Advancing ECE^2 Policy:
Early Childhood Education (ECE) and its
Quest for Excellence, Coherence, and Equity (ECE)

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ABSTRACT

The history of American early education is one of changing roles and goals. As federal engagement in early childhood has shifted in response to social, political, and economic needs, few policy efforts have focused on long-term planning or coordination. Such inattention has yielded a set of unresolved polemics, reflecting an enduring ambivalence about whether and which children should be served outside their homes, by whom, and with what purpose. These polemics have helped shape a fractured landscape of programs, dispersed across federal agencies and legislative committees, which beg for greater excellence, coherence, and equity. In framing next-generation early education efforts, we advance the purpose, "ECE for ECE," or ECE[2,] with the former ECE referring to Excellence, Coherence, and Equity, and the latter ECE referring to Early Childhood Education.

I. Introduction[1]

The purpose of this paper is to craft research-driven recommendations to guide the advancement of America's education policy for young children. Given that the past is a prologue for the future, the paper begins by reviewing the historical context for American early education, with a focus on federal programs and policies since the 1960s. The paper then provides an analysis of the effectiveness of major early childhood policies and programs, suggesting that while both disappointing and encouraging, we can learn much from the efforts. Based on the information presented, the paper concludes by proposing a set of policy recommendations for federal early education policy.

[1] The authors would like to thank Clive Belfield for his cost estimates and Jennifer Desantis for her effective research and editorial work on this paper. We would also like to thank our reviewers, some of whom were known to us: Helen Blank and Joan Lombardi for their comments on early drafts of Sections II.3 and II.4, and Cynthia Brown for her response to our recommendations. We also thank the three anonymous reviewers whose work strengthened this document considerably. One of them, thinking he was anonymous, was not; for his eminently thoughtful, detailed, and considered review, we dedicate this work to Edward Zigler, a true scholar—in addition to so much else. Finally, for the content, we alone are responsible; Clive Belfield is responsible for the cost estimates.

Thematically, the paper suggests that a lack of excellence, coherence, and equity—deeply embedded in the field's earliest undertakings—begs for structured federal attention.

At the outset, it is important to note that considerable inconsistency exists in how policymakers and scholars define early childhood education. In part, such inconsistencies revolve around the age band to include in early childhood. For some this means children from pre-natal to age eight; others suggest that early childhood includes birth to age five; still others refer to early childhood as preschool, suggesting a focus on the one or two years preceding school entry. For the purposes of this paper, we refer to early childhood as encompassing children from birth to age five, and we review policies and programs focusing on the age span that precedes kindergarten.

A second dimension of persistent ambiguity relates to whether one regards early childhood education primarily as care—often for the children of working parents—or primarily as an educational intervention for either at-risk or all children. In this paper, believing that early childhood education embraces both perspectives, we discuss both "care" and "education" policies and programs. With this perspective, it is impossible in a paper of this length to discuss every initiative or policy and its results thoroughly. Instead, we have focused our analysis where compelling data provide evidence of the results of early childhood efforts. Finally, as in much educational policy, there are significant distinctions between federal, state, and local policy. While noting these differences and discussing some efforts in each jurisdiction, we focus our work herein primarily on federal policies.

II. American Early Education Policy: A History of Changing Roles and Goals

II.1. Legacies of America's Earliest Efforts for Young Children

If one were to arrive in the United States fresh from another planet, one would have reason to be impressed by the nation's current affection for early education. Whether noting highly publicized neuro-scientific findings on early brain development (Shonkoff & Phillips, 2000; Shore, 1997), the well-documented cost-effectiveness of

model early education programs (Heckman, Grunewald, & Reynolds, 2006), expansions in state pre-kindergarten efforts (Barnett, Hustedt, Friedman, Boyd, & Ainsworth, 2008), or even the robust fiscal commitments being made by notable American philanthropies (e.g., Buffett Early Childhood Fund, Kellogg Foundation, and Pew Charitable Trusts), extraterrestrial visitors—as well as many American citizens—might think all is well and dismiss any call for federal attention to young children.

Yet this de Tocquevillian scenario masks deep-seated and unresolved polemics that characterize a litany of America's efforts to serve young children (Vinovskis, 1999b; Beatty, 1995; Cahan, 1989; Kahn & Kamerman, 1987; Grubb & Lazerson, 1982; Beck, 1982; Steiner, 1976). Discussed chronologically, these efforts unveil transcendent issues related to early education's mission, ideology, financing, and service delivery, all of which, in turn, frame federal policy and recommendations for its future.

America's earliest programmatic efforts for young children began with the Infant Schools, efforts that were privately funded and targeted to children of the indigent. Highly moralistic in intent, the Infant Schools sought to remove children "from the unhappy association of want and vice, and place [them] under better influences" (Infant School Society of Boston, 1828). Although initially for the poor, over time Infant Schools expanded to serve middle- and upper-income families on the grounds that what was good for poor children might also benefit more advantaged youngsters (Beatty, 1981). Yet, when Infant Schools fell prey to the negative comments of scholars and the re-emergence in the 1830s of the Puritan ethic that emphasized the hegemony of the home and importance of maternal care, they closed.

By the turn of the century, however, America experienced a growing economy and an influx of immigrants and, once again, turned to serving the children of the poor. Day nurseries emerged to provide services for children by tending to their education, health, and nutritional needs, and to provide job placement services and language instruction for their parents. Once again, however, concern about middle- and upper-class children surfaced. Anchored in the confluence of the academic child-study movement, the growth of the professional field of education, and philanthropy (Cahan, 1989), soon another form of early education emerged—the nursery school. Distinct from the day nurseries that served poor families and children, nursery schools took their cues from the

emerging field of developmental psychology, and regarded themselves as developmental rather than custodial in orientation. They prided themselves in providing high-quality educational and socialization experiences for those who could afford them, thus reinforcing a two-tiered delivery system—one for the rich and one for the poor.

Two subsequent national crises evoked significant federal engagement in early education, complicating the bifurcated delivery system that segregated children by income—and often by program quality. First, in response to the Great Depression, Congress allocated $6 million in 1933 to establish nursery schools for children "from needy, under-privileged families" and to create jobs for the unemployed (Cahan, 1989, p. 38). "Depression emergency nursery schools" were administered by the Federal Emergency Relief Agency (FERA) with input from the Children's Bureau. Structurally, this not only put the program out of the hands of federal child development experts, but also signaled the low priority accorded to children's issues. Valued less as a service to children and more as a service to a society in crisis, the majority of the Depression nursery schools closed by 1943 (Cohen, 1996).

The second major national crisis, World War II, again precipitated major federal engagement in child care. Under the aegis of the Community Facilities (Lanham) Act, the Federal Works Administration funded child care centers in war-impacted areas (Cohen, 1996). While the precise number of children served is unclear (Steiner, 1976), two realities are not. First, the quality of the programs was uneven (Kirp, 2007), due in part to the disregard of knowledge present in the field and in the Children's Bureau. Second, bureaucratic complexities were rampant due to unclear delineations of federal-agency aegis and confusion between federal and state roles. From the federal perspective, both the Depression nursery schools and the Lanham Act child care centers confirmed that only strict social utility in a time of crisis legitimated early care and education interventions. Moreover, though these programs quickly disappeared when the crises ended, they solidified a legacy of federal child care involvement with fragmented administration and only low to modest quality.

Turning from preschool to kindergarten (which we do not attempt to address comprehensively in this paper), it is worth noting that some of the same issues repeat themselves, even with a slightly older age group. Beginning in the mid- to late-1800s,

American kindergartens adopted broad missions that included nutrition, cleanliness, and good health (Beatty, 1995; Cahan, 1989; Ross, 1976). Gradually, public support for kindergarten grew, so that by the end of the 19th century, over half of public schools had kindergartens (Kahn & Kamerman, 1987). Many kindergartens, however, like services for even younger children, were distributed among numerous sponsors, including churches, labor unions, temperance groups, private businesses, and settlement houses; this again fortified the mixed delivery system that has become a permanent characteristic of American early education. These diverse delivery vehicles gave way to diverse ideologies, often consistent with the host organization, but left in their wake pedagogical inconsistencies that persist today. Finally, in the emergence of the kindergarten movement, the seeds of governmental responses to early education were manifest—reactive, partial, and responsive to social needs external to the child.

This race through history affirms several polemics that have both shaped the federal role in early education and remain largely unresolved. First, an ideological polemic questions whether young children should be served outside their homes at all. From the nation's birth, the primacy and the privacy of the home were ideological mantras, forcing early education programs to legitimate their existence and making them vulnerable to periodic extinction.

The second polemic relates to the role of the federal government. Because public values did not generally support out-of-home non-maternal care, federal involvement in, and financing of, early care and education was episodic and fragmented. Ill-supported by an organized federal bureaucracy, early education burgeoned in times of national crises and ended as soon as the crisis ebbed, leaving early education bereft of vision, permanence, and infrastructure.

The third polemic relates to which children should be served and how. Historically, most public programs have targeted children from low-income families, while the private sector has separately served children from middle- and upper-income families. Leaving a legacy of services segregated by income, which often translates into quality differences, early education policy defies deeply held American values regarding the equal opportunity that all young children should have to thrive and learn.

Finally, the fourth polemic relates to the long-debated mission of early education: when early education is provided, should it focus on care, as the day nurseries did, or should it focus on socialization and education, as nursery schools purported to do? Although increasingly regarded as a false dichotomy because good early education does both, federal and state policymakers still tussle with the question as they debate early education's departmental jurisdictions and funding amounts.

In turning from these very early policies to those dating from the 1960s to the present, we shall see that these polemics persist and have left a durable lack of excellence, coherence, and equity in American early education. Moreover, early education remains essentially reactionary, responding to roiling social, economic, and political change. Indeed, federal early education policies since 1960 can best be understood as a series of responses to shifting social, economic, and political phenomena (Cohen, 1996) set amidst a deep ambivalence about government intrusion in early childhood. In the sub-sections that follow, we discuss early childhood education as a response to: (II.2) inequity, poverty, and risk; (II.3) welfare and the working poor; (II.4) maternal and general workforce employment; (II.5) the needs of the military and federal employees; (II.6) demands for excellence and school readiness; (II.7) the press for success: model programs; (II.8) devolution and increasing state roles; and (II.9) incoherence and the need for infrastructure. It will become apparent that, regardless of the primary missions of these policies and programs, their purposes evolve and overlap as federal policymakers respond to the ever-changing context of early education.

II.2. Early Education as a Response to Inequity, Poverty, and Risk

The period from the end of World War II to the onset of the War on Poverty in the mid-1960s was comparatively dormant for federal early childhood policy. With the war over and soldiers and their wives at home, early education—to the extent that it was addressed—was handled by an increasing number of half-day kindergartens. Although several Cold War child care bills emerged during this period, none passed, rendering the period between the war and the onset of the Kennedy administration devoid of major early childhood policy initiatives. President Kennedy, however, wanted to expand access

to child care; Congress responded by appropriating $800,000 for child care in 1963, the first federal financial assistance since 1946.

Policy enthusiasm for young children subsequently grew when a confluence of civil rights, education, and employment legislation led first to the development of Head Start and the Elementary and Secondary Education Act (1965), and later to the Education for All Handicapped Children Act (1975). Notable for their commitments to young children, these three highly significant pieces of legislation represented a clear departure from past early education efforts. First, these efforts were not here-today-gone-tomorrow efforts; rather, they secured a durable place on the policy agenda for young children. Second, their existence signaled a shift in the ideological zeitgeist: no longer were programs held captive to a sweeping ambivalence regarding non-maternal care. Women from a variety of socio-economic backgrounds were entering the workforce, which helped build public support for federal action to address the needs of working women across the income spectrum. Third, these programs marked the beginning of a sustained federal commitment to young children. In so doing, they shifted the focus from the private sector to durable public *and* private sector involvement. In short, together the programs served as collective markers of a seismic policy shift for young children.

Of the three efforts, Head Start is most notable for its centrality to early childhood policy. Launched in 1965 as a summer program, today some 908,000 children from every state in the country attend the program, which has a budget of $6.9 billion and a cost of $7,326 per child in 2007 dollars (Office of Head Start, 2008b). First administered by the federal Office of Economic Opportunity, Head Start was conceived as an anti-poverty, child development, and family support program, and was designed to meet the comprehensive health, social, emotional, educational, nutritional, and physical needs of low-income three- and four-year old children. Importantly, the program strives for the intensive engagement of parents. Many Head Start parents are employed by the program; in 2006, parents of current or former enrollees comprised 27 percent of its staff (Office of Head Start).

