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Early Childhood Education: Preschool Participation, Program Efficacy, and Federal Policy Issues

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Summary

Between 1990 and 2001, the percentage of 3- to 5-year-olds in the United States enrolled in some kind of preprimary (center-based or kindergarten) education increased from 59% to 64%. At the same time, data indicate that some children need more assistance to be ready to learn effectively when they enter kindergarten, and that many school-age children are having difficulty becoming proficient readers. These events have increased the focus on the role of preschool education and care.

Research on the effects of quality early childhood education and care programs indicates positive *short-term* effects in terms of cognitive functioning, school readiness, and social behavior; and also supports positive *long-term* effects for children from "model" early intervention programs. *Long-term* results from more "typical" programs, such as Head Start, are less conclusive.

Most researchers have found high-quality early childhood programs to have several factors in common: low teacher-child ratios, well-trained and well-paid teachers, and low staff turnover rates.

The principal federal programs presently providing funding for early childhood education and care are: Head Start; Title I, Part A of the Elementary and Secondary Education Act (ESEA); the William F. Goodling Even Start Family Literacy Programs; the Individuals with Disabilities Education Act; the Early Reading First Program; the Child Care and Development Block Grant; the Social Services Block Grant; and the Early Learning Fund.

The number of states that have provided some funding for preschool programs has increased considerably over time, from 7 in 1980 to 38 in 2002-03. Although the benefits of preschool to society can be difficult to quantify, more research has emerged examining the costs and benefits of governmental investments in preschool. Several of these studies have projected that the benefits of such investments will exceed the costs.

Congress is considering what role is appropriate for the federal government in providing and setting standards for early childhood education and care, and how to best enhance the supply of quality early childhood education and care. At the same time, issues have been raised about what form federal aid for early childhood education and care should take, whether such aid should be targeted or universal, how to coordinate new federal initiatives with existing federal programs, and how to avoid supplanting or discouraging state initiatives for early childhood education and care. This report will be updated periodically.

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Early Childhood Education: Preschool Participation, Program Efficacy, and Federal Policy Issues

Between 1990 and 2001, the percentage of 3- to 5-year-olds in the United States enrolled in some kind of preprimary (center-based or kindergarten) education increased from 59% to 64%.¹ At the same time, data indicate that some children need more assistance to be ready to learn effectively when they enter kindergarten; and that many school-age children are having difficulty becoming proficient readers. National Assessment of Education Progress (NAEP) data for 2005 indicate that only 31% of 4th graders are at or above the proficient level in reading. For 4th graders eligible for free/reduced-price lunches (i.e., from relatively low-income families), only 16% are at or above the proficient level.

In addition, the scientific community has fueled interest in early childhood with research indicating that the early years are crucial for brain development and, that there is a connection between the stimulation young children receive from their preschool teachers or care givers and success in later learning and intellectual growth. This research has altered the way scientists see the development of the brain; most now believe that the neural circuitry of the brain is not fixed at birth but develops partly in response to early experiences. Research has shown that the first three years of life are the period of most rapid brain growth, and that there are certain "windows of opportunity" for certain kinds of learning (language, for example). Scientists have discovered that beginning in early adolescence, brain development occurs through the "pruning" of unnecessary synaptic connections. Those synapses that receive the most use in childhood are the likeliest to become permanent; those that are unused are the most likely to be eliminated.² However, researchers also caution that early intervention should not be viewed as a panacea; people continue to learn, and the human brain continues to incorporate new information, throughout life.

This report examines what we currently know about preprimary programs, including numbers of children served and their family characteristics; as well as data on the efficacy of preprimary programs in enhancing later learning and other life skills. Current federal programs that serve preschool age children are described, and policy issues which may arise as the federal role in early childhood education is debated are discussed.

¹ U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, *The Digest of Education Statistics 2003*, p. 59.

² Rima Shore, *Rethinking the Brain*, Families and Work Institute, New York, NY, 1997.

Children Served

In examining the number and growth of preprimary education programs, we immediately confront the question of how to conceptually and empirically separate education from child care in programs for young children. While the focus of this report is on early childhood education, it is difficult to empirically differentiate between early education and child care because in early childhood settings the two are often intertwined. Many experts believe that both are required for a quality environment for young children:

... care and education cannot be thought of as separate entities in dealing with young children. Adequate care involves providing quality cognitive stimulation, rich language environment, and the facilitation of social, emotional and motor development. Likewise, adequate education for young children can occur only in the context of good physical care and of warm affective relationships.³

