate Walsh & Emma Snyder, *Searching the Attic for Highly Qualified Teachers: How States Are Responding to the Nation's Goal of Placing a Highly Qualified Teacher in Every Classroom*, NATIONAL COUNCIL ON TEACHER QUALITY, (December 2004), <http://www.ecs.org/html/offsite.asp?document=http%3A%2F%2Fwww%2Eenctq%2Eorg%2Ffncq%2Fimages%2Fhouse%5Freport%5F2%2Epdf+>.
- ⁶⁷ *Id.* at 17-25.
- ⁶⁸ See Lewis, Parsad, Carey, Bartfai, Farris & Smerdon, *supra* note 37; Marilyn Cochran-Smith & Kenneth M. Zeichner, *Studying Teachers Education: The Report of the AERA Panel on Research and Teacher Education*, (Lawrence Erlbaum Associates, 2005).
- ⁶⁹ Arthur Levine, *Educating School Teachers*, THE EDUCATION SCHOOLS PROJECT, at 39 (September 2006), http://www.edschools.org/pdf/Educating_Teachers_Report.pdf#search=%22levine%20educating%20school%20teachers%22.
- ⁷⁰ Diane M. Early & Pamela J. Winton, *Preparing the Workforce: Early Childhood Teacher Preparation at 2- and 4-Year Institutions of Higher Education*, 16 No. 3 EARLY CHILDHOOD RESEARCH QUARTERLY, at 299 (2001).
- ⁷¹ *Id.* at 291.
- ⁷² Sharon Ryan, Debra J. Ackerman & Hao Song, *Getting qualified and becoming knowledgeable: Preschool teachers' perspectives on their professional preparation*, RUTGERS THE STATE UNIVERSITY OF NEW JERSEY, (2004).
- ⁷³ EDUCATION LAW CENTER, *Abbott Indicators District Profiles*, at 2 (2006) at http://www.edlawcenter.org/ELCPublic/AbbottvBurke/AbbottProfiles/All_Districts_Detail.pdf.
- ⁷⁴ NEW JERSEY DEPARTMENT OF EDUCATION, OFFICE OF SPECIAL EDUCATION PROGRAMS, *2005 Special Education Data: Number of Classified Students by Age and Placement Category, Ages 3-5, Abbott Districts*, at <http://www.nj.gov/njded/specialed/data/2005.htm>.
- ⁷⁵ U.S. DEPARTMENT OF EDUCATION, OFFICE OF POSTSECONDARY EDUCATION, *The Secretary's Fourth Annual Report on Teacher Quality: A Highly Qualified Teacher in Every Classroom*, at 51 (August 2005), www.ed.gov/about/reports/annual/teachprep/2005Title2-Report.doc.
- ⁷⁶ *Id.* at 49.
- ⁷⁷ *Id.* at 57-59.
- ⁷⁸ Gina Shkodriani, *Seamless pipeline from two-year to four-year institutions for teacher training*, COMMUNITY COLLEGE POLICY CENTER, EDUCATION COMMISSION OF THE STATES, at 1 (2004), <http://www.ecs.org/clearinghouse/49/57/4957.pdf>.
- ⁷⁹ *Id.* at 2.
- ⁸⁰ Deborah J. Cassidy, Linda L. Hestenes, Peggy S. Teague & Jo Ann Springs, *The Facilitation of the Transfer of Credit Between Early Childhood Education/Child Development Departments in Two- and Four-Year Institutions of Higher Education in North Carolina*, NORTH CAROLINA DIVISION OF CHILD DEVELOPMENT, North Carolina Early Childhood Education Articulation Manual, at 8 (2000), <http://www.ncchildcare.org/execsum.pdf>.
- ⁸¹ Eric Hirsch, Julia E. Koppich & Michael S. Knapp, *Revisiting What States are Doing to Improve the Quality of Teaching: An Update on Patterns and Trends*, CENTER FOR THE STUDY OF TEACHING AND POLICY, at 36-37 (February 2001), <http://depts.washington.edu/ctpmail/PDFs/States-HKK-02-2001.pdf>.
- ⁸² Ann S. Epstein, *Pathways to Quality in Head Start, Public School, and Private Nonprofit Early Childhood Programs*, HIGH/SCOPE EDUCATIONAL RESEARCH FOUNDATION, 13 JOURNAL OF RESEARCH IN CHILDHOOD EDUCATION, at 111 (Spring 1999).
- ⁸³ U.S. DEPARTMENT OF EDUCATION, OFFICE OF ELEMENTARY AND SECONDARY EDUCATION, *Early Childhood Educator Professional Development Program Awards*, (Last Modified August 31, 2006), at <http://www.ed.gov/programs/eceducator/awards.html>.
- ⁸⁴ Rachel Schumacher, Jennifer Mezey & Mark Greenberg, *Head Start Reauthorization: A Preliminary Analysis of H.R. 2210, the "School Readiness Act of 2003"*, CENTER FOR LAW AND SOCIAL POLICY, at 10 (Last Revised June 27, 2003), http://www.clasp.org/publications/HR2210_analysis.pdf#search=%22CLASP%2C%20Head%20Start%20Reauthorization%22.
- ⁸⁵ U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES, OFFICE OF HEAD START, *Head Start Program Statistical Fact Sheet*, (1998), at http://www.acf.hhs.gov/programs/hsb/research/factsheets/98_hsf.htm.
- ⁸⁶ U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES, *supra* note 26.
- ⁸⁷ Janelle Kerlin, Elizabeth Reid & Jennifer Auer, *Looking Beyond Government: The Transfer of the T.E.A.C.H. Early Childhood® Model across States*, CENTER ON NONPROFITS AND PHILANTHROPY, THE URBAN INSTITUTE, No. 15 Charting Civil Society, at 1-3 (January 2004), http://www.urban.org/UploadedPDF/310926_ChartingCivilSociety_15.pdf.
- ⁸⁸ EDUCATION LAW CENTER, *Abbott Preschool Program*, Starting at 3: Securing Access to Preschool Education, (2005), at <http://www.startingat3.org/abbott/index.html>.
- ⁸⁹ Sharon Ryan & Debra J. Ackerman, *Using Pressure and Support to Create a Qualified Workforce*, 13 No. 23 EDUCATION POLICY ANALYSIS ARCHIVES, at 5 (March 30, 2005), <http://epaa.asu.edu/epaa/v13n23/v13n23.pdf>.
- ⁹⁰ Telephone Interview with Debra J. Ackerman, Assistant Research Professor, NATIONAL INSTITUTE FOR EARLY EDUCATION RESEARCH, (October 16, 2006).
- ⁹¹ Kristie Kauerz, *Ladders of Learning, Fighting Fade-Out By Advancing PK-3 Alignment*, NEW AMERICA FOUNDATION, EARLY EDUCATION INITIATIVE, (January 2006), http://www.newamerica.net/files/archive/Doc_File_2826_1.pdf.