Structurally, Head Start is the only federal early childhood program that administratively bypasses the states. This enables Head Start to establish and monitor its own performance standards, professional development efforts, and child outcomes. In

essence, it is a self-contained early childhood system. Building on the Head Start approach of focusing on child development, family development, community building, and staff development, President Clinton launched Early Head Start in 1995 to advance the well-being of infants and toddlers in low-income families. The program strives to provide "high-quality, comprehensive child development services delivered through home visits, child care, case management, parenting education, health care and referrals, and family support" (Love et al., 2005, p. 886). Today it serves some 61,500 children annually (Administration for Children and Families, 2004).[2]

A significant aspect of the Head Start story has been its durable commitment to generating and using research to inform program and policy improvements. Such research has not only contributed to some of the most innovative efforts in early education, but has also led to important modifications in the program. For example, the 2007 reauthorization of Head Start, which reflected its commitment to school readiness in the title, "Improving Head Start for School Readiness," took important steps to enhance quality and to expand eligibility to participants whose family incomes reach 130 percent of the poverty line (U.S. Dept. of Health and Human Services, 2008b). By 2013, half of all Head Start teachers nationally must have at least a Bachelor's degree in early childhood education or a related degree with experience teaching preschool-age children. They must also attend at least 15 hours of professional development a year. In an effort to improve the coherence of early childhood programs at the state level, the reauthorization required states to create State Advisory Councils on Early Education and Care to coordinate the provision of early education.

Commensurate with these provisions, Head Start is facing more intense demands for major improvements in program quality, child outcomes, and monitoring. Evidence of this was manifest in a call for a National Reporting System, a controversial assessment of Head Start children that was halted with the program's most recent reauthorization. Such calls for improvement sit within a context of limited resource expansion; within a month

[2] The federal government has begun to recognize the value of home visiting programs for pregnant women and women with newborns, in part due to the positive results of randomized evaluations of a home visiting model (Olds et al., 2004). Accordingly, in 2008, the federal government appropriated $10 million for the Nurse-Family Partnership program (Isaacs, 2008).

of signing the authorization bill, the President signed an appropriations bill that imposed spending cuts of 15 percent on Head Start. Though the Office of Head Start pledged to use a one-time funding mechanism to cover the shortfall (Office of Head Start, 2008a), clearly the program is being asked to do more with less resources.

As part of the War on Poverty, President Johnson also signed the 1965 Elementary and Secondary Education Act (ESEA), which focused less on young children than did Head Start. Armed with ambitious goals and many titles, the Act reflected the ethos of its time; it was designed "to improve the opportunities of educationally deprived children by helping them succeed in school, attain grade level proficiency, and improve achievement in basic and advanced skills" (Behrman, 1995). Title I, which provided the bulk of ESEA funding, was essentially a funding mechanism for a grand experiment to pursue these goals with incomplete knowledge about what programs or practices would be most effective in achieving them (Vinovskis, 1999a).

Though most Title I funds go to the K-12 system, states are allowed to use the funds for early childhood and have done so increasingly over time. In 2000, the GAO reported that the number of preschoolers receiving Title I services had increased from 50,000 in the early to mid-1980s to about 300,000 in the 1997-1998 school year (U.S. General Accounting Office, 2000). To encourage districts to expand their use of Title I funds for preschool, the U.S. Department of Education (2004) published a non-regulatory guidance paper that provided a strong rationale for using Title I dollars for preschoolers and responded to lingering questions regarding the appropriateness of this use. The document also supported the new provisions in No Child Left Behind (NCLB) related to young children, which we discuss in detail in Section II.6.

Poverty was not the only risk that concerned Americans. Emanating from civil rights and parental concerns, the well-being of children with disabilities began to draw national attention. As early as 1959, federal legislation had addressed the training of personnel to work with children with disabilities; the 1961 Teachers of the Deaf Act provisioned for staff training; the Handicapped Children's Early Education Assistance Act of 1968 authorized support for exemplary early childhood programs; and the Economic Opportunities Amendments of 1972 increased Head Start enrollment for children with disabilities. By 1975, however, momentum had coalesced for a new

approach to serving children with disabilities. Policymakers recognized that, like their non-disabled counterparts, children with disabilities had multiple needs, which demanded a comprehensive approach to service delivery. Moreover, revelations of the inhumane conditions among children with disabilities hastened passage of the Education for All Handicapped Children Act (Brewer & Kakalik, 1979), which required states that were receiving funding to ensure free and appropriate public education for all children with disabilities from ages 3 to 18. The Act contained important provisions to support localities as they provided individualized education and services for children with disabilities.

Congress amended the Act in 1986, adding Part B, targeted for children from ages three to five, and Part C, focused on infants and toddlers. With a new name in 1990, the Individuals with Disabilities Education Act (IDEA) had become in many ways revolutionary; it called for a serious focus on young children and the establishment of an integrated and systemic approach to serving this population. Support for children with disabilities continues with Congress appropriating $374 million for preschoolers (Part B) and $435.7 million for infants and families (Part C) in 2008 (Linden et al., 2008).

As these federal efforts have unfolded, their categorical nature has yielded important consequences. First, harkening back to the segregation of children in poverty into separate programs that characterized the nation's earliest efforts, Head Start and ESEA reinforced the structure of income segregation. Although Head Start did provide for the enrollment of up to 10 percent of non-poor children, generally the all-too-precious Head Start slots were offered only to children from the lowest-income families. Thus, although the federal programs of this era altered who paid for early education by introducing a substantial federal role in funding, they essentially continued the pattern of segregating children by income.

The second consequence was that many reforms of the era were administered by different agencies, aggravating an already badly fragmented delivery system of services for young children. Reminiscent of past eras, a lack of clarity emerged at the federal level regarding the relationships between the agencies responsible for early education efforts. Ultimately this confusion was repeated at the local level, where often-frail local entities were charged with creating a coherent mosaic out of multiple ill-fitting policy pieces.

II.3. Early Education as a Response to Welfare and the Working Poor

Dating back to the Social Security Act of 1935, federal policy addressed concerns about the children of the poor and incapacitated. Payments for child care for children of welfare recipients who were receiving job training became part of the Act in 1962 with the Aid to Families with Dependent Children (AFDC) Child Care Program (Title IV-A) (Cohen, 1996). Five years later, the Work Incentive Program (WIN) (Title IV-C) required states to intensify efforts to place welfare recipients in jobs or job training, with supports for child care (Spakes, 1982; Ehrenberg & Hewlett, 1976). Despite these provisions, parents did not use child care assistance frequently because mothers of preschool-age children were exempt from job training and work requirements, and outreach to families needing child care was sparse (Cohen, 1996).

In 1971, a growing coalition of advocates for child care supported the Comprehensive Child Care and Development Act (Cohen, 1996). Designed to advance the well-being of children in care by focusing on quality, the bill offered assistance to families on a sliding-scale basis and provided funds for the development of a system of child care, declaring it a right. Vetoed by President Nixon, the defeat stunned its supporters and closed the dialogue regarding a comprehensive approach to child care for decades.

Nevertheless, over the years, federal policymakers have tried to address the needs of welfare recipients and the working poor. Title XX of the Social Services Amendments of 1974 provided a range of supports including child care; in some states, it was the sole source of public support for child care (Cohen, 1996). Amidst concerns of a swelling federal bureaucracy, in 1981 the Social Services Block Grant (SSBG) replaced Title XX and combined several programs. The earmark for child care disappeared along with provisions for regulations. These changes came with a substantial drop in spending on child care; funding fell from $2.9 billion to $2.4 billion and child care had to compete against other services for the limited dollars in the SSBG (Cohen).

Later, public sentiment opposed maternal dependence on welfare and compelled welfare recipients with children above age three to engage in job training, education, or employment. Under the Family Support Act of 1988 (FSA), states could require mothers

with children as young as one year of age to participate in these activities. In exchange, the FSA included a guarantee of child care for parents receiving welfare and those transitioning off welfare for one year, which quickly escalated demand. Child care subsidies could be spent in for-profit and non-profit centers and family care settings, many of which had only limited provisions for quality control.

Growing concerns about the cost, supply, and quality of care for children of low-income working parents (as opposed to parents receiving welfare), however, led to the enactment of legislation in 1990 that expanded federal support by establishing two new child care grant programs: the Child Care and Development Block Grant (CCDBG) and the At-Risk Child Care Program (Title IV-A) (Lombardi, 2003; Cohen, 1996). Though the CCDBG contains minimal health and safety standards, the law does require that states set aside 4 percent of CCDBG funds to improve child care quality (U.S. Dept. of Health and Human Services, 2008a; Cohen). Funding for the CCDBG is $5.0 billion in 2008 (Linden et al., 2008; Child Care Bureau, 2008).

Under the 1996 Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA), Temporary Assistance to Needy Families (TANF) replaced AFDC and brought with it a new philosophy that shifted the focus of welfare from cash assistance to moving individuals into the workforce. The TANF legislation also eliminated the federal "guarantee" of child care established in the FSA, and instead merely limited states' ability to sanction recipients for failing to work due to a lack of child care (Greenberg, 1998). Following steep declines in the TANF rolls since 1996, many states used TANF money to subsidize child-care expenses, as allowed under the legislation. From 1997 to 2000, TANF child care funding rose from $0.3 billion to $4.0 billion; it has since declined, however, to $3.1 billion in 2006 (Center for Law and Social Policy, 2007).

The late 1990s witnessed a shift in thinking about federal support for child care: rather than regarding it as primarily a support for working mothers, policymakers began to understand child care as an opportunity for early education and family support (Lombardi, 2003). This shift is reflected in the establishment in 1995 of the Child Care Bureau in the Department of Health and Human Services to consolidate the design, financing, and administration of federal child care policy. In 1998, following a White House Conference on child care, the Child Care Initiative began policy efforts to expand

federal assistance and direct support for early childhood programs and improvements in infrastructure, licensing, and professional development.

However brief, this review clearly conveys ongoing shifts in federal policy with regard to child care. For those concerned with "education" policy, the inclusion of this saga may seem inappropriate. Yet we suggest that any picture of educational policy for preschool children would be incomplete without acknowledging the formidable role that child care plays in the care *and* education of young children.

II.4. Early Education as a Response to Maternal and General Workforce Employment

It may be easy to associate federal support for child care with the needs of low-income, welfare-dependent, or low-wage-earner families, but this would be far from accurate. Since the Second World War, women of all income brackets and professional standings have entered the labor force, precipitating much policy discourse regarding the appropriate federal role in supporting their work. Proponents for greater federal support argued that if the three-dollar martini could be written off as a business expense, why couldn't child care?

In reality, though, dependent care deductions have been part of the Internal Revenue Tax Code since 1954 (Cohen, 1996). Originally limited to widows and widowers, mothers whose husbands were incapable of economic support, and the unmarried, the deduction has since expanded to include more claimants and become a tax credit, which allows more taxpayers to benefit from it. Presently, under the federal Child and Dependent Care Tax Credit (CDCTC), all families are allowed to claim up to $3,000 in child-care expenses for one child/dependent and up to $6,000 for two children/dependents. For families with incomes of $15,000 or less, families receive a 35 percent credit on these expenses, or $1,050 for one child/dependent and $2,100 for two or more children/dependents (National Women's Law Center, 2008). The credit is non-refundable, meaning that families who owe no income taxes receive no assistance through the credit provision. As such, current tax policy acknowledges the importance of child care in relation to earnings, even though it neither covers the full costs of care nor provides comparable benefit to all workers.

II.5. Early Education as a Response to the Needs of the Military and Federal Employees

When the military's All Volunteer Force began in 1973, the predominance of single men in its ranks came to an end. From 1973 to 1989, the percentage of women in the military rose from 2 to 11 percent (Campbell, Applebaum, Martinson, & Martin, 2000). By 1985, 55 percent of active-duty personnel were married. These profound shifts in the military population created a surge in demand for child care; yet the military's system was loosely structured, largely unregulated, and frequently low quality. A 1982 U.S. General Accounting Office report found unsafe and unsuitable conditions and inadequately trained and compensated staff in many military child care centers (U.S. General Accounting Office, 1982).

The response was the Military Child Care Act, which passed in 1989 with the goal of improving the quality, availability, and affordability of military child care (Campbell et al., 2000). Today, the Department of Defense supports the largest employer-sponsored system of child care in the country (Zellman & Gates, 2002). It serves over 200,000 children (ages zero to 12) in over 900 child development centers and 9,000 family child care sites at over 300 locations (Neugebauer, 2005). Parents with newborns, and women who are pregnant, can also receive home visits as part of the military's New Parent Support Program (Military OneSource, 2008).

