



A Center Policy & Practice Analysis Brief . . .

*Preschool Programs:
A Synthesis of Current Policy Issues*



The national Center for Mental Health in Schools is co-directed by Howard Adelman and Linda Taylor and operates under the auspices of the School Mental Health Project, Dept. of Psychology, UCLA.
Contact: Box 951563, Los Angeles, CA 90095-1563 Ph: (310) 825-3634; Toll free: (866) 846-4843;
Fax: (310) 206-5895; E-mail: smhp@ucla.edu Website: <http://smhp.psych.ucla.edu>

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UCLA Dept. of Psychology
P.O. Box 951563
Los Angeles, CA 90095-1563

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Preface

Whether or not children will be successful students depends greatly on the quality of their experiences in early childhood.

U.S. Department of Health and Human services, 2003

Once again, early education has emerged as a major policy and program topic. And, while the importance of early education is undisputed, the increasing calls for “Universal Preschool” and full-day kindergartens have yielded considerable controversy.

As a result, a myriad of polemic and analytic treatises have appeared in recent years. It seems that each day brings a new one.

At the risk of adding to the glut, we felt the need to provide a bit of a synthesis of the major issues.

Our specific interest in public policy for preschool programs stems from our concerns about promoting social and emotional development, preventing learning, behavior, and emotional problems, and addressing such problems at an early age.

This brief is designed to provide highlights of basic issues that permeate public policy discussions of pre-K programs. It also includes references to detailed guides and reports that expand on these matters.

CONTENTS

Introduction	1
Public Policy for Early Education	5
Data Relevant to the Cost-Benefit Debate	8
Three Sets of Overlapping Issues	14
Benefits vs. Costs	
Public Financing of Pre-Kindergarten Programs	
Universal Preschool	
Concluding Comments	16
References	17
Appendices	
A. A Few Examples of Public-Funded Pre-Kindergarten Programs	22
B. Three Frequently Cited Programs	24
C. Using the Center's Quick Find on Early Childhood Development	26

Introduction

We begin with some basic information about children and preschool programs in the U.S.A.

Early education programs, including legislative initiatives for full-day kindergarten and “Universal Preschool,” are a prominent agenda item in states across the country

- Census data reported in February, 2008, indicate there are approximately 20 million children in the U.S.A. under age 5, and almost 20% are poor.
- Labor statistics indicate that between 50 and 60% of their mothers are in the labor force.
- Lopez & de Cos (2004) report the following data for children in the U.S.A. aged 3-5 and not in kindergarten:

>Total number of children in this category	=	9,467,264
>Number enrolled in preschool/nursery	=	4,966,199 (or 52%)*

Of those enrolled:

>>Number in public programs	=	2,669,155**
>>Number in private programs	=	2,297,044

*Most reports indicate overall enrollment numbers will continue to rise as state funding increases.

**Federal Head Start program accounted for approximately 849,000; special education pre-kindergarten program enrollment accounted for approximately 399,000. The National Institute for Early Education Research (Barnett, et al., 2005) finds that the focus is mostly on 4-year-olds, with some states reducing enrollment of 3-year-olds to maintain or increase the number of 4-year-olds served.

- Early education programs, including legislative initiatives for full-day kindergarten and “Universal Preschool,” are a prominent agenda item in states across the country (Barnett, et al., 2005; Howard, 2006a, 2006b; 2006c; U.S. Department of Health and Human Services, 2006). The analyses by the Education Commission of the States (ECS, 2006) indicates that 45 states have legislation that provides some funding for pre-K programs. However, this number drops when only state-funded pre-kindergarten programs are considered. ECS data indicate that nine states do not fund such programs.

41 states and the District of Columbia fund preschools

Policy issues reflect differences in interpretation about respective costs and benefits for society