Available national-level data on early childhood education does not delineate time spent in education activities versus child care. Existing data do differentiate between center-based versus other settings (relative care and family day care centers) for child care and early childhood education. This discussion of national data focuses on center-based programs, broadly defined, because program names (day care center versus preschool for example) do not necessarily correlate with whether a program has an academic component or not.⁴ Some "day care centers" may contain an academic component, while some "preschools," for example, may not. Center-based programs include day care centers, nursery schools, prekindergarten programs, preschools, and Head Start programs. For these reasons the data on children's participation in early childhood education are based on center-based preprimary programs, broadly defined. Because federal and state preschool policies focus largely on children between the ages of 3 and 5, data for this age group are considered in more detail in this report. However, it is important to note that many children younger than three also participate in some form of nonparental care. Table 1 provides data on children's child care arrangements by age for 2001. These data indicate that 61% of children five and younger, and not yet in kindergarten, participate in some form of non-parental care. For even the youngest children (ages 0-2), 52% participate in some form of non-parental care, although participation in non-parental care rises with age. Additionally, older preschool aged children (3-5) are much more likely to participate in center based programs than are younger children (ages 0-2), with participation rates of 57% and 17%, respectively. (see Table 1).

³ National Research Council, *Eager to Learn: Educating Our Preschoolers*, Washington, National Academy Press, 2000, p. 2.

⁴ In this report, the terms preschool, prekindergarten and preprimary care and education programs are used interchangeably. Because existing national data are based on parental responses, and an academic program may call itself a day care center, a preschool or a prekindergarten, parental responses on whether their child's care includes an academic component often simply reflect the title of the program their child attends. State data, which are available for prekindergarten (including Head Start programs) programs, are discussed in the text of the report below.

Table 1. Child Care Arrangements of Preschool Children, NotYet Attending Kindergarten by Age: 2001

		Number and percent in non-parental arrangements									
	Total population of children ^a	Total		Relative care		Non- relative care ^b		Center based program ^c		Parental care only	
Characteristic	No.	No.	%	No.	%	No.	%	No.	%	No.	%
Total	20,252	12,397	61	4,681	23	3,308	16	6,761	33	7,885	39
Child's age											
Less than 1	3,868	1,598	41	877	23	564	15	298	8	2,270	59
1 year old	3,902	2,113	54	907	23	800	21	625	16	1,789	46
2 years old	3,931	2,368	60	946	24	742	19	1,014	26	1,562	40
Total (0-2)	11,701	6,079	52	2,730	23	2,106	18	1,937	17	5,621	<i>48</i>
3 years old	3,795	2,510	66	894	24	558	15	1,625	43	1,284	34
4 years old	3,861	3,073	80	870	23	527	14	2,546	66	788	20
5 years old	896	734	82	187	21	117	13	654	73	161	18
Total (3-5)	8,551	6,318	74	1,951	23	1,201	14	4,825	57	2,233	26

(Numbers in thousands)

Source: U.S. Department of Education, National Center for Education Statistics, Early Childhood Program Participation Survey of National Household Education Survey (NHES).

- **Note:** Children may participate in more than one type of care; therefore row numbers may sum to more than totals. Numbers also may not sum to totals due to rounding.
- a. Most 5-year-old children are enrolled in kindergarten, estimates for this report are based only on children who have not entered kindergarten. It includes children who are enrolled in school but are ungraded.
- b. Non-relative care includes family day care and nanny care.
- c. Center based programs include day care centers, nursery schools, prekindergarten, preschools, and Head Start programs.

Data indicate that of 3-5 year olds not yet in kindergarten, children in poverty were less likely (48%) to be in center-based programs than were children not in poverty (60%) (See **Table 2**). There is a clear correlation between rising income and participation of children in center-based care. Seventy-five percent of children in households with more than \$75,000 in income participated in center-based care, compared to 48% of children in households with incomes of \$20,000 or less.⁵

Additionally, 3-5 year olds whose mother graduated from college or had a graduate degree were much more likely (68% and 73%, respectively) to attend a center-based program than were 3-5 year olds whose mother did not graduate from high school (38%). And, language spoken most at home by a child's mother was strongly linked to whether or not the child participated in a center-based program. For children where English was spoken most at home, 59% participated in a center-based program compared to 36% of children in homes where a language other than English was spoken most.

Black, non-Hispanic children were more likely (63%) than either white non-Hispanic children (59%) or Hispanic children (40%) to be in a center-based program. Participation by black children is partly attributable to greater participation in Head Start programs by black children than by white or Hispanic children.

⁵ Because children may participate in more than one kind of care many children are counted more than once. (For example, a child may attend Head Start in the morning, and then attend another center-based program or family day care center in the afternoon.)