In addition to supporting military children and families, the federal government also supports a network of child care services via the General Services Administration (GSA) child care centers. With over 110 centers in GSA-managed space across 31 states, the District of Columbia, and Puerto Rico, these Centers serve federal employees' children from birth to five years of age in accredited settings (General Services Administration, 2003).

II.6. Early Education as a Response to Demands for Excellence and School Readiness

The No Child Left Behind law, the 2002 reauthorization of ESEA, was a response to persistent demands for excellence in public education and a gnawing need to close the achievement gap among children of different backgrounds. With increasing concern, policymakers also noted the differences among children in their "readiness" for

kindergarten (Lee & Burkam, 2002). Even so, while NCLB took dramatic steps to increase the federal role in public education, little in the law directly concerned preschool education, with the exception of the three following components (Kauerz & McMaken, 2004).

First, the law's heavy emphasis on testing and accountability evoked a new focus on early childhood accountability and, with it, concerns regarding the "trickle down" of inappropriate curriculum and testing for young children. Even though NCLB does not mandate testing children below third grade, some have raised concerns regarding the press to assess young children. Others view NCLB's mandate to foster more intentional teaching by using regular assessment as a tool for increasing academic achievement among children at risk of school failure (The National Early Childhood Accountability Task Force, 2007).

Second, NCLB's focus on improving the quality of teachers affects early childhood educators in two ways. The law created the Early Childhood Educator Professional Development program (ECEPD), which provided competitive grants of $14.6 million in 2007 (Linden et al., 2008) to local partnerships for professional development for teachers and caregivers of children from birth to kindergarten who come from low-income families or high-need communities.[3] The ECEPD was not funded in 2008 (Linden et al.), even though NCLB's demand for highly qualified teachers directly affects early childhood educators in schools that use Title I funds to pay for their pre-k programs (U.S. Department of Education, 2004).

Third, NCLB significantly increases funding for Early Reading First (a program for children from birth through preschool age) and Reading First (a program for children from kindergarten through third grade), with the goal of helping children read proficiently by third grade. Early Reading First and Reading First began as parts of President Bush's Good Start, Grow Smart initiative, which was announced in April 2002.

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[3] In addition, the 2008 reauthorization of the Higher Education Act created three-year grants for states to improve the quality of early childhood teaching by establishing local Early Childhood Professional Development and Career Task Forces (Mead, 2008), as well as offering loan forgiveness to those who work in early childhood programs such as Head Start.

Together, Early Reading First and Reading First try to address the concern that many children enter kindergarten without reading skills that are critical to success in school. Focused on literacy instruction and assessment in communities with a high percentage of children from low-income families or children reading below grade level, Early Reading First has a budget of $112.6 million in 2008 (Linden et al., 2008) to assist staff and preschool children in child care, Head Start, and school or family-based literacy programs.

Responses to demands for excellence and school readiness were also manifest in the Good Start, Grow Smart initiative. This initiative requires states, as a part of their CCDBG plans, to create voluntary early learning guidelines (ELGs) for state-funded programs, and gives states more flexibility in how they may spend their federal child care funds for early education programs. It also supports the development of Head Start's accountability system, and a training program for Head Start teachers in early literacy instruction (Child Care Bureau, 2006). It is important to note that the Good Start, Grow Smart initiative was designed to include early education programs funded from multiple federal agencies, although sufficient funding did not accompany the initiative.

These are not the first federal efforts to support the development of language and literacy skills before kindergarten entry. In 1988, the federal government enacted the Even Start program, which takes a novel approach by combining early childhood language and literacy instruction with adult literacy programs and training for parents in how to participate in their children's learning. The program targets low-income families in which parents have low literacy skills or low English proficiency and have children up to age seven. Funding in 2008 is $66.5 million, a decline of 73 percent from its 2004 funding of $246.9 million (Linden et al., 2008).

II.7. Early Education as a Response to the Press for Success: Model Programs

Perhaps as much as any federal policy, a trilogy of well-evaluated programs has altered the early childhood landscape by generating unprecedented momentum for the expansion of the field. Any analysis of efforts to advance American early education would be incomplete without reference to them, despite the fact that the efforts were not federally legislated. Given their importance and the rigor of their scientific approach, we

present the three model programs (though there are others) here, and discuss their positive and enduring results in Section III.

Prominent among the model programs, the Perry Preschool in Ypsilanti, Michigan provided high-quality preschool to three- and four-year old African American children living in poverty and at high risk of school failure. The program involved part-day preschool during the academic year and weekly home visits, both for one or two years (Schweinhart, 2002). As part of the program, the High/Scope curriculum was used. The average cost per child per year was estimated at $9,200 (Barnett, 1996). A second well-researched program that has received national attention is the Abecedarian preschool in Chapel Hill, North Carolina, which served children at high risk of school failure in an intensive full-day, full-year, five-year program from 1972 to 1977. The average cost per child per year was estimated at $13,900 (Masse & Barnett, 2002). A third effort, the Chicago Child-Parent Centers, is a school-based program that offers educational enrichment and family services to preschoolers. Similar to Head Start in its goal to offer support to families, the program also resembles Head Start in cost; the average cost per child per year is estimated at $6,700 (Reynolds, Temple, & Ou, 2003).

Although these programs varied in duration, intensity, and cost, they shared comparable successes, as well as a holistic approach to young children's development that went beyond short-term goals regarding IQ. Further, with common origins as research-driven, laboratory programs, they invariably employed highly qualified and devoted teachers who engaged in reflective practices.

II.8. Early Education as a Response to Devolution and Increasing State Roles

Since the late 1980s, the devolution of responsibility for many domestic policies to the states has given rise to increasing state investments and authority. No exception, early education has experienced a large increase in public investment at the state level. This is apparent in the fact that 38 states have funded public pre-k programs, surpassing, in the aggregate, Head Start's enrollment (Barnett et al., 2008). But enrollment is not the only marker of vast increases in state commitments to young children; in 2007, state spending for pre-kindergarten rose to an all-time high of $3.7 billion (Barnett et al.). States use very different approaches to serving preschool children, with some states, such

as Oklahoma, locating their programs entirely or primarily in public schools; others, such as Georgia and New York, employ a diverse array of public and private providers. Some invest pre-k dollars in child care programs, underscoring the growing acceptance of child care as an important source of educational opportunity for young children.

II.9. Early Education as a Response to Incoherence and the Need for Infrastructure

As state early childhood investments in early education have dramatically increased, policymakers and others want to know if increased investments are making a difference in the lives of young children and if the quality of the programs is improving. This concern is particularly acute given that data indicate that mainstream early childhood efforts are not high in quality, are not well coordinated, and are not realizing their intended outcomes (Cost, Quality, and Outcomes Study Team, 1995; Vandell & Wolfe, 2000).

In trying to account for the often poor quality of programs that has characterized American early education, some have pointed to underinvestment in the infrastructure, which includes those elements that undergird and advance direct services—notably, systematic approaches to professional development, regulation, accountability, governance, and finance (Kagan, 1991; Sugarman, 1991). Research is also a critical element of infrastructure. Realizing the importance of a functioning infrastructure to sustain quality, efforts have emerged to enhance the quality of the teaching workforce, to instantiate effective and appropriate standards and assessments for young cadre, to implement quality rating and improvement systems, to create state-level governing entities, and to enhance the quality and quantity of early childhood research.

Although these are mostly state-based efforts, the federal government's role in advancing research related to young children and early education is particularly noteworthy. Though the federal government has been "collecting, analyzing, and disseminating" the results of educational data since the creation of the Bureau of Education in 1867 (Vinovskis, 2000, p. 359), today the federal research enterprise in early education, while growing, is scattered over a variety of agencies (St. Pierre & Rossi, 2006), including but not limited to: the Office of Planning, Research, and Evaluation in the Department of Health and Human Services, which includes research on Head Start;

the Office of the Assistant Secretary for Planning and Evaluation; the National Institute of Child Health and Human Development; the National Science Foundation; and the Institute of Education Sciences (IES) in the Department of Education (Raden, 2004). A comparatively new addition, the National Center for Early Development and Learning (NCEDL) is the first federal research center funded under educational auspices (IES) to devote itself entirely to early childhood.[4] Despite these investments in research, and the fact that some pieces of legislation even provide small percentage "quality set-asides," the need to build an infrastructure is still not a priority for public funds (Fisher, 2000).

As this review suggests, the evolution of American early education is hallmarked by numerous efforts, each emerging as a response to changing social, political, and economic demands. One could argue that this approach produced a sense of urgency coupled with unwieldy expectations for poorly funded programs. Moreover, because each era's needs varied, policy responses were disparate in purpose and highly episodic. Long-range, systematic, and comprehensive planning to address pressing social issues was not the norm, with the consequence that the polemics of mission, ideology, public role, and service delivery instantiated early on festered. Even so, interesting and valuable efforts emerged. Just how valuable these efforts were and just what their effects and effectiveness have been is the subject of the next section.

III. Learning from Experience: Evidence of Policy and Program Effectiveness

Taken together, the results of the federal programs and assistance discussed above, and those of the significant state and privately funded initiatives in early education, are at once disappointing and encouraging. Yet to better understand these results, we need to discuss the programs and efforts individually. In this section, we present data on the individual programs described in Section II. For example, the model

[4] Federal spending on early childhood care research in 1997 totaled $48.7 million (Jones, Ross, & Kerachsky, 1998). Calculating an update of this number, i.e., federal research funding directed solely to early childhood, is beyond the scope of this paper.

programs discussed in Section II.7 have produced notable results that appear to disrupt the pattern of inter-generational poverty. Broader programs such as Head Start have produced modestly positive results that were somewhat dispiriting in light of the very high expectations that precipitated the birth of the program; yet findings from recent studies have been more encouraging. IDEA has substantially improved funding and attention to the educational needs of children with disabilities, while being hobbled by criticisms of inadequate funding and inaccurate identification of children needing "special education." State pre-k programs are mostly in their infancy, but the early results are encouraging, though they, too, may fall short of expectations created by more intensive model programs. Federal child care funding has generally been piecemeal, pragmatic, and inadequate in assuring that children can stay in high-quality settings of care and education. Nascent efforts to build a coherent infrastructure for early education, neglected since the earliest days of the nation's history, have emerged only in recent years, primarily at the state level. In short, the goals of excellence, coherence, and equity endure as aspirations more than realities.

To assess the specific results of these programs, we must consider several standards of effectiveness. For our purposes, we take as the primary standard of effectiveness whether or not federal policy or programs have improved outcomes for children, which include short- and long-term cognitive, physical, social, and emotional results, and social-indicator outcomes such as school attainment, employment, income, and avoidance of criminality. It should be noted, however, that many studies use the standard of "program quality," an assessment of the components of preschool programs that research has identified as predictors of positive child outcomes. When discussing quality, most studies distinguish between structural components (focusing on regulatable factors such as teacher/child ratios, group size, and teacher education) and process components (focusing largely on adult-child interactions). As a result, in the discussion below, we distinguish between *excellence*, which connotes positive changes in child outcomes, and *quality*, which relates to the structural and process components of the program.

When possible, we also address the important goals of whether early education policy and programs support parents' ability to sustain employment and participate in

their children's education, and whether they demonstrate cost-effectiveness. Given that the quality and extent of evaluations regarding early childhood education vary tremendously (Gilliam & Zigler, 2001), we report on research findings that have inspired reasonable confidence, and whenever possible, we rely on randomized experimental or quasi-experimental trials to evaluate program effects.

III.1. Head Start

The Head Start program began as an integral component of President Lyndon Johnson's federal campaign to do nothing less than break the lock-step pattern of inter-generational poverty that trapped so many low-income children in deplorable conditions and grim futures. With this lofty goal in mind, the initial evaluations of Head Start were disappointing. The most publicized measure of effectiveness was the change in children's IQ, drawing on research suggesting that early education could improve IQ and the academic achievement that seemed to go with it (Vinovskis, 1999a). This was a narrow focus for how to evaluate Head Start, given the array of health and social services offered by the program in addition to its educational component. But initial excitement about the program fueled high expectations for its effect on IQ and presumed subsequent improvement in school achievement and escape from poverty.

These hopes were dashed when the Westinghouse Learning Corporation's evaluation of the program in 1969 found that the IQ of Head Start children improved only modestly and then faded when children entered elementary school (Vinovskis, 1999a). Although supporters of the program sharply criticized the methodology of the evaluation, the uproar in academic and public circles about the program's disappointing results were hard to overcome.