- With respect to universal preschool, Oklahoma offers publicly-funded pre-kindergarten education to all children at age 4. The National Institute for Early Education Research (Barnett, et al., 2005) reports that: “In 2004–2005, more than 90 percent of Oklahoma’s 4-year-olds were enrolled in state prekindergarten, preschool special education, or Head Start programs. Georgia offered the next highest level of access to publicly-funded pre-kindergarten, with 67 percent of 4-year-olds enrolled in one of these programs.” Through a ballot initiative, Florida established a universal pre-K program in 2005. However, in California, a ballot initiative was defeated in June 2006 to finance universal pre-K by increasing income tax for the state's highest income bracket.
- Obviously, levels of state support vary greatly. Over recent years, the National Institute for Early Education Research has found periods of expansion and contraction (Barnett, et al., 2005). The Institute reports that: “Despite difficult times for state budgets, state spending on preschool education grew by 7.5 percent even after adjusting for inflation, and neared \$3 billion.” The 2006 report from ECS cites a legislative report prepared in November 2005 by Pre-K Now as indicating that 41 states and the District of Columbia fund preschools. Of those, 26 states increased preschool funding; funding remained flat in nine states (Alabama, California, Iowa, Kentucky, Maryland, Michigan, New York, Rhode Island and South Carolina); and New Jersey and Vermont decreased funding. The 9 states without state-funded programs are Alaska, Idaho, Indiana, Mississippi, Montana, New Hampshire, North Dakota, Utah and Wyoming. However, ECS notes that Alaska's Head Start program did receive a small increase in state funding.
- The greatest impetus for enhancing funding comes from those who want to increase accessibility to early education programs for children from low-income families. The rationale for doing so generally is to enhance their opportunity for later success in school and in life and to reduce the costs associated with failure to succeed at school. In this context, policy issues reflect differences in interpretation about respective costs and benefits for society.
- Debate has focused extensively on conflicting interpretations about what available research indicates about whether benefits outweigh costs. For example, the National Institute for Early Education Research (Barnett, et al., 2005) states that: “high-quality preschool dramatically affects later achievement, high school graduation and college attendance, employment and earnings, crime and delinquency, health behaviors like smoking and drug use, even marriage rates. In economic terms, research finds that high-quality preschool pays high returns to the individual, community, state and nation as a whole. Preschool offers important benefits for the nation’s economic productivity, cost of government, families and communities.” Others argue that the positive research cited is being overstated, negative findings are being understated, and that costs outweigh benefits. (We highlight data and the cost-benefit issues later in this brief.)

- Financing for pre-K programs comes from various sources. As reported by ECS (Howard, 2006b), in addition to state general fund investments and school funding formulas, the following are examples of some finance strategies used in states:

>Pre-K programs in Kansas received funds from the tobacco settlement finalized in 1999.

>Funding in Tennessee, Georgia, and North Carolina were generated through lottery revenues. Legislation enacted in Tennessee in 2005 stipulated that funds for pre-K programming would be drawn from recurring excess net education lottery proceeds in the Lottery for Education Account, after higher education scholarships had been funded. Georgia's lottery financed an additional 2,000 state preschool slots, and the North Carolina legislature approved a lottery to raise funds for pre-kindergarten programs.

>In Arkansas funds were generated through a tax on beer, first passed by the legislature in 2001 and which continues to be earmarked for financing pre-K in the state.

>Local programs in California used tobacco tax revenues to finance programs.

>Hawaii used department of education dollars and transferred Temporary Assistance for Needy Families (TANF) dollars into pre-K programming to increase support without legislative action.

>The newest state to include pre-K funding in the school funding formula is Nebraska. Legislation to gradually shift funding was accompanied by a short-term increase in the state's Early Childhood Grant program to allow for ongoing expansion during phase-in.

>Two states, Iowa and Massachusetts, increased program affordability by increasing child care subsidies to families.”

[In Arizona, the Arizona Early Childhood Development and Health Initiative was proposed to ensure that all families have voluntary access to high-quality early learning and health screening. The universal pre-K initiative proposed in California was defeated in June 2006; however, the governor proposed a budget investment in Pre-K programs for low performing districts.]

Despite widespread support, public funding continues to be hotly debated, especially when universal preschool is proposed

Despite widespread support, public funding continues to be hotly debated, especially when universal preschool is proposed. Both these matters are highlighted later in this brief.

- Quality of pre-kindergarten programs has been a long-standing worry, and the concern increases along with the growing number of programs. In this connection, it is commonly noted that programs models and standards vary considerably. The majority of states do not require specific qualifications for preschool teachers. And, of the almost 5 million people who work as child care teachers, assistants, and family care providers, about half are unpaid/volunteers (Barnett, et al., 2005; Howard, 2006c).

a patchwork of ad hoc, piecemeal, and fragmented activity that varies in quality and doesn't provide all children with equal access

In sum, it is evident that the nationwide status of pre-kindergarten education is a patchwork of ad hoc, piecemeal, and fragmented activity that varies in quality and doesn't provide all children with equal access. This state of affairs weakens the contribution state-funded early education programs potentially can make to fulfilling the public policy commitment to leave no child behind.

A Few Representative Quotes

“ . . . the findings tell the same story—that those most at risk will make the greatest gains from early childhood programs (and conversely the social costs will be the highest for a failure to intervene on their behalf)” (Galinsky, 2006).

“ . . . about early education programs: the real benefits are not from making children smarter, but from nurturing children's noncognitive skills, giving them social, emotional, and behavioral benefits that lead to success later in life” (Ehrlich & Kornblatt, 2004, with credit to Carneiro & Heckman, 2003).