-
- ⁹² Arthur Reynolds, Katherine Magnuson & Suh-Ruu Ou, *PK-3 Education: Programs and Practices that Work in Children's First Decade*, FOUNDATION FOR CHILD DEVELOPMENT, No. 6 FCD Working Paper: Advancing PK-3, at 10 (January 2006), <http://www.fcd-us.org/pdfs/PK-3EducationProgramsandPracticesthatWork.pdf>.
- ⁹³ Michael S. Garet, Andrew C. Porter, Laura Desimone, Beatrice F. Birman & Kwang Suk Yoon, *What Makes Professional Development Effective? Results from a National Sample of Teachers*, 38 No. 4 AMERICAN EDUCATION RESEARCH JOURNAL, <http://aztla.asu.edu/ProfDev1.pdf>.
- ⁹⁴ Epstein, *supra* note 82, at 111.
- ⁹⁵ NATIONAL CONFERENCE OF STATE LEGISLATURES, *Quality Teaching, Professional Learning and the Legislative Agenda: The State of State Professional Development*, at 7 (2002).
- ⁹⁶ Susan Choy & Xianglei Chen, *Toward Better Teaching: Professional Development in 1993-94*, NATIONAL CENTER FOR EDUCATION STATISTICS, U.S. DEPARTMENT OF EDUCATION, OFFICE OF EDUCATIONAL RESEARCH AND IMPROVEMENT, at iv (July 1998), <http://nces.ed.gov/pubs98/98230.pdf>.
- ⁹⁷ NATIONAL CONFERENCE OF STATE LEGISLATURES *supra* note 95, at 7.
- ⁹⁸ Hirsch, Koppich & Knapp, *supra* note 81, at 36-37.
- ⁹⁹ Barnett, Hustedt, Robin & Schulman, *supra* note 4, at 15.
- ¹⁰⁰ Gilliam & Marchesseault, *supra* note 38, at 8.
- ¹⁰¹ Epstein, *supra* note 82, at 111.
- ¹⁰² Bellm, Burton, Whitebook, Broatch, and Young, *supra* note 53.
- ¹⁰³ NATIONAL INSTITUTE OF CHILD HEALTH AND HUMAN DEVELOPMENT EARLY CHILD CARE RESEARCH NETWORK, *A Day in Third Grade: A Large-Scale Study of Classroom Quality and Teacher and Student Behavior*, 105 No. 3 THE ELEMENTARY SCHOOL JOURNAL, at 317 (January 2005), <http://www.journals.uchicago.edu/ESJ/journal/issues/v105n3/1050304/1050304.web.pdf?erFrom=-8714976439610502784Guest>.
- ¹⁰⁴ *Id.* at 319.
- ¹⁰⁵ Dan Goldhaber, *The Mystery of Good Teaching*, No. 1 EDUCATION NEXT, at 53 (Spring 2002), <http://www.hoover.org/publications/ednext/3368021.html>.
- ¹⁰⁶ Marcy Whitebook, *Early Education Quality: Higher Teacher Qualifications for Better Learning Environments – A Review of the Literature*, INSTITUTE OF INDUSTRIAL RELATIONS, CENTER FOR THE STUDY OF CHILD CARE EMPLOYMENT, at 9, (2003), <http://www.iir.berkeley.edu/cscce/pdf/teacher.pdf>.
- ¹⁰⁷ *Id.* at 10.
- ¹⁰⁸ *Id.*
- ¹⁰⁹ *Id.*
- ¹¹⁰ *Id.*
- ¹¹¹ *Id.*
- ¹¹² *Id.* at 11.
- ¹¹³ *Id.*
- ¹¹⁴ *Id.*
- ¹¹⁵ *Id.*
- ¹¹⁶ Barbara T. Bowman, M. Suzanne Donovan & M. Susan Burns, *Eager to Learn: Educating Our Preschoolers*, COMMITTEE ON EARLY CHILDHOOD PEDAGOGY, COMMISSION ON BEHAVIORAL AND SOCIAL SCIENCES AND EDUCATION, NATIONAL RESEARCH COUNCIL, at 9 (National Academies Press, 2000).
- ¹¹⁷ *Id.* at 13-14.
- ¹¹⁸ David M. Blau, *The Production of Quality in Child-Care Centers: Another Look*, 4 No. 3 APPLIED DEVELOPMENTAL SCIENCE, at 136 (2000).
- ¹¹⁹ *Id.* at 147.
- ¹²⁰ *Id.*
- ¹²¹ Howes, Bryant, Burchinal, Clifford, Early, Pianta, Barbarin & Ritchie, *supra* note 65, at 2.
- ¹²² *Id.* at 2.
- ¹²³ Jennifer LoCasale-Crouch, Time Konold, Robert Pianta, Carollee Howes, Margaret Burchinal, Donna Bryant, Richard Clifford, Diane Early & Oscar Barbarin, *Observed Classroom Quality Profiles in State-Funded Pre-kindergarten Programs and Associations with Teacher, Program, and Classroom Characteristics*, EARLY CHILDHOOD RESEARCH QUARTERLY, at 12 (2006).
- ¹²⁴ King, *supra* note 11, at 8-12.
- ¹²⁵ U.S. OFFICE OF MANAGEMENT AND BUDGET, EXPECTMORE.GOV, *Program Assessment: Education State Grants for Innovation*, at <http://www.whitehouse.gov/omb/expectmore/summary.10003315.2005.html>.
- ¹²⁶ King, *supra* note 11, at 6.
- ¹²⁷ Bill Graves, *PK-3: What is it and How Do We Know It Works?*, FOUNDATION FOR CHILD DEVELOPMENT, No. 4 FCD Working Paper: Advancing PK-3, at 3-4 (May 2006), <http://www.fcd-us.org/PDFs/GravesBrief.pdf>.
- ¹²⁸ *Id.* at 3-4.
- ¹²⁹ Whitebook, *supra* note 106, at 10.
- ¹³⁰ Elementary and Secondary Education Act, *Title IX – General Provisions*, Section 9101, available at <http://www.ed.gov/policy/elsec/leg/esea02/pg107.html>.