By the time of President Clinton's inauguration in 1991, subsequent evaluations of Head Start, conducted in a climate of perhaps more modest expectations, had produced more encouraging results. The Educational Testing Service's Longitudinal Study of Head Start, for example, followed children into second grade and found positive effects on both verbal test scores and measures of social adjustment such as impulse control (Lee, Brooks-Gunn, Schnur, & Liaw, 1990).

Subsequent studies tried to address questions regarding the methodology of Head Start evaluations. Currie and Thomas (1995), for example, controlled for unobservable differences in a non-randomized study of Head Start children by using the National Longitudinal Survey of Youth to compare siblings who participated in Head Start to siblings who did not. Unlike other evaluations, the Currie and Thomas study also included a significant number of non-African American children who attended Head Start. The study found reading and vocabulary gains among African Americans that were similar to other studies, and which similarly "faded-out" over time. For white children, however, Head Start appeared to produce positive gains that persisted over time and resulted in lower rates of grade retention. This observation suggested that the fade-out of Head Start stems not from the program itself, but from the subsequent low quality of elementary schools that many African Americans who live in high-poverty districts are more likely to attend (Magnuson, Ruhm, & Waldfogel, 2007).

The Department of Health and Human Services is currently conducting an experimental evaluation of Head Start that promises to make an important contribution to the literature. In this study, children were randomly assigned to Head Start or not. Many of those who were not in Head Start may have found other education or care settings. Thus, the evaluation assesses the effect of Head Start relative to the mix of other options open to low-income parents. The first wave of results from this study showed that Head Start modestly improved pre-language and cognitive abilities and school-related behavior—by 0.10 to 0.24 standard deviations (U.S. Dept. of Health and Human Services, 2005). This amounts to a reduction of about one-quarter of the gap between children who enter Head Start and national norms for children on measures of language, pre-literacy, and math skills (U.S. Dept. of Health and Human Services, 2003).

Another way to evaluate Head Start is to compare its effects to those of state pre-k programs. For example, a study in Georgia (Henry, Gordon, & Rickman, 2006) compared children in Head Start with children who were eligible for Head Start but who attended the state pre-k program. Although the two groups were statistically similar at the beginning of their preschool year, by the beginning of kindergarten, children attending Georgia's pre-k program demonstrated higher learning and developmental outcomes on 5 of 6 direct cognitive and language assessments and 14 of 17 teacher assessments of

children's academic and social skills, health, communication, and "general readiness." This suggests that, using a definition of school readiness that encompasses both academic skills and teacher perceptions of social and health indicators, children in Georgia's pre-k program did better than comparable children in Head Start.

While these studies focus on short-term results, policymakers require long-term evaluations of Head Start to assess the durability of its effects and the likelihood that it will be worth its cost. To this end, Garces, Thomas, and Currie (2002) looked at siblings in the federal Panel Study of Income Dynamics and found lasting effects of Head Start for children who attended Head Start—compared to siblings who did not—on high school completion and college attendance rates for white students and reductions in criminality rates for African Americans. Though these results are encouraging, the study did not involve random assignment and no cost-benefit analyses were conducted. Even so, the benefits appear to be large enough to outweigh the program costs (Duncan, Ludwig, & Magnuson, 2007).

A central question about Head Start, which affects the interpretation of its results and recalls the polemic of early education's mission, is whether the program should be evaluated as a narrowly defined early education program or a more holistic child and family health, education, and social support program, reflecting its original mission. The program began as—and continues to be—a two-generation approach to promoting school readiness among young children. Its supporters resist the common focus on math and reading scores as exclusive indicators of children's readiness to learn, and instead advocate for the inclusion of social competence as a core program goal (Zigler & Styfco, 2004). For example, Head Start performs very well on measures of children's access to health care, nutrition, and immunizations. Certainly, the program has also fulfilled its mission of engaging parents in their children's education; parents comprise 66 percent of the 1,384,000 volunteers who assist the 220,000 Head Start employees (Office of Head Start, 2008b). This legion of devoted parents has also contributed to a strong political constituency that advocates effectively for Head Start.

If we adopt a broader definition of Head Start's purpose beyond narrowly defined educational goals, Head Start could be considered a generally excellent preschool program relative to most other options (Currie, 2001). In this light, it is ironic that Head

Start may often be an impractical choice for working parents. One study found that Head Start participation *decreased* as welfare recipients moved into the workforce, which may result from Head Start's part-day, part-year schedule being incompatible with the work schedules required by most employers (Chang, Huston, Crosby, & Gennetian, 2007).

In any case, it fair to say that Head Start scores reasonably well on measures of excellence. Yet its status as a program that sends federal dollars directly to local providers does little to enhance the coherence of the early education system. Proposals to "devolve" responsibility for Head Start to the states have met political opposition and skepticism that states will sustain the federal commitment to Head Start. In terms of equity, Head Start is largely responsible for the estimated 62 percent of children living in poverty who attend preschool (Barnett & Yarosz, 2007). Even so, insufficient funding has prevented the program from serving all children who qualify. Repeated calls to "fully fund" Head Start have generally fallen short of the program supporters' goals to cover every child living in poverty. Although a lack of funding is one major concern, problems persist in measuring whether low-income children are receiving services in Head Start and/or other early education programs simultaneously. The current lack of state capacity to render data on unduplicated counts of preschool participants, in part, accounts for this. Moreover, families living in poverty are often transient, which makes tracking them, and the services their children receive, difficult.

III.2. Early Head Start

The creation of Early Head Start was based on research indicating that children's learning began long before age three or four, and using successful elements of Head Start, Early Head Start took hold with very positive initial evaluations. At age three, children in Early Head Start performed better than "control" children in cognitive and language development, displayed higher emotional engagement with their parents, more sustained attention with play objects, and less aggressive behavior (Love et al., 2005). Compared with a control group, Early Head Start parents were also more emotionally supportive, provided more language and learning stimulation, read to their children more, and spanked less.

The 2007 Reauthorization of Head Start moved to expand and improve Early Head Start. It authorized new funds to expand the program, and allowed Head Start programs to convert slots currently used to serve preschoolers to those for infants and toddlers (U.S. Dept. of Health and Human Services, 2008b). It required that by 2010, all Early Head Start teachers have at least a Child Development Associate credential (CDA) and training in early childhood development (Waters & Beckerman, 2008). In an environment of very scarce resources, the federal government is at least beginning to recognize the value of the earliest education program.

III.3. Title I Funding

The expansive purpose of Title I funding—"to improve the academic achievement of the disadvantaged" (U.S. Dept. of Education, 2008) has led to inconsistent uses of the money across local districts. Only recently has the focus on the readiness gap led to scrutiny of how localities use Title I funding for preschool. Because we are not aware of any evaluations of the child outcomes specifically related to Title I funding for preschool, we focus instead on how effectively the funds have been used to support preschool services in public schools.

States and local school districts tend to use Title I money by layering it onto other sources of funding, such as child care subsidies, Head Start, TANF money, and state pre-k funding, to create or support preschool programs and services for young children (Ewen & Matthews, 2007). The complexity of this patchwork funding frequently requires strong and creative local leaders who collaborate with programs outside the public school system and leverage Title I funds to qualify for state funds. When this fabric of funds is sufficient, it can sustain programs that otherwise might not survive. The Chicago Child-Parent Centers, for example, which opened their doors in 1967, rely heavily on Title I funding ($6 million in 2006), and could be considered "the second-oldest federally funded early education program in the U.S." (Ewen & Matthews, p. 8).

Some data suggest that use of Title I funding for preschool is growing. In 2003, 456,492 children attended Title I-funded preschool programs, up from 329,755 in 2000; this represents a modest rise from 2 percent of all Title I participants in 2000 to 3 percent of all Title I participants in 2003 (Ewen & Matthews, 2007). While school districts may

be increasing their use of Title I funding for early education, some of them also report that the accountability requirements of NCLB make it hard to sustain the use of these funds for early childhood as K-12 schools strive to meet the increasing requirements of NCLB over time (Ewen & Matthews). Here, as in so many areas of early childhood, a stable funding base is lacking.

III.4. IDEA

Though Head Start and Early Head Start serve children with disabilities, IDEA makes early education an entitlement for all disabled children. This has led to the inclusion of thousands of children in publicly funded preschool settings whose families might otherwise have been unable to afford such programs. In 2007, 407,967 three- and four-year-olds were in IDEA-funded preschool settings; this represents 6 percent of all four-year-olds and 4 percent of all three-year-olds (Barnett et al., 2008). Moreover, in some communities, IDEA has become a lynchpin for a variety of early childhood services (Harbin & McNulty, 1990).

IDEA faces challenges, however. Critics have long charged that the federal government's explicit promise to fund 40 percent of IDEA costs, with state and localities covering the balance, has never been fulfilled in practice. Moreover, the identification and determination of eligibility of children for IDEA has come under persistent criticism for the inappropriate designation of ethnic minorities and English Language Learners (ELLs) in special education (Garcia & Delis, 2006). As the number of young children from racial and ethnic minorities and immigrant families rises in the general population, the challenge of effective identification among young children will only grow. Finally, the field of special education has also felt new pressures from the standards and accountability movement; the 2004 reauthorization of IDEA required states to develop outcome measures to assess the quality and effectiveness of IDEA services, an endeavor that demands careful and creative consideration (Odom et al., 2005).

III.5. Model Programs

The gold standard of program evaluations is a randomized, controlled trial. Because these experiments are costly and difficult to conduct in the social sciences, they are rare. Yet

randomized evaluations of two model programs that we described in Section II have found very impressive results that appear to endure over time. Both the Perry Preschool and Abecedarian programs improved cognitive and language abilities by 0.75 to 1.50 standard deviations (Barnett & Belfield, 2006). More importantly, longitudinal research has found that participation in both programs led to greater success in school, avoidance of special education, less truancy, higher educational attainment, higher earnings, less welfare, and less criminality (Barnett & Masse, 2007; Belfield, Nores, Barnett, & Schweinhart, 2006; Campbell, Pungello, Miller-Johnson, Burchinal, & Ramey, 2001). Both programs have also proven to be highly cost-effective. Using data on individuals at age 40, one study found that the Perry Preschool saved taxpayers $8.74 for every $1 invested in the program (Karoly, 2006). Abecedarian, which is more costly than the Perry Preschool because it is a year-round five-year program, returned $3.23 for every $1 (Karoly).

Another model program, the Chicago Child-Parent Centers, was subject to a non-randomized, but still careful quasi-experimental evaluation in which researchers compared participants to a matched-group cohort and followed their progress in life over time (Temple & Reynolds, 2007). Drawing from a larger sample (over 1,500 children) than the Perry Preschool and Abecedarian evaluations, the results were again impressive: among children in the program, cognitive and language abilities improved by 0.38 to 0.79 standard deviations (Barnett & Belfield, 2006). Longitudinal evaluations have found that program participants, when compared to children who did not participate, demonstrated higher school completion and college attendance rates; fewer felony arrests, convictions, and incarcerations; fewer depressive symptoms and out-of-home placements; higher rates of full-time employment; lower rates of disability; and better access to health care (Reynolds et al., 2007). A cost-benefit analysis found that the program returned $7.14 for every $1 invested (Reynolds et al., 2003).

It is worth noting that these programs, with the exception of Abecedarian, were generally *not* successful at creating dramatic, long-term improvements in IQ (Duncan et al., 2007; Karoly, 2006). This has prompted questions on the derivation of the school achievement and employment changes that the programs seem to affect. Economist James Heckman (Heckman, Sitxrud, & Urzua, 2006) has posited that the non-cognitive abilities nurtured by these programs, such as motivation, persistence, and self-esteem, have a deep

and abiding effect on social and economic success. If true, it indicates how a narrow focus on IQ gains limits our ability to understand the potential impacts of early education.

What is clear is that participation in these programs changed the life trajectories of children, preventing school failure and persistent poverty. Yet the programs involved a relatively small number of children in intensive services. Despite their demonstrated cost-effectiveness, their price tags are higher than most policymakers can imagine taking to scale with more children. Instead, most states have designed lower-cost pre-k programs and/or relied on Head Start. Though short-term findings indicate that Head Start is much less effective than model programs, it comes at a cost of $7,326 per child (Office of Head Start, 2008b), or roughly 60 percent of the cost of the Perry Preschool and 70 percent of the cost of the Abecedarian program (Currie, 2006).

III.6. Federal Subsidies for Child Care for Welfare Recipients and the Working Poor

Growing significantly since TANF was enacted in 1996, federal child care priorities have given a nod to quality but have remained largely focused on providing supports to foster maternal employment. Given modest commitments to quality enhancement, it is not surprising that the overall quality of most child care remains low (Fuller, Kagan, Loeb, & Chang, 2004; NICHD, 2006). In terms of excellence, most estimates of the effects of *typical* center-based child care indicate that it improves preschool children's short-term cognitive and language abilities, relative to control groups, by a modest 0.10 to 0.15 standard deviations (Barnett & Belfield, 2006).