“The rosy arguments attempting to justify tax increases and a massive bureaucratic program rely on heroic and unbelievable assumptions belied by the real-world evidence” (Cardiff & Stringham, 2006)

“Most advocates of public preschool argue that early schooling of low-income children is an investment that pays off in the long term by reducing the number of children who will perform poorly in school, become teenage parents, commit criminal acts, or depend on welfare. Other advocates of public preschool see it as a way to subsidize child care. Experience provides little reason to believe universal preschool would significantly benefit children” (Olsen, 1999)

Public Policy for Early Education

In a 2006(c) policy brief, Mimi Howard nicely sets the stage for policy and program analyses and action:

“Over the past decade, investing in early learning programs for young children – especially at the pre-K and early elementary levels – has emerged as a central strategy in states’ efforts to improve educational achievement and opportunity. This trend has been fueled by strong public support and a steady stream of research findings on the influence of the first few years of life on cognitive and emotional development, social adjustment, health and economic self-sufficiency.

Early education holds and will continue to hold a key place in state policy. Paradoxically, increased political and public support, while creating important educational opportunities for young children, has also raised new challenges and questions for those charged with creating and implementing policy. The need to close a persistent achievement gap, and ensure both long- and short-term returns on investments in early learning, has led to a growing focus on establishing policies and practices that will have the biggest impact on whether or not early learning programs pay off.

As early learning expands, so does the multiplicity of programs and accompanying infrastructures, policies and procedures, funding streams and accountability mechanisms. Policymakers are grappling with the challenges of accommodating existing programs and services while at the same time maintaining some uniformity of quality, outcomes and coordination across programs.”

The first matter we consider here is the current status of federal and state policy.

Federal

As the U.S. Department of Health and Human Services (2003) states: “Head Start is the major federal program designed to promote the school readiness of poor children and to assist them in developing to their fullest potential.” From its onset in 1965, Head Start has included “comprehensive services to address children’s cognitive, social-emotional, health and safety needs while strengthening their families and supporting parents’ participation in their children’s education.” And, in the 1998 reauthorization, a special emphasis was added for developing children’s language and pre-reading skills.

State

Before Head Start, few states funded pre-kindergarten programs.

As indicated in the introduction, the latest reports indicate that 45 states have legislation that provides some funding for pre-K programs. However, this number drops to 39 when only state-funded preschool is considered.

Obviously, levels of state support vary greatly; so do the initiatives that are supported. Universal preschool is rare. Oklahoma stands out, with over 90% of 4-year-olds enrolled. Georgia is up to 67%. Louisiana, New Jersey, New York, Ohio, Pennsylvania, Vermont, and Wisconsin each have more than one distinct initiative.

In almost every state, legislators are backing governors' priorities for early childhood education

Florida is the latest to provide state funded preschool. In June 2006, the *Sarasota Herald Tribune* reported: "Florida's fledgling pre-K program, struggling from the start to reach enrollment goals, has hit another obstacle. Only 6,200 children are registered for the state's free summer pre-kindergarten program. That's a fraction of the 35,000 4-year-olds state officials had projected. Organizers blame the 7 1/2- to 10-hour school day for putting off parents who might otherwise have embraced a last chance to prepare their child for kindergarten. The Legislature mandated a 300-hour summer program, forcing schools to design a longer school day than students will face in kindergarten."

A perspective on state-level policies and the pre-school programs they engender is provided in The National Institute for Early Education Research's report *On: The State of Preschool: 2005 State Preschool Yearbook* (Barnett, et al., 2005). The Institute reports on each state using a common set of indicators. In addition to their overall analyses, they present a one page description of each state's program followed by a page with data on the program's key features. The description covers the main features of the state's initiative, including its origins, types of settings, and the eligibility criteria for children, percentages of the state's 3-year-olds and 4-year-olds enrolled, and spending per child with changes from fiscal year 2002 through fiscal year 2005. There also are rankings of how the state prekindergarten program compares to other states with respect to percentage of the state's 3 and 4-year-old population enrolled and state expenditures per child enrolled. Findings are grouped in terms of (1) access, (2) quality standards, and (3) resources (see Exhibit 1).

The report summarizes the status of state-funded preschool as follows: "By the 2001–2002 school year, ... 38 states were funding programs and enrolling nearly 700,000 children. By 2004–2005, those states served more than 800,000 children, surpassing the 40-year-old federal Head Start program in number of 4-year-olds served. This represents an astounding jump of 20 percent in 4-year-olds and an 8 percent increase in 3-year-olds enrolled during those four years. When 2005–2006 is reported, Florida's new program alone is likely to add 100,000 4-year-olds to the total. ... Despite difficult times for state budgets, state spending on preschool education grew by 7.5 percent even after adjusting for inflation, and neared \$3 billion. ... Growth in quality of programs has been slow to develop. Only one state—Arkansas—meets all 10 benchmarks on NIEER's Quality Standards Checklist while five state prekindergarten initiatives achieve nine of the 10. More than half of states with programs still have policies that do not require all teachers to have appropriate qualifications. ... The national trend in enrollment was strongly positive from 2001 to 2004. However, funding shortfalls produced enrollment declines in 11 states. Nationally, inflation-adjusted state spending per enrolled child declined by more than 7 percent over four years. In 26 of 38 states with prekindergarten programs, the state's per child expenditure declined in real (inflation-adjusted) dollars. ..."