Table 2. Child Care Arrangements of Preschool Children3-5 Years Old, Not Attending Kindergarten,by Child and Household Characteristics: 2001

(Numbers in thousands)

		Number and percent in non-parental arrangements									
	Total population of children ^a	Total		Relative care		Non- relative care ^b		Center based program ^c		Parental care only	
Characteristic	No.	No.	%	No.	%	No.	%	No.	%	No.	%
Total (ages 3-5)	8,551	6,318	74	1,951	23	1,201	14	4,825	57	2,233	26
Race/ethnicity											
White, non-Hispanic	5,313	3,971	75	1,039	20	874	17	3,139	59	1,342	25
Black, non-Hispanic	1,251	1,061	85	459	37	106	9	789	63	189	15
Hispanic	1,506	918	61	343	23	170	11	600	40	588	39
Other	482	367	76	110	23	52	11	297	62	114	24
Language spoken most at home by child's mother											
English	7,368	5,605	76	1,652	23	1,089	15	4,368	59	1,764	24
Other language	984	564	57	219	22	87	9	349	36	420	43
Income range											
\$20,000 or less	2,106	1,443	69	624	30	183	9	1,018	48	663	32
20,001-35,000	1,607	1,108	69	401	25	187	12	808	50	498	31
35,001-50,000	1,327	844	64	294	22	179	14	582	44	483	36
50,001-75,000	1,724	1,363	79	357	21	320	19	1,074	62	360	21
More than \$75,000	1,788	1,559	87	274	15	332	19	1,343	75	229	13
Poverty status ^d	1										
In poverty	2,221		68	644	29	186	8	1,058	48	720	33
Not in poverty	6,331	4,817	76	1,308	21	1,015	16	3,768	60	1,513	24
Mother's highest e	Mother's highest education level										
Less than high school	996	581	58	252	25	58	6	379	38	414	42
High school/GED	2,712	1,877	69	690	26	328	12	1,286	48	835	31
Vocational/ technical or some college	2,406	1,858	77	608	25	333	14	1,487	62	548	23
College graduate	1,418	1,141	81	227	16	248	18	966	68	277	20
Graduate degree	820	711	87	94	12	210	26	600	73	110	14

Source: U.S. Department of Education, National Center for Education Statistics, Early Childhood Program Participation Survey of National Household Education Survey (NHES).

Note: Children may participate in more than one type of care; therefore row numbers may sum to more than totals. Numbers also may not sum to totals due to rounding.

a. Estimates are based only on children 3-5 years who have not entered kindergarten or who are enrolled in school but are ungraded.

- b. Non-relative care includes family day care and nanny care.
- c. Center based programs include day care centers, nursery schools, prekindergarten, preschools, and Head Start programs.
- d. Poverty was defined as a household income of \$18,022 for a family of four in 2001.

Research on Efficacy

There is an extensive and growing body of research examining the effectiveness of early childhood programs. Effectiveness is usually measured by cognitive functioning, school readiness and/or social adjustment in the shorter-run; and by subsequent wages, high school graduation rates, criminal activity and welfare use in the longer-run. The conclusions of four major surveys of the literature on early childhood program outcomes are discussed below.

In December 2000, a study titled *Eager to Learn* was released by the Committee on Early Childhood Pedagogy.⁶ The Committee was established by the National Research Council in 1997 to review and synthesize the theory and research on early childhood pedagogy, and to make recommendations, based on the present state of knowledge, for early childhood education programs and public policy. *Eager to Learn* included 19 specific recommendations in four major areas: (1) teacher training; (2) teaching materials; (3) public policies to support quality preschools; and (4) dissemination of information on preschool development.

The Committee made recommendations in all four of these areas that it argued would significantly improve the U.S. system of preschool education and care. The Committee agreed that "the case for a substantial investment in a high-quality system of child care and preschool on the basis of what is already known is persuasive."⁷ One of the strongest recommendations made in *Eager to Learn* was regarding teacher training. The committee recommended that all children in early care programs be provided with a teacher who has a bachelor's degree and specialized education in early childhood. The Committee on Early Childhood Pedagogy stated,

The professional development of teachers is related to the quality of early childhood programs, and program quality predicts developmental outcomes for children. Formal early childhood education and training have been linked consistently to positive caregiver behaviors. The strongest relationship is found between the number of years of education and training and the appropriateness of a teacher's classroom behavior.⁸

The importance of teacher education and training runs throughout the literature on early childhood education. Another major study, *The Cost, Quality and Outcomes Study*, begun in 1993, examines the impact of "typical" center-based as opposed to "model" early childhood programs, by tracking children from preschool through their early elementary years. This study considered two broad measures of quality:

⁶ Eager to Learn, Executive Summary, National Research Council, National Academy Press, Washington, D.C., 2000.

⁷ Ibid., p. 322.

⁸ Ibid., p. 7.

classroom practices and teacher child relationships.⁹ Based on four years of data tracking individual children from preschool through second grade, the researchers found that the quality of care provided is key.