The generally low quality of most federally funded child care raises concerns regarding both excellence and equity. In reality, welfare and low-income families have only limited access to quality care for several reasons on the demand and supply sides. On the demand side, families receive their child care subsidies in the form of vouchers; the value of vouchers, which states determine, is often insufficient to cover the full cost of high-quality care, forcing recipients to select lower-quality care. Frequently they turn to kith and kin care that may also better meet their need for off-hour care than what most child care centers offer. In general, however, kith and kin quality is lower than center quality, and is unregulated, thus exacerbating parental access to quality settings for their children (Fuller et al., 2004).

Perhaps even more importantly, on the supply side, federal law has only minimal requirements regarding the quality of programs that states can subsidize with federal money, which allows states to set their own regulations and decide when to enforce them (Currie, 2006). In many states, a lack of sufficient regulatory apparatus persists despite the consensus of data indicating that state regulations play a greater role in increasing the supply of quality options for low-income parents than do demand-side factors (Fuller et al., 2004; Cost, Quality, and Outcomes Study Team, 1995). Some states also have onerous reporting requirements that may require parents to repeatedly take time off from work, which may undermine the goal of the subsidy.

Finally, in terms of coherence, federally subsidized child care programs have historically been excluded from efforts to promote high-quality early education programs. The Good Start, Grow Smart initiative, however, took steps to create linkages between the CCDBG and state-level efforts to promote early learning. The effectiveness of these efforts has not been formally evaluated.

III.7. Child and Dependent Care Tax Credit

Because attributing child outcomes to a tax credit is difficult to discern, we discuss the effects of the Child and Dependent Care Tax Credit in terms of the strengths and weaknesses of its provisions. Certainly, the CDCTC benefits middle-income families more than low-income families. Although the maximum expense that a family with two children can claim is $6,000, few if any poor families can afford to pay $6,000 a year for child care (Currie, 2006). As noted in Section II.4, low-income families receive a maximum credit of only $1,050 for one child and $2,100 for two or more children; this modest level of support is particularly unlikely to support the higher cost of care for infants and toddlers, relative to care for older children. Moreover, the poorest families may not owe any taxes, making the non-refundable credit useless to them.

As a consequence, the tax credit provides modest assistance to middle-income families, while poor families rely heavily on federal subsidies to help them afford care for their children. Even so, the credit remains the largest public investment in child care and is very important to families that can utilize the credit (Cohen, 1996).

III.8. Military Child Care

The military child care system has been lauded as a model for the nation in its capacity to provide equity of access to generally excellent services (DeVita & Montilla, 2003). Increases in staff compensation and training have played a role in accelerating quality, as does the military's focus on accountability through the development of an inspection and certification system. Ninety-five percent of all military child care centers received the National Association for the Education of Young Children accreditation, and staff turnover is among the most stable in the field (Campbell et al., 2000). The Department of Defense subsidizes 50 percent of the annual cost for every family, and it employs a sliding scale to determine the amount that lower-income families must pay to assure that care is affordable to all. Although it is a closed system that is not as porous as early education nationally, the military—like Head Start—is an excellent federal laboratory for innovation.

III.9. No Child Left Behind and Early Reading First

Though the NCLB legislation itself made few explicit demands on early childhood educators, its impact has been great. The law has fostered intense pressures to raise levels of quality in early childhood programs so that they can close the "readiness gaps" among children who differ by race, ethnicity, and socio-economic status, as measured by cognitive scores (Lee & Burkam, 2002). In particular, the law has motivated policy efforts to: (1) bolster the academic skills of young children and develop accountability systems through early learning guidelines; (2) increase the competence of the early childhood workforce; and (3) improve early literacy instruction.

First, state preschool educators are placing a heavier emphasis on academic skills (Stipek, 2006). This has been reflected in the early learning guidelines that states have created as standards of quality for their pre-k programs (Scott-Little, Kagan, & Frelow, 2003). While many in the field express concern regarding an over-emphasis on academically oriented curricula before kindergarten, others worry that children from low-income families who are not exposed to such curricula will begin kindergarten at a disadvantage (Stipek; Bowman, 1993).

Second, efforts to improve the quality of the early childhood workforce, inspired in part by NCLB, are growing, but have yet to yield data on their effectiveness. The field is generally characterized by limited recruitment strategies, low entry requirements, few opportunities for professional growth, low compensation, and high turnover (Kagan, Kauerz, & Tarrant, 2008). With regard to turnover, for example, a major study on early childhood teachers found that 76 percent of the teachers employed in the studied centers in 1996, and 82 percent of those employed in 1994, had left their jobs by 2000 (Whitebook, Sakai, Gerber, & Howes, 2001). With regard to compensation, not only are salaries low, but child care workers also routinely suffer from inadequate benefits, ranging from no health insurance and retirement to very limited coverage (Herzenberg, Price, & Bradley, 2005). Efforts to raise entry requirements in the field have created inconsistent results, which we address in a discussion on quality in Section IV.1.a.

Third, and more targeted than efforts to improve teacher quality, the Early Reading First program aimed directly to boost literacy skills of children. Beset by controversy, the program has simultaneously been lauded for its positive results and criticized for the nature of its evaluation. A national evaluation, released in 2007 and funded by the Institute of Education Sciences in the U.S. Department of Education, found that teachers in Early Reading First classrooms received more professional development, mentoring, and tutoring on literacy and curriculum topics than their non-Early Reading First counterparts; children in Early Reading First classrooms also had higher-quality interactions with teachers, greater access to literacy-building activities, more early-writing exercises, improved lesson planning, and regular screening and assessments of their skills (Institute of Education Sciences, 2007). The evaluation also found that Early Reading First had a significant positive effect on children's print and letter knowledge, but no significant effect on phonological awareness, oral language, or social-emotional skills (Institute of Education Sciences).

A 2006 report by the Congressional Research Service summarized some of the controversies surrounding the program: potential conflicts of interest existed between contractors/consultants of the program's evaluation and commercial reading-and-assessment companies; and the Department of Education's definition of scientifically based research, as outlined by NCLB, strictly and, some say, inappropriately limited states' choice of programs, assessments, and professional development packages

(McCallion, 2006). The resolution of these controversies, which requires a consensus regarding the appropriate evaluation of educational research and the latitude states should enjoy in choosing educational programs, is yet to come.

III.10. Good Start, Grow Smart

The Good Start, Grow Smart initiative, along with NCLB, has fostered emphasis on standards and accountability. Although early learning standards have not been formally assessed for their impact on child outcomes, their growth is evident. While every state has early learning guidelines for preschools (Scott-Little et al., 2003), at least 21 states have also developed standards for infant and toddler programs (Scott-Little, Kagan, Frelow, & Reid, 2008). By outlining what children should know and be able to do as they progress in preschool, the guidelines can serve as a mechanism for program improvement and professional development. However, to create an effective accountability system, programs must have the capacity to collect and use data to improve their practice and program decision-making. Few states have this type of system in place, although efforts, led by the Council of Chief State School Officers, are underway to support states as they develop comprehensive data and accountability systems for young children.

III.11. Even Start

Sometimes initiatives that began in response to calls for improved school readiness yield equivocal results. Evaluations of the Even Start Family Literacy Program, for example, have been discouraging (Vinovskis, 1999a). A randomized evaluation in 1995 found that Even Start did not appear to improve the literacy skills of participating preschool-age children and their parents (Vinovskis, 1999a). The findings suggested that the program might need to develop and test local models to understand better what components of the Even Start model could be effective under particular conditions (Vinovskis, 1999b). This need to adapt programs to the particular needs of communities has emerged many times in the design and implementation of early education and care programs.

Since the 1995 study, IES sponsored a second randomized evaluation of the program that again produced disappointing results. Although the study found that literacy skills among children and parents in the program improved modestly over time, those in a control group did equally well (St. Pierre et al., 2003). The study's lead investigators raised several possible questions that might explain the results: (1) whether the model was fully implemented in the study sites; (2) whether the program's instructional services were sufficiently intensive; (3) whether Even Start families participated sufficiently; and (4) whether Even Start's quality of instruction and curriculum content were sufficient to produce positive effects (St. Pierre, Ricciuti, & Rimdzius, 2005).

Even Start's administrators and participants have rallied Congressional support for the program, and have focused on boosting the program's quality by testing different curricula. With this purpose, IES sponsored a third randomized evaluation that compared a research-based literacy-focused child and parent curricula (the Combined Literacy Interventions and Outcomes curricula, called the "CLIO combined curricula") to the instructional practices in other Even Start programs (Judkins et al., 2008). The results, released in September 2008, were mixed. While the CLIO combined curriculum had positive impacts on some hypothesized precursors to the development of children's literacy skills, such as instructional supports for literacy, child social competence, and parenting skills, it had no apparent impact on child language development and early literacy outcomes (Judkins et al.). Sharp declines in the program's budget (described in Section II.6) reflect waning support for this model (St. Pierre et al., 2005).

III.12. State Pre-K

With enrollment in state pre-k now exceeding that of Head Start, we turn to a discussion of the effects of several pioneer pre-k programs. The pre-k programs in Oklahoma and Georgia, both examples of universal programs, have been carefully evaluated (with non-randomized, quasi-experimental designs), and have produced positive short-term results on cognitive and language scores among four-year-old children from a wide range of socio-economic backgrounds (Gormley, Gayer, Phillips, & Dawson, 2005; Henry et al., 2003). In Tulsa, Oklahoma, for example, the pre-k program

produced 0.38 to 0.79 standard-deviation improvements in children's literacy and cognitive test scores, relative to a control group (Gormley et al.).

These effects appear to be roughly half the size of those from model programs such as the Perry Preschool and the Abecedarian Project, and comparable to the effects of the Chicago Child-Parent Centers, but significantly higher than Head Start (Barnett & Belfield, 2006). It is possible that these results stem from pre-K programs hiring better qualified teachers and paying them more than does Head Start, as well as implementing a more academically oriented curriculum than does Head Start (Duncan et al, 2007), though we cannot confirm these speculations without further evaluations.

A broader evaluation of five state pre-k programs (Michigan, New Jersey, Oklahoma, South Carolina, and West Virginia) yielded positive though inconsistent effects on children's cognitive and language skills, such as vocabulary, math, and print awareness (Wong, Cook, Barnett, & Jung, 2008). An even broader evaluation of 11 state pre-k programs found positive short-term gains in math, language, and literacy, and social skills among four-year-old children (Howes et al., 2008). These results are very encouraging, but preliminary. We do not yet know how consistent they will be across different states, and they have not been tested for long-term durability.

III.13. Efforts to Build Infrastructure

Many policymakers at the state level regard infrastructure efforts as an important element in advancing quality services and in building a coherent early childhood system. Yet, infrastructure efforts as well as evaluation data about them are quite limited. Consider, for example, data on the most recent and popular infrastructure effort, the Quality Rating and Improvement Systems (QRIS), which aim to provide a common metric for quality and a means for quality improvement. Although QRIS efforts are now underway in 17 states (National Association for the Education of Young Children, 2008), preliminary data show encouraging results. In Pennsylvania, for example, an evaluation of Keystone STARS (Standards, Training/professional development, Assistance, Resources, and Support) found that child care centers and homes improved significantly as they moved up the STARS continuum (Barnard, Smith, Fiene, & Swanson, 2006). In addition, more targeted and long-standing efforts like professional development and

longevity awards achieve their goals of enhanced professional competence, higher compensation, and workforce stability (Child Care Services Association, 2005; Whitebook & Bellm, 2004).

Given these encouraging results coupled with the embryonic state of research in the area, additional studies that assess the linkage between infrastructure enhancement and improved teacher quality and child outcomes would be welcome (Kagan et al., 2008). But obtaining effective evaluations of infrastructure efforts can be challenging for several reasons. First, many of the new infrastructure efforts are both quite broad and distant from the children or settings they were designed to benefit. New efforts often relate to the establishment of inventive governance, financing, or accountability mechanisms that transcend delivery silos. The very nature of the intervention, then, coupled with its many players, makes attribution of success or failure imprecise. Second, and related, there is debate on what to evaluate and for what outcomes. Should we evaluate systemic implementation, improved program quality, or better child performance as outcomes of these efforts? Laden with concerns about the independent and dependent variables to be studied, research on the infrastructure is lacking.