¹³¹ Saluja, Early & Clifford, *supra* note 34.

¹³² Kauerz, *supra* note 91, at 4.

¹³³ NATIONAL ASSOCIATION FOR THE EDUCATION OF YOUNG CHILDREN, *Teacher-Child Ratios Within Group Size*, NAEYC Accreditation Criteria, (2005), at http://www.naeyc.org/academy/criteria/teacher_child_ratios.html.

¹³⁴ U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES, OFFICE OF HEAD START, *Head Start History*, (Last Modified June 15, 2006), at <http://www.acf.hhs.gov/programs/hsb/about/history.htm>.

¹³⁵ U.S. GENERAL ACCOUNTING OFFICE, *supra* note 13, at 3; U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES, *supra* note 26.

¹³⁶ Community Opportunities, Accountability, and Training and Educational Services Act of 1998, S.2206, Public Law 105-285, (October 27, 1998), available at http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=105_cong_public_laws&docid=f:publ285.105.pdf.

¹³⁷ *Id.* at 2706.

¹³⁸ Adapted from Hamm, *supra* note 14, at 6.

¹³⁹ U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES, *supra* note 26.

¹⁴⁰ U.S. DEPARTMENT OF EDUCATION, *supra* note 57.

¹⁴¹ Early & Winton, *supra* note 70, at 291.

¹⁴² Debra J. Ackerman, *Getting Teachers from Here to There: Examining Issues Related to an Early Care and Education Teacher Policy*, 7 No. 1 EARLY CHILDHOOD RESEARCH AND PRACTICE, at 9, (Spring 2005), <http://ecrp.uiuc.edu/v7n1/ackerman.html>.

¹⁴³ 1998 Amendments to Higher Education Act of 1965, H.R.6, Public Law 105-244, *Accountability for Programs that Prepare Teachers*, at Section 207 (1998), available at <http://www.ed.gov/policy/highered/leg/hea98/sec201.html>.

¹⁴⁴ Early & Winton, *supra* note 70, at 291.

¹⁴⁵ See alternative teacher certification programs, e.g., Troops to Teachers, available at <http://www.proudtoserveagain.com/>; DC Teaching Fellows available at <http://www.dcteachingfellows.org/>; the National Center for Alternative Certification available at <http://www.teach-now.org/index.asp>.