Children who attended quality childcare programs (those programs ranking in the 75th percentile or better) when they were 3-4 years old, were reported to have subsequently scored better on math, language and social skills in early elementary school than children who attended poor quality childcare programs (those programs ranking in the 25th percentile or less). Furthermore, better classroom behavior and social skills were reported in children who had closer relationships with their childcare teachers. These positive effects in math skills, thinking/attention skills, and problem behaviors remained through second grade, but the differential diminished over time. In addition, the researchers found that the positive effects of quality childcare, and the negative effects of poor quality childcare, are most pronounced for children at risk of not doing well in school.¹⁰ Furthermore, the researchers found teacher pay and qualifications to be linked with quality programs:

Our research indicated that the quality of child care was related to both the formal education levels and the specialized early childhood training of the classroom teachers. Similarly, teacher compensation was closely linked to the quality of services in child care. The findings reported here further underline the need to raise quality, indicating that these child care experiences continue to influence children's development through the early elementary years.¹¹

A 1998 Rand study, *Investing In Our Children*, authored by Lynn Karoly and seven colleagues, examined the costs and benefits of early childhood interventions, specifically those promoting the development of "at risk"¹² children, including Head Start, Individuals with Disabilities Education Act (IDEA) programs, parenting classes, home visits, preschool and prekindergarten programs. Karoly et al., conclude that well-designed programs can produce tangible benefits for children and their families in one or more of four broad domains: cognitive development, education, economic self-sufficiency, and health.¹³

Karoly, et al., conducted a cost-benefit study of the two programs included in their research that had an experimental design, including control groups, and had long follow-up periods for tracking participants. They concluded (for these two studies only) that there were tangible benefits, but the benefits may accrue over a long time period, while the costs occur in the short term. Karoly, et al., also note that the question of how best to target participants to obtain the highest benefit to cost

⁹ Classroom practices consisted of the child care environment, teacher sensitivity and responsiveness, and teaching style. Teacher-child relationships were determined based on teacher ratings. FPG Child Development Center, University of North Carolina, *The Children of the Cost, Quality and Outcomes Study Go to School*, June 1999.

¹⁰ Mother's level of education was used as a proxy for risk of not doing well in school.

¹¹ The Children of the Cost, Quality Outcomes Study Go to School, June 1999, p. 13.

¹² Lynn Karoly et al., *Investing in Our Children*, Rand, 1998, p. 110. At-risk children, according to Karoly et al., are those exposed to one or more stressors in the arenas of cognitive, emotional or resources deficiencies.

¹³ Ibid., p. 9.

ratios is uncertain. They state that existing scientific research is insufficient to discern why some programs succeed and others do not; or whether some program designs work best, i.e., by focusing on: children or parents; infancy or preschool years; one or multiple independent programs; or individually tailored programs that serve a smaller pool in comparison to larger programs that serve more children.

A survey conducted by Janet Currie, titled *Early Childhood Intervention Programs: What Do We Know?*, examined four studies of model programs that used random assignment, had low rates of participant attrition, and followed children's progress at least through middle school.¹⁴ In addition, Currie looked at large scale publicly funded programs, primarily Head Start programs. The model programs generally spent more per pupil than the Head Start programs. Currie found that wellfunded, well-designed programs can have a long term impact on children's outcomes, especially for disadvantaged children.

The four studies Currie examined were: the Early Training Project; the Carolina Abecedarian Project; the Perry Preschool Project; and the Milwaukee Project. Currie found only one of the four had a long term impact on IQ (the Milwaukee Project), although all four showed a positive effect on long term scholastic success. Sixty-eight percent of the children who participated in the Early Training Project graduated from high school compared to 52% of the control group. At age 21, the children who participated in the Carolina Abecedarian Project were twice as likely to still be in school or to have attended a four-year college. Positive effects were twice as large for the most disadvantaged children in this study. The Perry Preschool project found that as of age 27, children who participated in the project experienced positive effects on achievement test scores, grades, high school graduation rates, and earnings, in addition to lower rates of crime and welfare use. Children in the Milwaukee project were found to have higher IQs in 8th grade than children in the control group, but they did not have positive gains in other measured areas.

However, these four programs were all "model" programs with low pupil/teacher ratios and highly qualified staff. Currie did not find the same conclusive evidence of long term benefits when she examined the Head Start program. Currie and her colleagues examined Head Start by using siblings (who did not attend Head Start) of participants as a control group. Head Start is currently the largest publicly supported preschool program for disadvantaged children with funded enrollment of 909,608 in FY2003.¹⁵ Currie et. al. found that initial test score improvements for black Head Start participants faded in elementary school, but not for white students. They surmised that this "fading" might be due to subsequent school deficiencies, since the black Head Start participants subsequently attended schools of lower quality than other black children, but this was not true for the white Head Start students. Currie states:

¹⁴ Janet Currie, *Early Childhood Intervention Programs: What Do We Know?* UCLA and NBER, Apr. 2000.