ECS cites the findings from a special Education Week report (Richard, 2006) that indicates that, in almost every state, legislators are backing governors' priorities for early childhood education.

Exhibit 1. Access, Quality, and Resources Related to State-Funded Preschool Programs

From: The National Institute for Early Education Research's report On: *The State of Preschool: 2005 State Preschool Yearbook* (Barnett, et al., 2005)

Access

- In 2004–2005, 38 states funded one or more state prekindergarten initiatives. There were 12 states without state-funded prekindergarten, although one of those states, Florida, began a large-scale initiative during the 2005–2006 school year.
- State prekindergarten initiatives served more than 800,000 children during the 2004–2005 school year. This is an increase of about 16 percent, or 110,000 children since we began tracking access during the 2001–2002 school year. Despite this overall pattern of growth, state prekindergarten enrollment actually declined in 11 states.
- State prekindergarten programs continued to focus primarily on 4-year-olds. In 2004–2005, 17 percent of the nation's 4-year-olds were enrolled, an increase from 14 percent in 2001–2002. Meanwhile, only 3 percent of the nation's 3-year-olds were enrolled during 2004–2005, roughly the same percentage served in 2001–2002. Some states appear to have reduced enrollment of 3-year-olds in order to increase or maintain the number of 4-year-olds served.
- Oklahoma is the only state that can be said to offer publicly-funded preschool education to virtually all children at age 4. In 2004–2005, more than 90 percent of Oklahoma's 4-year-olds were enrolled in state prekindergarten, preschool special education, or Head Start programs. Georgia offered the next highest level of access to publicly-funded prekindergarten, with 67 percent of 4-year-olds enrolled in one of these programs.

Quality Standards

- Arkansas was the only state that met all 10 of NIEER's quality benchmarks. Five additional state preschool initiatives—in Alabama, Illinois, New Jersey, North Carolina, and Tennessee—each met nine of the 10 benchmarks. However, 21 state initiatives met five or fewer benchmarks. This suggests that states need to develop policies that establish stronger and more uniform quality standards.
- Twenty-one states did not require all state prekindergarten teachers to hold at least a bachelor's degree. Nine of these states did not require *any* state prekindergarten teachers to have a bachelor's degree; nine more exempted teachers outside the public schools; and three had multiple prekindergarten initiatives, at least one of which did not require a BA. As a result, some preschoolers in each of these states have teachers who lack the basic educational credential generally expected of teachers at other grade levels.
- Improvements in the quality of state preschool initiatives have been relatively slow to materialize. Four state programs—in Georgia, Kentucky, Louisiana, and West Virginia—made policy changes resulting in real improvements to their quality standards by the 2004–2005 program year.
- For the first time, this report examines quality monitoring requirements as a gauge of states' efforts to ensure that the goals of quality standards are achieved in preschool classrooms. Thirty state prekindergarten initiatives used regular site visits to monitor local programs in 2004–2005.

Resources

- Total state spending for prekindergarten initiatives reached \$2.84 billion in 2004–2005. By comparison, state governments spent about \$240 billion on grades K–12 during the same time period. Spending on preschool education represents slightly more than 1 percent of the total state K–12 budget.
- State prekindergarten spending grew 7.5 percent from 2001–2002 to 2004–2005, after adjusting for inflation. Average state spending per child enrolled was \$3,551 in 2004–2005. States vary tremendously in their per-child spending. The top-ranked state—New Jersey—spent 10 times more per child than Maryland, the lowest-ranked state.
- Although there was modest growth in spending from 2001–2002 to 2004–2005, enrollment growth in state prekindergarten outpaced spending increases. As a result, there was a 7.3 percent *decline* in inflation-adjusted per-child spending over this 4-year period.

The report provides a Table ranking each state with respect to access (for 3 and 4-year-olds), resources, and the average number of quality benchmarks met.