In summary, the results of many of these various evaluations offer evidence that is, by and large, very encouraging. Indeed, some business leaders and economists have suggested that effective early education programs are one of the best public investments we could make (Committee for Economic Development, 2006; Heckman et al., 2006). Any plan for going forward, however, requires a clear understanding of lessons learned from past experience, which we offer in the next section.

IV. Lessons Learned: The Need for Excellence, Coherence, and Equity

Nearly 50 years of experience with a federal role in early education has produced important lessons about “what works” to guide future policy. While the goals of early education policy have veered from equity to excellence, and from equal opportunity to school readiness, we have learned from experience and increasingly rigorous research

how the goals of excellence, coherence, and equity should guide effective early childhood policy. Based on our review of the evidence, we argue that these three goals do not offer a menu of discreet aims from which policymakers could choose. Instead, we assert that together they represent inter-connected components of effective early education policy that uses federal dollars wisely, efficiently, and with maximum effect.

IV.1. The Need for Excellence

One salient lesson from experience emerges regarding efforts to achieve the goal of excellence: quality and culture matter.

IV.1.a. Quality matters. The many evaluations conducted on early education programs provide evidence of positive short-term and sometimes long-term effects of *high-quality* early childhood programs in terms of cognitive skills, school readiness, and social behavior (Bradley & Vandell, 2007; Barnett & Belfield, 2006). The research is also clear that many publicly funded early care and education programs do not achieve the standards of high quality (Justice, Mashburn, Hamre, & Pianta, 2008; Fuller et. al., 2004; Cost, Quality, & Outcomes Study Team, 1995).

Specifically, the data identify structural factors that contribute to high-quality programs, which in turn can yield more positive outcomes for children. For example, regulatable variables such as group size and adult-child ratios are important. Abundant data also suggest that when process quality is higher, children appear happier, have closer and more secure attachments to caregivers, and perform better on standardized cognitive and language tests (Vandell & Wolfe, 2000). Process quality, the relational aspects of caring for and educating children, has been demonstrated to have a modest effect on children's cognitive and social-emotional development through second grade (Bradley & Vandell, 2007; Peisner-Feinberg et al., 2001). Moreover, the NICHD study, which included more than 1,000 children in child care settings, found that the presence of structural aspects of quality increased the likelihood that process quality would be high, and in turn, that children's outcomes would improve (NICHD, 2006).

Recent work on curriculum, another element of process quality, indicates its importance as well. In its seminal *Eager to Learn* report, the National Research Council concluded, "While no curriculum or pedagogical approach can be identified as best,

children who attend well-planned, high-quality early childhood programs in which curriculum aims are specified and integrated across domains tend to learn more and are better prepared to master the complex demands of formal schooling" (Bowman, Donovan, & Burns, 2001, p. 8).

The Preschool Curriculum Evaluation Research Initiative (PCERI), funded by IES, is producing important findings regarding the relative effectiveness of particular curricula in promoting children's learning (Preschool Curriculum Evaluation Research Consortium, 2008). While past analyses have focused almost exclusively on curricula related to literacy and language, the PCERI and other federally funded research is examining the effects of both literacy and math curricula, as well as interventions to promote social-emotional skills such as self-regulation. This broadening focus reflects a growing awareness that the components of a child's "school readiness" include more than emergent literacy skills. Together, these research initiatives represent important progress toward understanding the processes responsible for the positive effects of early education.

From a myriad of studies, of all the quality predictors, the relational process between teachers and children has emerged with extraordinary reliability (Justice et al., 2008; Mashburn et al., 2008; Howes et al., 2008; Palermo, Hanish, Martin, Fabes, & Reiser, 2007; Burchinal & Cryer, 2003). We know that teachers who are less harsh, more supportive, and better trained provide higher-quality care and instruction that contributes to positive child outcomes.

Interestingly, however, while a consensus exists that good teaching is critically important in early education, data are equivocal regarding the precise degrees and the specific amounts of education and experience that are necessary to evoke quality (Preschool Puzzle, 2008; Kagan et al., 2008); indeed in a recent re-analysis of literature, no consistent association was found between "any index of teacher education and either classroom quality or child outcomes" (Burchinal, Hyson, & Zaslow, 2008, p. 3). The consequence of this uncertainty in the research is that wide disparities in current policy exist. In Oklahoma's pre-k program, for example, teachers must have a BA degree. In Georgia's pre-k program, teachers must have at least a high school degree and a CDA credential. Head Start hopes to have 50 percent of its teachers with BAs by 2013 (U.S. Dept. of Health and Human Services, 2008b). These policy inconsistencies have led some

to press for the development of a national teacher credential that would have currency across states and early childhood settings (Kagan et al., 2008).

In sum, although the data are clear that structural and process components of quality in early education programs matter a great deal, inferior quality settings remain common. Ongoing research should render important findings to improve our understanding of the specific components of quality programs, such as the curricula that work best and the type and amounts of teacher education and training that produce excellent results among children.

IV.1.b. Culture matters. The decline in the portion of the American population that is non-Hispanic White has received wide media attention, but less noticed is the more rapid shift in the backgrounds of the nation's children. While the U.S. Census Bureau (2008) predicts that today's racial and ethnic "minorities" will comprise 54 percent of the total population by 2050, we will reach this milestone much sooner—by 2023—among the nation's children. By 2050, racial and ethnic "minorities" will comprise 62 percent of the nation's children—almost two out of every three children, up from 44 percent today. Young children of the future will not only represent a broad array of cultural backgrounds, but many will also speak a language other than English at home. Because mismatches between program culture, teachers, and children can marginalize children in the classroom, squelch their curiosity, and set the stage for school failure (Bowman, 1993; Delpit, 1995), cultural backgrounds and norms must be taken into account when developing early childhood efforts of the future.

The desire to expand access to consistently high-quality programs for all children carries an inherent tension with the need to avoid program uniformity that effectively excludes children who come from different cultures and backgrounds (Fuller, 2007). One particular concern, for example, is the relatively low participation rates in center-based preschool among Latino families, a phenomenon that may reflect language and cultural barriers that have not been adequately addressed (Barnett & Yarosz, 2007). Any federal action in early education must be sensitive to this persistent need for a degree of local control of early education programs that embraces the cultural differences that are a foundational strength of our nation.

IV.2. The Need for Coherence

Long a neglected aspect of effective policy in the field of early education, the coherence of policies and programs has been gaining attention at both the federal and state levels. While these efforts are relatively new, we find four salient lessons that should guide federal policy going forward: (1) gaps in data hinder efforts to create effective early education policy and programs; (2) states vary widely in the quality and extent of early education programs that their families can afford; (3) the connection between infrastructure and quality is unavoidable, and (4) federal and state governments must work together in partnership to create effective policy and programs that serve American families.

IV.2.a. Data gaps hinder sensible policy formation. Important gaps persist in our knowledge regarding what programs work for whom, and under what conditions. While we have learned much since the 1960s, when the federal commitment to early education surged, we are left with cracks in our knowledge base, particularly related to what elements of program quality work best with children who have special needs, children from low-income families, children from diverse cultures, and children who are English-language learners.

We also lack an integrated, ongoing data-collection system that can tell us what programs children attend, at what cost, and with what results. A policymaker might reasonably ask, “What children are attending which programs? How much does it cost? What are the results?” Yet we could answer only in general terms. For example, given that Head Start is usually a half-day, school-year program, its children are likely to attend a variety of other child care settings as well; disentangling this overlap in program participation is only one challenge to discerning where young children spend their days.

Even so, the press for scientifically rigorous research is yielding important findings with federal money. The Early Head Start Research and Evaluation Study, the NICHD Study of Early Child Care and Youth Development, the Head Start Impact Study, the Early Childhood Longitudinal Studies (birth and kindergarten cohorts), the Preschool Curriculum Evaluation Research program, and others are all contributing greatly to what we know about making sound public investments in early childhood.

What is still needed, however, is a coordinated and ambitious effort to fill the gaps that hinder the excellence and coherence of early education efforts.

IV.2.b. Policy disparities across and within states are wide and deep. The states vary enormously in their expenditures and regulations for early education. Spending per child in state pre-k programs, for example, ranges from $10,494 in New Jersey to $2,335 in Florida (Barnett et al., 2008). Child-care subsidies also differ substantially among the states; in 2002 for example, the monthly maximum family income that qualified for child care subsidies varied from $1,482 in Missouri to $3,501 in Minnesota (Currie, 2006). States also differ in how they regulate child care quality, and whether they enforce these regulations to ensure that all children are in safe, nurturing, and stimulating care. Class size and teacher-child ratios range from 15 with a teacher and full-time assistant in New Jersey to no limit in Texas and Kansas. Teacher credential requirements vary from a BA with a teaching certificate in early childhood in some states to only a high school diploma in others. In one sense, this variation offers 50 laboratories of state-level experiments in how to—and not to—structure systems of early education for American children. Yet these policy disparities evoke programmatic inconsistencies for children and profound costs and inequities for families. In a nation that values equity, such vast state-by-state differences provide a rationale for federal involvement in early education, just as disparities have occasioned federal involvement in other times and fields.

IV.2.c. Only a stable infrastructure can sustain quality. Many states have taken important steps to create stable and effective governing structures for the myriad early education programs that serve their constituent families. Often they have done so with the critical understanding that a coherent systemic framework for funding and governing early education programs is a necessary foundation for programs that are consistently high-quality. We have learned the hard way from decades, even centuries, of experience that sporadic policymaking in times of crisis, inconsistent and inadequate funding, and little or no attention to outcomes for children and families yields a landscape in which high-quality programs are the celebrated exception, rather than the rule.

If the overarching goal is a system of high-quality early education programs for all parents who choose to enroll their children, then only a well-funded, coherent, and stable infrastructure will get us there. The challenge this presents in early childhood is

formidable. We need to promote service and program coordination both within the field of early education and across fields and agencies to assure that high-quality programs are the norm across systems. Early development and learning is a cross-domain, integrated, and dynamic process that does not fit into a single silo called education.

Many obstacles have thwarted past efforts to create effective governance structures and systems in early childhood: social ambivalence about the role of out-of-home care, our nation's political legacy of incrementalism, the blurred lines of responsibility between federal, state, and local government entities for the care and education of young children, and the mixed-sector delivery system that characterizes early education, with programs sponsored by the for-profit, non-profit, and public sectors. Sporadic and piecemeal policymaking has aggravated these challenges, producing disparate and unstable funding streams, uneven quality, and a lack of accountability for child outcomes. Without strong federal leadership, this costly "non-system" will endure.

IV.2.d. Early education policy requires a federal-state partnership. State policy and program disparities and the need for federal leadership in building cross-state coherence are only two of the rationales for federal engagement. Federal action in early childhood can also be justified on the grounds that states do not have the capacity and resources to capture the full social and economic benefits of early education. Moreover, early education generates positive externalities, the benefits that spill over to members of society beyond the children who attend the programs (Temple & Reynolds, 2007). Finally, it is inefficient for states to expend resources for some functions related to early education that are better consolidated federally. The question, then, is not if the federal government should be involved in early education, but how.

As in the K-12 system, it is clear that the federal government neither can nor should dictate the practice of early education from on high. What is necessary is a federal and state partnership that uses federal resources, both human and fiscal, to support states in their efforts to serve their constituent families and create fiscal incentives to address priorities set by the federal government. This is most certainly not an argument for an intrusive, expensive, and expansive government role in the education of young children. But it is abundantly clear that states cannot do the job alone. We envision a federal role

that is not one of command-and-control enforcement, but one of incentives, technical assistance, and results-based rewards.

The Good Start, Grow Smart initiative tested a model for federal-state partnership by trying to create linkages between the Child Care and Development Fund and state and private early education programs. This initiative reflected the important realization that child care programs are very much engaged in the education of young children before they enter formal schooling, and that efforts to improve the quality of early education would be foolish to ignore. This type of cross-system leadership should begin at the federal level with the nurturance of productive collaborative relationships between the Department of Health and Human Services and the Department of Education, where the artificial division between education and care for young children has become obsolete.

One lesson that has repeated itself through history is the need to allow early education programs to adapt to the needs of their families. Head Start is an example of one model that has afforded a significant degree of local control over the conduct of a public program. Yet the press for consistent quality across programs and accountability for outcomes has led to the adoption of performance standards and more federal dictates on how to run Head Start programs, and the programs are responding. The balance between accountability for public funds and sensitivity to the diverse needs of communities, however, requires careful consideration in the policymaking process. To achieve it, the federal-state partnership must also embrace the community leaders who are found in local governments, businesses, houses of worship, volunteer and civic organizations, and community-based service organizations. They are critical providers of support to families in the complex web of what we call early education.