¹⁵ For more information on Head Start, see CRS Report RL30952, *Head Start: Background and Issues*, by Melinda Gish.

The evidence reviewed above suggests that model early intervention programs can have positive long-term effects on children. But, there is a large gap between these programs and the large-scale, publicly-funded interventions that are currently in place ... A point that is often lost in the controversy over whether there are long-term benefits of Head Start is that there are many well-documented short-term benefits. Depending on precisely which benefits are counted and on how we value them, it can be shown that the short- and medium-term benefits of Head Start already pay back much of the cost of the program.¹⁶

Finally, the measurement of more "typical" programs is usually linked to evaluations of Head Start, the largest federal program with education and care as its primary mission. Available studies on Head Start (based on Head Start-funded Family and Child Care Experience Survey) do provide data on program outcomes, but do not permit a definitive conclusion regarding program impact; i.e., whether observed outcomes are due to a child's participation in Head Start, or are due to other factors:

Recent data collected on program outcomes show that children participating in Head Start exhibit many of the skills thought to indicate a readiness to learn in school. HHS [The U.S. Dept. of Health and Human Services] is now undertaking efforts to determine the extent to which such outcomes are directly attributable to children's participation in the program rather than to other factors.¹⁷

In sum, study data do support positive *short-term* effects of *high-quality* early childhood programs in terms of cognitive skills, school readiness and social behavior; and positive *long-term* effects in terms of greater high school completion rates, higher earnings, less criminal activity and welfare use for "*model*" early intervention programs. *Long-term* effects from more "*typical*" programs, such as Head Start, are less conclusive. In part this is due to the difficulty of separating the influence of early intervention on children's later success from all the other factors that are significant in influencing *long-term* success.

Federal Programs

Federal programs for young children currently provide funding for education and care, services to education and care facilities, and tax credits to families for child care. Only the largest programs which explicitly permit funds to be used in part for early education and care are discussed here.

Title I, Part A of the Elementary and Secondary Education Act (reauthorized by the No Child Left Behind Act, P.L. 107-110) is the largest federal program serving disadvantaged children, particularly school-aged children. After Head Start, it is the largest program providing early education and care to young children. ED estimates that approximately 2% of children served by Title I each year are preschoolers. Preschool services are not separately funded under Title

¹⁶ Ibid., p. 20.

¹⁷ U.S. General Accounting Office, *Early Education and Care: Overlap Indicates Need to Assess Crosscutting Programs*, HEHS-00-78, Apr. 2000.

I — such spending occurs if local educational agencies (LEAs) choose to use some of their Title I funds for this purpose.

The **William F. Goodling Even Start Family Literacy Programs** provide education and related services jointly to parents lacking a high school diploma (or equivalent) and their young children. Even Start services include basic academic instruction and parenting skills training for the adults, and early childhood education for their children through age 7 (children 8 and older may receive services if they are provided in collaboration with ESEA Title I, Part A), along with necessary supplementary services such as child care or transportation.¹⁸

Early Reading First, authorized by Title I, Part B Subpart 2 of the No Child Left Behind Act, P.L. 107-110. This early reading initiative provides competitive grants to LEAs and other public and private entities, from the Secretary of Education, to: provide preschool age children (particularly those from low-income families) with greater opportunities for exposure to high-quality language and literature-rich environments, support professional training, support acquisition of scientifically based instructional material on reading for preschoolers, and promote integration of these materials into existing programs serving preschoolers.¹⁹

The largest federal program with early childhood development as its primary mission is **Head Start**. The Head Start program provides educational services as well as health, nutrition, and other services to low-income children to prepare them to enter kindergarten. In 1994, Early Head Start was established so that children younger than 3 years old could be served in greater numbers by the program.²⁰

The **Child Care and Development Block Grant (CCDBG)** is the primary federal grant program supporting low-income families with child care needs. It is administered by HHS, and provides block grants to states, through mandatory and discretionary funds (referred to in combination as the Child Care and Development Fund (CCDF)), which are used to help provide low-income families with child care subsidies.²¹

The Social Services Block Grant (SSBG), authorized by Title XX of the Social Security Act, is a block grant to states. States are authorized to use SSBG funds for social services, including child care. SSBG is administered by HHS. State

¹⁸ See CRS Report RL30448, *Even Start Family Literacy Programs: An Overview*, by Gail McCallion; and CRS Report RL33071, *Even Start: Funding Controversy*, by Gail McCallion.

¹⁹ See CRS Report RL31241, *Reading First and Early Reading First: Background and Funding*, by Gail McCallion.

²⁰ For information on Head Start, see CRS Report RL30952, *Head Start: Background and Issues*, by Melinda Gish.