Data Relevant to the Cost-Benefit Debate

Research on the effectiveness of preschool education has been controversial. Arguments arise over findings related to benefits, costs, and cost-benefits. Data are drawn from various early childhood interventions that have some follow-up findings. Not surprisingly, the research on this topic has been restricted by financial and methodological constraints. Thus, the findings related to each study suffer from a variety of limitations and the differences in samples make it difficult to aggregate findings across studies or to disaggregate subgroup effects. Moreover, few have adulthood findings. Among the most cited findings are those from the High/Scope Perry Preschool Program, Carolina Abecedarian Project, Chicago Child-Parent Centers, Houston Parent-Child Development Center, Yale Child Welfare Research Program, Milwaukee Project, Syracuse Family Development Program, Consortium for Longitudinal Studies, Infant and Health Development Program, Educational Testing Service Head Start Study, and PISD Head Start Longitudinal Study.

The Negative Argument

One side states that current early education efforts have neither effectively illustrated long-term gains, nor produced substantive longitudinal results. Indeed, they suggest that the effects of preschool fade out by third grade. Also related to costs, there are concerns that scarce resources are used for matters not directly related to education. This latter argument suggests that preschools may simply incur large-scale costs in their attempts to address deeper problems in society that cannot be solved via early education efforts alone. The Cato Institute goes so far as to argue that “public preschool for younger children is irresponsible, given the failure of the public school system to educate the children currently enrolled.” There are also cautions about iatrogenic effects, such as the potential inappropriate over-identification of subgroups for special education and concern about overemphasizing cognitive development at the expense of social and emotional learning.

From the Reason Foundation – *Assessing Proposals for Preschool and Kindergarten: Essential Information for Parents, Taxpayers and Policymakers* (2006) by Darcy Olsen with Lisa Snell
http://www.reason.org/ps344_universalpreschool.pdf

“A significant body of research shows that formal early education can be detrimental to mainstream children. ... A November 2005 study by researchers at Stanford University and the University of California, Berkeley analyzed data from more than 14,000 kindergartners from the National Center for Education Statistics’ Early Childhood Longitudinal Study. They found evidence that preschool hinders social development and created poor social behavior, such as bullying and aggression, and a lack of motivation to take part in classroom activities. Those patterns for former center-based preschoolers were the strongest among white children from high-income families and among low-income black children. The study, “How much is too much? The Influence of Preschool Centers on Children’s Development Nationwide,” found that children who attended preschool at least 15 hours a week are more likely to display more negative social behaviors, such as acting up or having trouble cooperating, than their peers. Children from better-off families were most likely to exhibit social and emotional development problems, said UC Berkeley sociologist and co-author Bruce Fuller (Loeb, et al., 2005).

In a February 2006 study of Quebec’s universal preschool program examining more than 33,000 children between 1994 and 2002, economists from the C.D. Howe Institute find negative outcomes for children enrolled in universal childcare. They write: *Several measures we looked at suggest that children were worse off in the years following the introduction of the universal childcare program. We studied a wide range of measures of child well-being from anxiety and hyperactivity to social and motor skills. For almost every measure, we find that the increased use of childcare was associated with a decrease in their well-being relative to other children. For example, reported fighting and aggressive behavior increased substantially* (Baker, Gruber, & Milligan, 2006).”

The Positive Argument

The other side argues there are sufficient data to support the conclusions that “high-quality preschool dramatically affects later achievement, high school graduation and college attendance, employment and earnings, crime and delinquency, health behaviors like smoking and drug use, even marriage rates. In economic terms, research finds that high-quality preschool pays high returns to the individual, community, state and nation as a whole. Preschool offers important benefits for the nation’s economic productivity, cost of government, families and communities” (Barnett, et al., 2005).

From the National Institute for Early Education Research
<http://nieer.org/resources/files/CAProp82Analysis.pdf>

"The notion that preschool education's effects fade out by third grade is one of the most common myths about early childhood education. It is based on half-truths and poor research. Research studies have generally shown that gains in IQ due to preschool programs are most apparent in the short term and tend to gradually diminish over time. However, other outcomes do not disappear over time. Overall, the strongest studies find that meaningful effects on achievement persist. After participating in high-quality preschool programs, children are less likely to repeat a grade or to be placed in special education. They are also more likely to graduate from high school. It is also important to understand that public education can create what looks like 'fade-out' when schools assist children who are failing with expensive additional services, costs that are better avoided in the first place, and that poor-quality preschool programs will not generate persistent effects. In addition, important effects have been found on a wide range of children's social and emotional outcomes, including reductions in delinquency and crime and in behaviors like smoking and teen pregnancy that pose significant health risks."