IV.3. The Need for Equity

Many states are weighing the costs and benefits of universal versus targeted pre-k programs, and considering the question of where Head Start fits into the quest for equity. While we do not try to resolve this question here, we do offer important lessons gleaned from past experience that can inform efforts going forward to promote excellent programs, and assure that families of various socio-economic backgrounds have equitable access to them. In particular, we report on the relative costs and benefits of universal and

targeted programs, and the abiding importance of allowing communities and parents to define what educational experiences are best for their young children.

IV.3.a. A porous "system" leaves out many children. Clearly, the "system" of early education is not a system at all, but rather a collection of fragmented policies and programs created in response to crises and changing goals, to produce a market for early education that leaves out many of the nation's children. Surprisingly, children in lower-middle and middle-income families are the least likely to attend public or private preschool, as compared to children from the poorest families who are likely to attend Head Start. While about 62 percent of children in families with annual incomes up to $20,000 attend preschool, the participation rate drops to 55 percent among children in families with annual incomes from $20,000 to $30,000 (Barnett & Yarosz, 2007). At $30,000 and above, the rate gradually increases, reaching 64 percent for children in families with annual incomes from $60,000 to $75,000 and 89 percent for those in families with annual incomes above $100,000. These gaps in enrollment have inspired calls for universal policies that would allow *all* children to attend high-quality preschool (Zigler, Gilliam, & Jones, 2006).

The advantage of a universal system is that no children are left out. If we believe that all children deserve the benefits of high-quality preschool, universal policies are the only way to meet this commitment. Moreover, universality offers the benefits of fostering programs that are integrated by income, a clear advantage over the income segregation that characterizes early education now. We know that children from low-income families do better in K-12 schools that are integrated by income (Rumberger & Palardy, 2005; Kahlenberg, 2001), and preliminary research suggests this is likely to be true in preschool as well (Schecter & Bye, 2007; Sylva et al., 2003). The history of schooling for children from low-income families also indicates that programs solely for poor children are, on average, lower quality than those for higher-income children (Orfield & Lee, 2005). The benefits of offering high-quality programs to all children come with a higher price tag, of course. Even so, cost analyses of state-level universal pre-k systems suggest that they would be cost-effective over the long-term (Belfield, 2006; Karoly & Bigelow, 2005).

The advantages of a targeted system are its lower costs and the possibility that it offers a more efficient way to close the achievement gap between high- and low-income

children. If *all* children benefit from high-quality preschool, then the achievement gap will close in a universal system only if low-income children benefit much more. While most research indicates that disadvantaged children do indeed benefit from high-quality preschool more than their higher-income peers, the extent of this difference is not yet clear (Magnuson, Meyers, Ruhm, & Waldfogel, 2007; Gormley et al., 2005; Peisner-Feinberg et al., 2001). The downside of a targeted approach is that it leaves out many children from lower- and middle-income families who do not qualify for programs targeted at families living in poverty. The process of determining eligibility incurs bureaucratic costs as well.

The broader challenge is not only to expand access to affordable options for all families, but also to make those options of high quality. We will accomplish little at great expense if we rush to enroll children in preschools without assuring that the preschools will nurture their cognitive, social, emotional, and physical growth with excellent teachers in a safe and caring environment.

IV.3.b. Respecting the value of parental choice. The legacies left by early education programs and policy before 1960 are still very much with us today in the values many Americans share regarding early learning and families. Perhaps the most salient of these is the importance we attach to allowing parents to choose how to raise their young children and whether to enroll them in public programs before formal schooling begins in kindergarten. Certainly this suggests that no matter how compelling the benefits of center-based high-quality preschool may be, preschool enrollment should be voluntary.

Beyond this threshold question, we must ask what it means to say that parents should have a choice regarding preschool. Because one size does not fit all in a culturally diverse society, early education policies should allow parents to choose from programs in their neighborhood or beyond. The K-12 model of neighborhood assignment to a local public school may simply be inappropriate in the preschool years. Creating meaningful choice for parents requires that federal, state, and local governments work together to nurture the diverse supply, in both the public and private sectors, of high-quality programs and to assure that lower-income parents can afford them.

Today, most preschool spending still comes from one source: parents. As public funds promote high-quality and affordable options for more families, it is worth remembering that parents need to be part of the process of establishing notions of quality and shaping programs in ways that serve a variety of cultural norms for how young children learn. Engaging parents as informed consumers of preschool as well as the first teachers of their children is both good policy and good practice.

V. Looking Forward: Recommendations

V.1. A Call for Excellence, Coherence, and Equity

As the preceding sections have indicated, the role of the federal government in early education has a long and somewhat contentious history. While the nature and amount of federal engagement has shifted in response to changing social, political, and economic needs, comparatively few policy efforts have focused on long-term planning or coordination. Such inattention has yielded a set of embedded polemics as well as an array of programs, dispersed across federal agencies and legislative committees, which beg for greater excellence, coherence, and equity. Logically then, in framing next-generation early education efforts, we advance the following purpose: ***"ECE for ECE," or ECE^2*** with the former ECE referring to ***E***xcellence, ***C***oherence, and ***E***quity, and the latter ECE referring to ***E***arly ***C***hildhood ***E***ducation.

In considering how best to go about this, we heed our own recommendations to address the historical context and build upon the past. First, we would like to retain many elements of American early education. Keeping early education voluntary prior to kindergarten is essential. Building upon the diverse delivery system with its public and private providers seems fiscally prudent and encourages a modicum of choice for parents. Fostering developmentally oriented pedagogy that stresses cognitive, language, social, emotional, and physical development for all children is critical. Honoring linguistic, cultural, and programmatic diversity must prevail. Conceptualizing early education as a partnership among families, programs, and communities is essential, with parents continuing to play a key role in the education and development of their children.

Second, we see a need for expanded federal leadership and investments in early education. Such investments, however, must be guided by clearly delineated ***roles*** for federal and state governments. These roles, which we delineate in Section V.2 below, must frame and bound the public early childhood policy agenda. In addition to role clarity, the ***goals*** of federal intervention must be clear. We suggest that the goals of new early education efforts focus on advancing excellence, coherence, and equity. We suspect that without ***role and goal*** clarity, our hope of using early education as an elixir to reduce the achievement gap and help create a workforce for a 21st century world will be seriously curtailed.

Third, at the local community and family level, we strongly support a combination of demand and supply side strategies for direct-service provision, noting that a focus on demand-side policy mechanisms alone seriously erodes excellence, coherence, and equity. We also support a mixed delivery system to the extent that quality parameters are in effect for all programs, irrespective of funding mechanism. In particular, we encourage the development of *high-quality* choices for low- and middle- income families—two aspects of early childhood education that the current market fails to address effectively.

Fourth, we would like to reposition the debate over universal versus targeted services. Early childhood services should be regarded as a fundamental right of all American children, from birth to age five, whose parents wish to enroll them. Even on a sliding-scale fee basis, this goal will not be achieved for years. Yet with a universal goal in mind, we would have the platform for systematic expansion of high-quality early education services. This means abandoning the program-of-the-year approach to early education and substituting a clear and steady agenda for reform. Even if funding must be incremental, it means converting the policy zeitgeist from one that permits multiple idiosyncratic department-by-department and state-by-state efforts and moving to thoughtful, evidence-based policy efforts that fit within a conceptually coherent scheme for universality.

V.2. The Overall Scheme: Discerning Responsibilities

The scheme presumes that we address the polemic of ideology by asserting the value of early education for *all* children and allowing for voluntary participation. Those who remain ideologically opposed to early education do not have to participate. With regard to the polemic of mission, we assume that high-quality early education programs offer both care and education, with the paramount goal of readiness for school *and* life. We respond to the polemic of which children should be served and how by establishing the foundational goal of universality with policy that does not, by design, segregate children by family income. Finally, we address the polemics of the federal role and service delivery below by suggesting specific responsibilities for federal, state, and local governments.

V.2.a. The role of the federal government. The federal government has five primary functions with regard to early education:

- Provide the *coordinated long-term* ***vision and leadership*** for the development of a comprehensive, integrated American early childhood system that makes high-quality early education available to all preschool-age children on a voluntary basis.
- Establish *research-driven* ***standards*** regarding the expectations for children, the skills and competencies their teachers require, the provisions of programs that serve children, and the requirements for states regarding their duties in advancing the early childhood system.
- Foster the building of ***infrastructure*** at the state and local level as a prerequisite for quality and an integral component of all early education efforts by advancing: (1) teacher quality and workforce enhancements/credentialing; (2) governance; (3) the development of assessment tools and the collection of usable data; (4) preschool to K-12 school linkage/transition efforts; (5) parental and public engagement; and (6) research.
- Fund, in conjunction with the states, essential ***direct services*** for children at high risk of school failure and children of the working poor, as a first step toward fulfilling the mission of universality.

- Promote a spirit of ***innovation*** and the *development and use of new* ***knowledge*** regarding early childhood development, pedagogy, curriculum, assessment, and program effectiveness. This includes the funding and effective dissemination of basic research, longitudinal studies, program evaluations, and a series of research and demonstration efforts to guide future policy and practice.

V.2.b. The role of state governments. State governments have five primary functions:

- Assure equitable access to early education for all children in ways that do not segregate children along socio-economic lines.
- Create and monitor long-range state plans so that early education services, irrespective of departments, are coordinated and cohesive.
- Review federal standards; set and monitor state standards for children, programs, and personnel. Inherent in this function is the establishment of state accountability systems that capture young children's access to services and their progress over time.
- Fund and monitor direct services for young children.
- Fund and monitor infrastructure advancements.

V.2.c. The role of the local communities. Local communities have three major functions:

- Implement state mandates and reporting requirements.
- Provide funding for programs to reflect a local commitment to young children.
- Engage parents and community leaders in the design and distribution of services.

V.3. Specific Recommendations for the Next Three Years

Although we broadly delineate federal, state, and local roles above, the focus of this paper is to use our knowledge to guide the development of ***federal*** early education policy. To that end, we take the five roles posited for the federal government above and make a set of recommendations for federal action. For some, these recommendations may

seem too modest in cost, given the formidable challenges that characterize the field of early education. Indeed, the recommendations are more modest than we would have liked. Yet we are obligated to frame them this way given two contextual realities. First, we take into consideration the extraordinarily daunting fiscal environment and the competing international and domestic challenges that face our new administration and Congress. Second, given the already pervasive weaknesses of the current early childhood infrastructure, we seriously question whether an overly rapid expansion of direct services without a comparable focus on the infrastructure could be effectively accommodated. Consequently, advancing a fiscally and operationally prudent policy agenda, we take a steady, incremental approach, which builds over a three-year period and addresses significant and simultaneous increases in direct services ***and*** in the early childhood infrastructure. In so doing, we do not lose sight of the need for a vigilant focus on the goals of excellence, coherence, and equity, and we code each recommendation accordingly with an [EX] for Excellence, [C] for Coherence, and [EQ] for equity.