²¹ See CRS Report RL30785, *The Child Care and Development Block Grant: Background and Funding*, by Melinda Gish.

allocations are based on population.²² According to HHS, in FY2003, approximately 7% (\$165 million) of total SSBG expenditures were for child care.

The **Early Learning Opportunities Act** (also known as the Early Learning Fund), was authorized by the FY2001 Consolidated Appropriations Act (P.L. 106-554). This program provides grants to communities to enhance school readiness for children under 5; specifically by funding efforts to improve the cognitive, physical, social, and emotional development of these children.

Finally, federal support is provided for early childhood education and care through tax credits to assist parents with child care expenses.²³

State Initiatives

A study conducted by the National Institute for Early Education Research (NIEER), a research and policy analysis organization at Rutgers University, found that in 2002-2003, 38 states funded preschool programs, compared to seven in 1980.²⁴ The NIEER study primarily relied upon survey and follow-up data provided by state level administrators of these programs. It found that, in total, states spent approximately \$2.54 billion on these programs in 2002-2003, although three-fifths of this amount was accounted for by five states. The average per pupil state spending on preschool was \$3,451. Although many of these state preschool programs also receive local and federal assistance, consistent data on funding from each of these sources are not available.²⁵

In 2002-2003, 740,000 children were served by these programs, the majority of them four year olds. Overall, 16% of all four year olds were served by these programs in 2002-2003. Most states provide very limited funding, if any, for

²² States are entitled to their share, according to a formula, of a nationwide funding ceiling or "cap" that is specified in the statute. See CRS Report 94-953, *Social Services Block Grant (Title XX of the Social Security Act)*, by Melinda Gish.

²³ See CRS Report RS21466, *Dependent Care: Current Tax Benefits and Legislative Issues*, by Christine Scott.

²⁴ Steven Barnett, Kenneth Robin, Jason Hustedt, and Karen Schulman, *The State of Preschool: 2004 State Preschool Yearbook* (The National Institute for Early Education Research, Rutgers University: NJ, 2004). NIEER considers state funded preschool programs to be those that, in addition to receiving state funds, are primarily geared to serve children, serve 3 and 4 year olds (older and younger children may be served as well), operate at least two days a week, are not funded by the state's child care subsidy system, and are not geared primarily for children with disabilities. State supplements to Head Start are included if the funds significantly expand the number of children who participate.

²⁵ Ibid, p. 7. According to NIEER: "States need to create better data systems that provide the critical information policymakers need to make informed decisions about expanding and improving preschool. Most states cannot report unduplicated enrollment counts across early childhood education programs, nor can they track funding across multiple sources. Such shortcomings in information gathering do not exist for children in grades K-12. The federal government should support states in creating or improving data systems for prekindergarten programs."

programs that serve three year olds. Georgia and Oklahoma are currently the only states that makes prekindergarten available to all families who want their four year old children to participate. Most states do not limit these programs to the public schools (although the majority of these programs are in public schools) — many permit programs to be located in private child care centers and Head Start centers as well. Most commonly, these programs are half-day programs that operate during the school year, although 10 state initiatives offer programs that are for the full-school day, or longer. In many cases, hours of operation are locally determined.²⁶

According to the NIEER study, the quality of these state funded programs also varies across states. It found that states differ in the following areas: whether they require teachers to have a Bachelor's degree, whether specialized early childhood training is required, allowable student to child ratios, family services provided (such as health referrals and parent teacher conferences), and program standards.

Policy Issues

Research indicates that the quality of early childhood education and care is significant for children's later academic success, particularly for disadvantaged youngsters. Yet, the U.S. system of preschool education and care presently varies enormously, not only in quality (however defined) and content, but also in organization, sponsorship, source of funding, and the extent of government regulation.

An economic argument can be made for a federal role in providing aid for early childhood education and care due to externalities and information imperfections in the market for early childhood care and education.²⁷ This intervention might take the form of provision of care, subsidies or tax credits for families, tuition credits for early childhood educators (to provide an incentive for educators to pursue more education), licensing requirements, or simply the provision of information. Externalities exist because the benefits of quality early childhood education programs accrue not only to the families who purchase these services, but to society at large (through lower taxes for welfare and crime, through higher productivity of well-educated citizens, etc.). However, when the costs of these services are borne only by parents, the price paid for these services will be artificially low.²⁸ In addition, because of imperfect information and geographic limitations, parents may not be able to locate the best providers of early childhood education and care, or know how best to evaluate the costs, quality and services of different providers.

²⁶ Ibid., p. 33.

²⁷ A market failure is defined as "a situation in which a market left on its own fails to allocate resources efficiently." Deborah Vandell, and Barbara Wolfe, *Child Care Quality: Does It Matter and Does It Need to be Improved?*, U.S. Department of Health and Human Services, Washington, D.C., 2000.