A Middle Ground Argument

Kristie Kauerz (2006) offers what can be viewed as a middle-ground perspective. She states: “It’s a good news, bad news situation. The good news is an increasing body of evidence shows that children’s participation in high quality pre-kindergarten (PK) programs helps them begin kindergarten ready to succeed. Similarly, there is growing evidence that children who start kindergarten behind but participate in a *full*-day kindergarten (FDK) program catch up to their peers by the end one academic year. The bad news is these effects often appear to ‘fade out’ over time. As children move through the primary grades (grades 1, 2, and 3), the progress they made in PK and FDK dissipates and they are, once again, lagging behind other children. This fadeout effect suggests that while participation in PK and FDK produces positive short-term outcomes, it may not be sufficient to inoculate children against future academic failure. ... High-quality PK and FDK give children a boost to successfully climb the first few rungs on the ladder of learning.” What all this means, she argues as others have for some time, is that there needs to be a policy commitment to ensuring that children have a sturdy ladder of learning to climb as they progress into elementary school. She stresses: “It is not that PK and FDK are not effective. Indeed, PK and FDK *are* effective in closing achievement gaps before children enter first grade. It is crucial to expand children’s

Improving the quality of K-3 schools is a necessity to mitigate fade-out

access to high quality PK and FDK programs so that every child enters first grade well prepared to undertake a challenging curriculum and to meet high standards. One or two strong rungs, however, do not guarantee a successful climb up the ladder of learning; there must be an ongoing succession of sturdy rungs. Therefore, improving the quality of K-3 schools is a necessity to mitigate fade-out. Two prominent efforts have articulated cross-cutting principles for strengthening *both* early care and education and schooling in the primary grades. If the rungs stop after kindergarten and there is a long gap of unsupported space until the top of the ladder, children will have more difficulty – and need more assistance – to reach the top.” (See Exhibit 2 below for excerpts from Kauerz’s January 2006 issue brief.)

Exhibit 2. About Countering Fade-Out in Preschool Impact

From: *Ladders of Learning: Fighting Fade-Out by Advancing PK-3 Alignment*. K. Kauerz (2006)
<http://www.fcd-us.org/pdfs/kkauerzladdersoflearning.pdf>

“The research is clear: preschool for 3- and 4-year olds is an effective investment for helping children succeed in the short term. Based on data from the *Early Childhood Longitudinal Study-Kindergarten Class of 1998-99* (ECLS-K), children who attended preschool (the specific program type was not disaggregated) performed significantly better in both math and reading in the fall of their kindergarten year compared to children cared for only by their parents before kindergarten. In fact, children who attended preschool increased on average from the 50th to the 54th percentile in reading achievement. The effects on math skills were of a similar size (Magnuson, Meyers, Ruhm, & Waldfogel, 2005). Beyond these findings about preschool in general, studies of carefully controlled, high quality early childhood programs designed specifically to be “model” programs for disadvantaged students (*e.g.*, High/Scope Perry Preschool and the Carolina Abecedarian Project) also show substantial short term positive outcomes in children’s cognitive development, boosting at-risk children’s achievement by nearly one-half (Barnett, 1995; National Research Council, 2001). Even programs that are neither as well funded nor as carefully controlled produce positive short term gains for young children. For example, recent research on state-based, pre-kindergarten programs—publicly funded programs that serve children who are not all economically disadvantaged—shows cognitive progress for participating children. Specifically, children who attended state pre-kindergarten programs have statistically significant and meaningful gains in early language, literacy, and mathematical development—an 8 percent increase in children’s average vocabulary scores and a 13 percent increase in math scores (Barnett, Lamy, & Jung, 2005). In short, the research shows that PK provides crucial short term gains for participating children, giving them a sturdy first foothold on the ladder of learning.

Similarly, there is increasing evidence of the efficacy of FDK in boosting children’s academic achievement (Ackerman, Barnett, & Robin, 2005). Analyses of ECLSK data show that children who participated in FDK made statistically significant gains in reading and math skills by the end of the kindergarten year when compared to their peers who attended a half-day program. Children in FDK programs made greater gains in both reading and math achievement – gains that close the achievement gap between the highest and lowest performing students by nearly one-third in reading and by one-fourth in math (Walston & West, 2004). FDK thus is another strong rung on the ladder of learning.

Unfortunately, while children show short term gains at the end of PK and FDK, those gains are reduced or have faded out when measured a few years later. For example, based on ECLS-K data, early academic advantages associated with preschool attendance fade over the first two years of elementary school. In fact, researchers estimate that 60 to 80 percent of the cognitive gains found in kindergarten associated with attending preschool dissipate by the spring of first grade (Magnuson, Meyers, Ruhm, & Waldfogel, 2005). Additional findings from ECLS-K did not detect any substantive differences in children’s third grade achievement relative to the type of kindergarten program (full-day vs. half-day) they attended, thereby pointing to a fade-out effect in elementary school for full-day kindergarten as well (Rathbun, West, & Hausken, 2004).

(cont.)