V.3.a. Vision and Leadership

1. *Establish and Fund a Federal Early Learning Council.* Composed of representatives from diverse federal agencies, states, and philanthropic leaders, the Council will develop a 10-year plan for the federal government's role in advancing ECE. Such a plan will address governmental roles and responsibilities to young children and their families; it will determine how best to handle the diverse federal funding streams and how to assure that all early education efforts meet standards of excellence, coherence, and equity. [EX, C, EQ]

V.3.b. Standards

2. *Establish Federal Guidelines for Children, Teachers, and Programs.* In order to promote greater consistency across the states, guidelines should be established that specify what children should know and be able to do, how teachers should be qualified to teach young children, and what foundational elements of quality should characterize early childhood programs. Developed by three national Task Forces over a two-year period, none of the guidelines would be mandated, but would

serve as guides for states to consider as they develop and modify their own standards. [EX, C, EQ]

3. *Modify NCLB.* In order to promote a continuity of experience for children as they transition from early childhood settings into schools, modify NCLB to assure that: (1) states align their standards, curricula, and assessments across these age groups; and (2) elementary schools become ready for young children and their families. Fund these efforts by adding $100 million to NCLB for them in the first year and sustain that increase over the three years. [EX, C, EQ]

V.3.c. Infrastructure

4. *Set Aside an Additional 10 Percent of All New Federal Early Education Dollars.* Irrespective of funding streams, all new federal direct service dollars for children should have a 10 percent earmark (on top of all new federal dollars invested in early education) for infrastructure and quality enhancement. These funds would be used by states to enhance: (1) personnel preparation, development, compensation, and credentialing services and systems; (2) standards development and implementation; (3) coordinated assessment, monitoring, and accountability systems; (4) coordinated governance efforts; and (5) program quality enhancement systems. [EX, C, EQ]
5. *Enhance Early Childhood Teacher Preparation and Credentialing.* Given the importance of teacher quality to early childhood program quality and child outcomes, funding over and above what is currently provisioned in the recent Higher Education Act reauthorization and the infrastructure recommendation above must be considered. We recommend increasing the Higher Education Act budget by 1 percent and sustaining that increase in each of the three years, with these funds targeted to the preparation and credentialing of early education personnel. [EX, C, EQ]

V.3.d. Direct Services

6. *Support Parents with Young Children.* Parents are their children's first and most important teachers, but many young low-income women become parents without the requisite supports and knowledge to advance their children's development. The federal government should provide parenting education and support to 100,000 low-income mothers with infants and/or toddlers in the next fiscal year. For each of the two subsequent fiscal years, an additional 100,000 mothers should be added. Each mother should be served for two years. [EX, EQ]
7. *Expand Services to Low-Income Infants and Toddlers through Early Head Start.* Quadruple the funding for Early Head Start in year one, and sustain this increase in subsequent years, so that its services can reach more children and families and its quality can be enhanced. [EX, EQ]
8. *Expand Services to Low-Income Children through Head Start and the CCDBG.* To enhance the availability of services to preschool-age children, expand Head Start funding by 5 percent annually. The CCDBG budget should also experience a 5 percent annual increase with the goal of expanding its direct services to low-income children for children from age zero to five. [EX, EQ]
9. *Expand the Child and Dependent Care Tax Credit.* Increase the value of the credit by 25 percent for families whose annual incomes are below $40,000. [EX, EQ]
10. *Support States as they Develop Pre-kindergarten and Other Early Education Efforts.* For the next three years, provide states 25 cents on each additional dollar the states invest to launch or expand their current enrollments in pre-k, with first priority accorded to children from low-income families, where English is not the home language, and/or who are at high risk of school failure. Eligibility for these funds is contingent upon states having a long-term plan to provide universal preschool for three- and four-year-old children. [EX, EQ]

V.3.e. Experimentation and New Knowledge

11. *Expand and Coordinate Federal Research on Young Children and Their Families.* Dedicate $100 million new funds for research on young children and sustain this increase in each of the three years. Such funds would be distributed among Department of Education and Department of Health and Human Services and would ensure the funding of two early childhood research centers and the continuation of the ECLS-B and ECLS-K. [EX, C, EQ]
12. *Establish an Electronic National Clearing House on Early Education Innovations.* Given that early educators are experimenting with innovative pedagogical and systems-infrastructure approaches, the federal government should oversee the review of such efforts and make the results widely available though a national clearinghouse. Such a clearinghouse should include results from and links to high-quality research efforts that could affect policy and practice. [EX, C, EQ]
13. *Make Challenge Grants Available to States to Promote Innovation and Quality.* The federal government should award competitive challenge grants, which require a state match, to 10 states in the amount of $10 million each in the first year; such grants should be sustained for three years. The challenge grants should select highly promising cross-funding stream (public and private sector) efforts that will significantly enhance early education excellence, coherence, and equity, and that offer strong promise of replicability. [EX, C, EQ]

Clear and pointed, these recommendations convey the urgent action required to enact an effective federal commitment to young children. We make these recommendations because in no other field is the evidence of efficacy so compelling and in no other field is the potential for future investment so promising. Yet we are profoundly aware that advancing a piecemeal approach to these or any set of

recommendations will only perpetuate the fragmentation and lack of quality and equity that has characterized American early education to date. To that end, we recommend finally that the new President and new Congress avoid viewing these recommendations as a menu and instead regard them as an integrated package.

V.4. The Cost and the Promise

As noted above, we have written this paper at a time of an extraordinary economic crisis, which may limit the resources the federal government can devote to making the goals of excellence, coherence, and equity an immediate reality. Yet we are also deeply aware that neglecting these goals will undeniably hinder our nation's economic health, suppress the quality and productivity of its workforce, and destroy the hopes we have for our youngest citizens. With the belief that we must take potent steps to moderate this neglect, we have offered recommendations that total an estimated $15 billion over a three-year period, with an increase of $3.9 billion in new dollars in the first year, an additional $5.0 billion in the second year, and $6.1 billion in the third year. Cost analyses, conducted by Clive Belfield, are delineated more specifically in Appendix A.[5] Although these are rough estimates that are subject to revision, they provide a sense of the fiscal scope of the recommendations. Moreover, they respect the federal roles described in Section V.2 and establish a foundational platform for future expansion of a system where the goals of excellence, coherence, and equity are the norm.

Under different economic circumstances, our recommendations might have called for expansions that would have greatly increased the scope and costs of improving federal policy for young children. At least three other major research efforts have quantified the costs of fully funding early education. Although each used different methods and advanced different priorities, they offer alternative perspectives on the costs associated with a universal system of early education. First, a national network of scholars, the Brookings Roundtable on Children, concluded that a universal preschool program for four-year-olds, financed on a sliding-fee scale with federal assistance, would cost $20.8 billion (with much of the costs paid by middle- and upper-income families

[5] We are extremely grateful to Clive Belfield for his invaluable assistance in estimating the costs of the recommendations.

who enroll) (Sawhill, 2003). It also proposed spending an additional $10 billion on intensive center-based programs for high-risk children up to age three (Sawhill).

Second, Duncan et al. (2007) proposed a universal intensive two-year education-focused preschool intervention for three- and four-year-olds. Again using a sliding-fee scale, the program would fully subsidize low-income children's participation, while high-income parents would pay the full cost (Duncan et al.). Net of current spending at the federal, state, and local level that could be directed to the effort, the authors estimated the costs of the proposal at $20 billion. They also predicted that the program would reduce the future poverty rates of participants by 5 to 15 percent.

Third, the New Commission on the Skills of the American Workforce, convened by the National Center on Education and the Economy (NCEE), calculated the additional cost of universal preschool for three- and four-year olds at $19.3 billion, after taking into account current federal and state spending that could contribute to the effort (National Center on Education and the Economy, 2007. The Commission proposal included a 10 percent set-aside for infrastructure. While the three cost estimates are formidable, achieving them on an incremental basis is not unthinkable, particularly in light of the benefits they are likely to generate.

Although we have allowed current realities to temper the fiscal scope of our recommendations, we are unwilling to temper our call for America to construct robust, intentional policies for young children. Such policies should be predicated on research and experience; they should also advance and finance a crisp agenda that simultaneously delineates and bounds the federal role. Beyond providing clear and just leadership, such policies would finally square early childhood education with the excellence, coherence, and equity that it—and this nation—have badly deserved for so long.

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Appendix A

Estimated Costs of ECE^2 Recommendations

		Annual Cost to the Federal Government ($ millions)			Total Cost
	Reform	**Year 1**	**Year 2**	**Year 3**	
1	Establish and Fund a Federal Early Learning Council	$15	$10	$10	**$35**
2	Establish Federal Guidelines for Children, Teachers, and Programs	$30	$31	$-	**$61**
3	Modify NCLB	$100	$103	$106	**$309**
4	Set Aside 10% of All New federal Early Education Dollars	$318	$328	$337	**$983**
5	Enhance Early Childhood Teacher Preparation and Credentialing	$195	$201	$207	**$603**
6	Support Parents with Young Children	$450	$922	$1,423	**$2,795**
7	Expand Services to Low-Income Infants and Toddlers through Early Head Start (4x increase in funding)	$1,666	$1,716	$1,768	**$5,150**
8a	Expand Services to Low-Income Children through Head Start (5% annual expansion)	$352	$744	$1,179	**$2,275**
8b	Expand Services to Low-Income Children through CCDBG (5% annual expansion)	$140	$295	$467	**$902**
9	Expand the Child and Dependent Care Tax Credit	$275	$283	$292	**$850**

10	Support States as they Develop Pre-kindergarten and Other Early Education Efforts (25% match to additional state spending)	$102	$115	$131	**$348**
11	Expand and Coordinate Federal Research on Young Children and Their Families	$100	$103	$106	**$309**
12	Establish an Electronic National Clearing House on Early Education Innovations	$8	$8	$8	**$24**
13	Make Challenge Grants Available to States to Promote Innovation and Quality	$100	$103	$106	**$309**
T1	**Total**	**$3,851**	**$4,962**	**$6,140**	**$14,955**
T2	**Total Federal Spending on Education (excluding higher education)***	**$42,000**	**$43,260**	**$44,558**	**$129,818**
T3	**Total Federal Spending on Education (including higher education)****	**$68,600**	**$70,658**	**$72,778**	**$212,036**
	Percentage Increment in Spending (T1/T2)	**9%**	**11%**	**14%**	**12%**
	Notes and sources:				
	Costs in undiscounted 2008 dollars. Nominal dollar amounts in brackets with year. Inflation rate of 3% applied annually. Costs are additional to current federal spending on early education.				
1	Based on cost of Education Division of National Research Council. Upfront investment of $5 million, with annual operating budget of $10 million.				
2	Three task forces for two years; annual budgets of $10 million each.				
3	State allocations of $2 million annually.				
4	Calculated as 10% of items 5-10.				
5	Appropriations for HR4137 (Higher Education Opportunity Act) are estimated at $97.4 billion over five years, 2008-2012 (http://cbo.gov/ftpdocs/88xx/doc8899/hr4137.pdf). Assume 1% allocation for early education professionals.				

6	Home-visiting programs cost estimated at $4,240 annually per mother [$3,659 in 2002 dollars] (Aos, S., Lieb, R., Mayfield, J., Miller, M., & Pannucci, A. (2004). Benefits and costs of prevention and early intervention programs for youth, Document 04-07-3901. Olympia, WA: Washington State Institute for Public Policy.) Estimates adapted from Olds, D. L., Robinson, J., O'Brien, R., Luckey, D. W., Pettitt, L. M. Henderson, C. R., et al. (2002). Home visiting by paraprofessionals and by nurses: A randomized, controlled trial. *Pediatrics, 110*(3), 486-496. Assume a two-year program uprated for inflation. Provision for 0.1m mothers in year 1, 0.2m mothers in year 2, 0.3m mothers in year 3. Assume program expansion raises input prices by 5%. Evaluation of program estimated at $5 million annually.				
7	Annual spending on Early Head Start was $0.52 billion [$0.47 billion in 2003] (Committee on Ways and Means of the U.S. House of Representatives. (2004) *2004 Green Book*. Washington, DC: U.S. Government Printing Office. Table 9-15). See note 8a. Assume expansion raises input prices by 5%.				
8a	Annual spending on Head Start and Early Head Start was $7.50 billion [$6.67 billion in 2003] (Green Book, Table 9-15). Head Start proportion estimated at 93% of total (based on proportion enrolled in each program). Assume program expansion raises input prices by 1%.				
8b	Annual spending on CCDBG was $4.39 billion [$3.9 billion in 2003], mandatory and voluntary (Green Book, Table 9-15); 63% of that amount was allocated to children from 0-5 (Green Book, Table 9-18). Assume program expansion raises input prices by 1% annually.				
9	Total child care tax credit claims were $3.13 billion [$2.7 billion in 2002] (www.irs.gov/pub/irs-soi/02in02ar.xls). Persons with AGI<$40,000 claim 46% ($1.44 billion). Increase claim amount by 25%.				
10	Annual state spending on pre-k was $3.96 billion [$3.84 billion in 2006] (Annual Yearbook, NIEER, www.nieer.org). This figure excludes federal transfers to support state programs. Assume annual growth in state spending of 10% per annum (growth rate from 2004 to 2006 was 15% per annum). Matching funds are made available every year for extra spending for all years from base year.				
11	Contracts to undertake ECLS-B and ECLS-K totaled $119 million over the period 1997-2007 (Biennial Report to Congress, 2005, Institute for Educational Sciences, ies.ed.gov/director). Assume 15% federal administration plus inflation.				
12	The federally funded What Works Clearinghouse contract was $25 million over five years 2002-2007 (Biennial Report to Congress, 2005, Institute for Educational Sciences, ies.ed.gov/director). Assume 15% federal administration plus inflation.				

13	See text.				
*	Total of 2008 appropriations for Office of Elementary and Secondary Education (OESE), Office of Innovation and Improvement (OII), Office of Safe and Drug-Free Schools (OSDFS), Office of English Language Acquisition (OELA), Office of Special Education and Rehabilitative Services (OSERS), Office of Vocational and Adult Education (OVAE) (Department of Education Budget, www.ed.gov).				
**	Total of 2008 appropriations for all offices (Department of Education Budget, www.ed.gov).				