²⁸ Ibid., p. 5. "[M]arket failure perpetuates itself. Because the demand for high-quality care is too low, compensation is too low, and the more highly trained seek employment in other spheres. As a result, quality declines, unless intervention occurs."

However, even if federal aid is determined to be appropriate, there is no consensus on how much federal aid should be provided and what form of aid would be most effective. There is also disagreement on whether such aid should be targeted to disadvantaged youngsters or should be universal. Others express concern that such aid may supplant current state programs. There are also questions regarding the potential role for the federal government in setting standards for early-childhood education and care; and for encouraging the coordination of any new initiatives with existing federal and state programs.

Most researchers have found high quality early childhood programs to have several factors in common: low teacher-child ratios, well trained and well paid teachers, and low staff turnover rates. Yet well trained, better paid staff, and low teacher-child ratios translate into more expensive programs. Presently many middle class families pay privately for their child or children's early education and care. Many children from low-income families participate in Head Start, although in 2002 only an estimated 59% of eligible four year olds were able to participate.²⁹

Weighing Costs and Benefits of Universal Preschool. The nongovernmental National Institute for Early Education Research estimates the annual cost per child of universal, quality preschool at approximately \$8,700.³⁰ It bases this estimate on ED's projection of 2002 K-12 costs per pupil of \$8,800, arguing this is a good proxy for full school day preschool. The \$8,700 per child preschool cost estimate is derived by applying ED's \$8,800 figure to the following assumptions: one-third of three and four year olds would attend half day preschool, one-third would attend a full school day, and one-third would attend a full day year round. This works out on average, to a cost of \$8700 per child. The \$8,700 figure is then multiplied by the Census Bureau's 2000 data on the population of three and four year olds to obtain an estimate for the total cost of providing quality preschool for every three and four year old of approximately \$70 billion (this assumes all costs are provided from public funds) annually.³¹ NIEER further breaks down these estimates to take into account alternative scenarios such as making universal preschool available only for four year olds, or only for children in poverty. It estimates the annual cost of universal care for four-year olds only, would be \$33.8 billion; it estimates the annual cost to serve only poor 3- and 4-year-olds would be \$11.6 billion.³²

NIEER estimates that the annual benefit from universally available preschool for 3 and 4 year olds would be approximately \$25,000 per year for each child served, substantially more than the estimated cost of \$8,700 per child. For this estimate it

²⁹ CRS Report RL30952, *Head Start: Background and Issues*, by Melinda Gish.

³⁰ According to NIEER, this amount would cover all program costs, as well as administration, support services and wrap around child care for families that need it. [http://www.nieer.org].

³¹ Ibid. Census 2000 data indicates that there were 3.89 million three year olds and 3.99 million four year olds in 2000.

³² Ibid. NIEER uses the March 2002 National Center in Poverty Child Poverty fact sheet figure of a 17% rate of poverty for children under six.

draws on results from the Chicago Child Parent Study and the Perry Preschool Project.³³

The Economic Policy Institute has recently published a report that finds similar costs and benefits of quality preschool, finding the benefit to cost ratio of providing high-quality preschool to all poor 3- and 4-year-olds would be at least 3 to 1 (i.e., a \$3 return for every \$1 invested in preschool):

Using the Perry Preschool cost-benefit ratios, the EPI study translates the potential benefits of establishing government financed universal preschool for all poor 3 and 4 year olds beginning in 2005 into projected future benefits to federal, state and local governments, in terms of government finance, the economy, and crime.³⁴ The study finds that for the first 16 years, the program costs would exceed program benefits. Thereafter, program benefits would be greater than costs. This would be due to higher tax revenues, lower welfare expenditures, and lower judicial costs as these children successfully enter the workforce. The study projects there would be higher productivity and higher future earnings leading to higher Gross Domestic Product, and improved social security solvency. Additionally, it projects substantial benefits to individuals (in terms of reduced financial loss and pain and suffering) from projected reductions in crime.

Presently much of the costs of preschool are borne by families. Costs of quality preschool can be difficult, it not impossible for many parents to afford. *Average* costs (*without assessing quality*) for a 4 year old in a child care center in 2000, were \$4,000 to \$6,000 per year, according to the Children's Defense Fund.³⁵ In all states but one (Vermont) the annual costs of child care in an urban area are greater than the costs of public college tuition. The costs of preprimary care are particularly burdensome for low-income families according to the Children's Defense Fund:

Even if a two-parent family with both parents working full time at minimum wage (\$21,200 a year before taxes) managed to budget 10 percent of their income for childcare (\$2,140), they would be left several thousand dollars short of what they needed to afford *average-priced* childcare, much less the higher prices charged by many better quality centers and family childcare homes.³⁶

³³ This is the estimated present value of anticipated future benefits. For references and more information on these studies see [http://www.nieer.org].