The fade-out effect of achievement during the elementary years may cause some to rush to judgment about the efficacy of PK and FDK, concluding that such early childhood programs are not beneficial to children and therefore are a waste of time and resources. Such a conclusion, however, would be premature and overly broad. There are several plausible explanations for fadeout during elementary school; all point to the need to expand and improve children's learning experiences from PK through third grade. First, it is simplistic to assume that there is a single magic bullet solution to raising student achievement. The lives of many at-risk children are complex and include multiple risk factors (National Institute of Child Health and Human Development Early Child Care Research Network, 2004; Ryan, Fauth, & Brooks-Gunn, 2006). Indeed, what research on early intervention suggests is that there is no program that, administered for one or two years, will ensure the success of at-risk children throughout their school careers and beyond (Slavin, 1994).

Second, the availability of high quality PK programs to *all* children is a crucial variable contributing to fade-out. In the absence of universal PK programs, some children enter first grade having had extensive and high quality PK experiences, while other children enter first grade with no enriched or intentional early learning experiences. Inevitably, the first grade teacher must focus on those children who do not have the relevant and necessary cognitive or social skills, thereby being forced to slow and level down the curriculum and pedagogy in order not to leave behind less well prepared children. This though can have the simultaneous effect of holding back and hindering the learning of children who enter first grade well prepared to take advantage of a robust curriculum and high learning standards. The cumulative effect of slowed down curriculum and pedagogy over the course of two or three years would understandably lead to the fading out of gains made by children in PK and FDK.

Third, it is important to consider the quality of elementary schools into which children enter. If children move from a high quality PK program into a low quality school, it is not surprising that fade-out occurs. This is particularly problematic for low income students, because placements into elementary schools are entirely dependent on residential location, with low income children more likely to end up in low resource schools (Clements, Reynolds, & Hickey, 2004; Education Trust, 2005; Reed, 2001; Schrag, 2003). No matter how beneficial PK or FDK were initially for young participants, such benefits are undermined if students are subsequently exposed to schooling of systematically lower quality (Currie & Thomas, 2000; Lee & Loeb, 1995).

Importantly, despite the fade-out of benefits during the elementary school years, scientifically rigorous research shows that high quality early childhood interventions produce impressive long term benefits to society including fewer grade retentions, fewer special education placements, increased high school graduation rates, decreased arrest rates, and increased employment earnings (Campbell, Miller-Johnson, Sparling, & Pungello, 2001; National Research Council, 2001; Schweinhart et al., 2005). These data do not contradict the fade-out problem, but highlight the complexities of measuring cognitive achievement in comparison to other factors. For example, measuring grade retention is rather straightforward: either a child was or was not retained. In contrast, measuring cognitive achievement over time relies on valid and reliable test instruments that calculate roughly the same kinds of skills and learning, despite the myriad of technical problems that affect achievement testing and assessment today. In today's standards-based education climate, however, it would be a mistake to dismiss fade-out as a technical glitch in research efforts. Rather, fade-out should be seen as justification for ensuring that children's achievement is supported and sustained in both the short term and the long term.

It is not that PK and FDK are not effective. Indeed, PK and FDK *are* effective in closing achievement gaps before children enter first grade. It is crucial to expand children's access to high quality PK and FDK programs so that every child enters first grade well prepared to undertake a challenging curriculum and to meet high standards. One or two strong rungs, however, do not guarantee a successful climb up the ladder of learning; there must be an ongoing succession of sturdy rungs. Therefore, improving the quality of K-3 schools is a necessity to mitigate fade-out."

Finally, given our concern about learning, behavior, and emotional problems, we note (1) the 2005 research center summary from PACE (Policy Analysis for California Education) discussing their analysis of preschool with a perspective on children from economically disadvantaged families, and (2) a statement focused on young children with disabilities from the U. S. Department of Education in its Special Education Research Grants Request for Applications (4/20/06).

From: *Preschool Centers and Child Development*. (2005)
http://pace.berkeley.edu/summary_23DA10_new.doc

“Children from poor families have displayed solid gains in their cognitive skills when attending preschools. Evidence for these effects stems from small, controlled experiments and from non-experimental data on children enrolled in a variety of local programs. Less evidence is available on whether youngsters from middle-class homes benefit from attending early childhood programs. In addition, we know little about possible impacts from the duration (the age at which children enter preschool) or the intensity (hours enrolled each week) of attendance. These empirical questions have become more pressing as several governors and state legislatures press forward to offer publicly funded preschool to all children.

The effect of center attendance on children’s cognitive skills. Accurately estimating the effect of children’s exposure to preschool centers requires taking into account home factors, such as income and parenting practices, which may predict both whether a child enters a center and the child’s pace of learning. Without controlling for these selection factors, we would risk inaccurately specifying how center attendance contributes to child development... We find that attending a preschool center prior to kindergarten raises early language and pre-reading skills and math skills by about 10 percent of a standard deviation (SD) on average. The magnitude of this benefit is more than double for English-proficient Hispanic children (0.23 SD), compared with White children. To set the magnitude of these estimates in context, we can compare them to the magnitude of other interventions. For example, the benefit accruing to children randomly assigned to Tennessee’s smaller kindergarten classes of less than 17 students equaled about 0.21 SD, compared to the control group which remained in larger classes.