³⁴ In 2003 approximately 20% of the total population of 3 and 4 year olds were poor. Robert G. Lynch, *Exceptional Returns* (Washington, DC: Economic Policy Institute, 2004), p. 5.

³⁵ The GAO estimated the cost of *high quality* early childhood education in 1988 to be \$4,200 annually per child, plus \$600 for in-kind contributions. GAO surveyed National Association for the Education of Young Children (NAEYC) accredited centers. GAO assumed these accredited programs would give a reasonable estimate of the costs of a high quality early-childhood education program. U.S. General Accounting Office. *Early Childhood Education. What Are the Costs of High-Quality Programs?* Washington, D.C., Jan. 1990. Sixty-five percent of preschool costs are attributable to personnel costs. See CRS Report RL31118, *The Child Care Workforce*, by Linda Levine.

³⁶ Costs are for 2000, and are based on data collected from local child care resource and (continued...)

Nevertheless, although many preschool advocates and researchers acknowledge the burden of preschool cost on families, particularly low and middle income families, the prospect of procuring large sums of federal money for universal preschool is quite daunting, particularly since many of the potential benefits lie well in the future.

Universal vs. Targeted Preschool. Given the costs of early childhood education and care, in the context of limited resources, should federal aid be targeted to disadvantaged children, such as those who are presently not being served by Head Start? Research data indicate that disadvantaged children especially benefit from quality early childhood education and care. This research, as well as equity considerations, might support directing federal aid, if limited, to disadvantaged children. Proponents of targeting aid argue that universal care would provide care to children whose families already are paying for care privately and can afford to do so.

However, proponents of universal care argue that targeted programs miss many disadvantaged children who would benefit, and that if early childhood education and care programs become universally available there will also be a much larger number of families to advocate for the continued existence of these programs, and to advocate for high quality programs. Finally, there is no clear demarcation between children who need publically funded programs and those who do not; many working poor and middle class families, not eligible for publically funded preschool, struggle to provide quality preschool for their children.

Sponsorship. Another important issue is how best to ensure quality in early childhood education and care programs. In some European countries, where universal early childhood care and education are more prevalent, these programs are usually part of the public education system. Some argue that U.S. early childhood education and care programs should be run by public schools, because that would ensure quality standards and an education component to programs. Proponents argue that having local educational agencies in charge of these programs would help provide a qualified, well-paid staff and would be best for focusing efforts on preparing young children for entering elementary school. Others argue that the public school system has failed low-income children and should not serve as the model. And, they argue, in order to encourage continuing state and private efforts to provide quality early childhood education and care programs, flexibility in programs' sponsorship (including private providers and Head Start programs), organization and funding sources should be encouraged.

Congress is also concerned with how to increase the supply of quality early childhood care and education programs, without supplanting state provision of early-childhood education and care. Opponents of increased federal involvement argue that this aid will supplant existing private and state initiatives, and that more federal regulation of early childhood education and care services may effectively increase the

³⁶ (...continued)

referral agencies. Karen Schulman, *The High Cost of Child Care Puts Quality Care Out of the Reach for Many Families*, Children's Defense Fund, 2000.

costs of care to families. Furthermore, opponents of more federal aid for early childhood education and care argue that as a matter of principle such initiatives unduly interfere with the primary role of families in raising young children. Additionally, some argue it would be most efficient and politically feasible to build on existing programs. Because existing state initiatives vary enormously in terms of funding, structure, the entities providing care, and level of participation, concerns have also been raised about whether increased federal aid in the form of specific new programs might duplicate or discourage these efforts. On the other hand, if new federal aid is provided in a form intended to complement existing state efforts (a block grant, for example), it may risk a lack of focus.

Finally, some argue that more coordination of new and existing federal programs in early childhood education and care is needed. In a GAO report issued in 2000, the agency concluded that there is presently mission fragmentation and overlap in federal early childhood care and education programs:

Both occur when more than one federal agency (or more than one bureau within an agency) is involved in the same broad area of need. Fragmentation can create inefficient service delivery and administrative complexity because various agencies are administering similar programs serving similar groups of children. In addition, mission fragmentation makes coordination among agencies administering these programs necessary. Program overlap creates the potential for duplication — which occurs when programs have the same goals, the same activities or strategies to achieve them, or same targeted recipients. However, a certain amount of redundancy among programs may be necessary to improve service delivery, or it may indicate that a certain program is related to a number of areas.³⁷

Thus, some argue that the federal government needs to focus its efforts, not only on expanding aid for early childhood education and care, but also on developing more effective coordination among existing programs for early childhood education and care.

³⁷ U.S. General Accounting Office, *Early Education and Care: Overlap Indicates Need to Assess Crosscutting Programs*, HEHS-00-78, Apr. 2000, p. 7.