The effect of center attendance on children’s social development. We find that attendance in preschool centers, even for short periods of time each week, hinders the rate at which young children develop social skills and display the motivation to engage classroom tasks, as reported by their kindergarten teachers. We use a composite measure of social-behavioral growth which includes indicators rooted in three domains of development: children’s externalizing behaviors (such as aggression, bullying, acting up), interpersonal skills (such as, sharing and cooperation), and self-control in engaging classroom tasks.

These findings also inform the debate over half-day versus full-day preschool programs. Our results suggest that full-day programs may be a wise investment for children from poor families who gain cognitively from more intensive preschool but do not show strongly negative behavioral consequences associated with additional hours. Half-day programs may be sufficient for children from middle or higher-income families, given that for these children the cognitive benefits taper-off after 30 hours per week of exposure, and the negative social-developmental effects intensify.

Early Intervention, Early Childhood, and Assessment for Young Children with Disabilities
[From the statement from the U. S. Department of Education, Special Education Research Grants Request for Applications (4/20/06) – <http://ies.ed.gov>]

Through its “Early Intervention, Early Childhood Special Education, and Assessment for Young Children with Disabilities Research Grants Program,” the Institute of Education Sciences intends to contribute to the improvement of cognitive, linguistic, social, emotional, adaptive, and physical outcomes of infants, toddlers, and young children (from birth through 5) with disabilities or to prevent the development of disabilities.

Research on early intervention for young children with or at risk for disabilities conducted prior to 1986 (Guralnick, 1988) revealed an unremarkable but important finding: Children and families who received early intervention services and supports were better off than children and families who received essentially no early intervention services and supports. Subsequent research has focused more strategically on the design and implementation of early intervention programs, practices, and techniques for young children with or at risk for disabilities (Guralnick, 1997) and employed more mature research methodology designed to address a more complex set of questions across a broader array of developmental, familial, social, cognitive, curricular, and pedagogical dimensions. However, as the National Research Council’s Committee on Integrating the Science of Early Childhood Development noted, even this research has suffered from important methodological limitations: “.....the empirical knowledge base on the efficacy of early childhood intervention is relatively uneven.....Most important in this regard is the extent to which a large proportion of studies that address questions of causality have suffered from inappropriate research designs, inadequate analytic approaches, or both.....” (Shonkoff & Phillips, 2000, p. 342).

In the context of this limited research base, the Institute is interested in expanding its special education research program on early intervention, early childhood special education, and assessment of infants, toddlers, and young children with disabilities. This program will support the development and evaluation of interventions, programs, and curricula intended to address the cognitive, linguistic, social, emotional, adaptive, and physical needs of infants, toddlers, and young children with disabilities, or at risk for disabilities, and their families. The Institute encourages researchers to modify or adapt existing interventions, programs, or curricula (including family focused interventions) to meet the needs of infants, toddlers, and young children with disabilities, or at risk for disabilities, and their families and support the development of children’s school readiness skills. Researchers may consider, for example, what levels of intensity (e.g., high intensity includes daily levels of frequent and distributed practice on selected concepts or topics), specificity (e.g., highly specified instruction includes explicit teacher scaffolding of verbal support and prompting), or content emphasis (e.g., basic language concepts, basic gross and fine motor skills,) are necessary to ensure high threshold levels of progress and performance on a range of cognitive, social, functional or developmental outcome measures. Other questions that require attention include, for example: What is the differential effectiveness of selected intervention programs or models delivered in classroom, home, or other natural settings within or across the full range of infants, toddlers, and young children with or at risk for disabilities on a range of cognitive, language, developmental or social measures at different points in children’s growth and development? What features and levels of personnel preparation or professional development (e.g., high and continuous professional development support versus low and incidental professional development support) on what specific pedagogical (e.g., structured and teacher directed vs. unstructured and child-centered), curricular (e.g., vertical coverage vs. horizontal coverage of content), and instructional dimensions (e.g., number of modeled examples; small group vs. 1-to-1), at what points in the year, and for what children are most effective in promoting the high quality implementation of curriculum programs for infants, toddlers, and young children with or at risk for disabilities?

In addition, the Institute encourages researchers to develop and/or validate early screening and progress monitoring instruments that can be used by practitioners to identify and monitor infants, toddlers, and young children who are in need of early intervention. Finally, researchers are encouraged to develop and/or validate outcome measures that can be used not only for measuring infants’, toddlers’, and young children’s development and achievement but also for determining program areas that need improvement and for providing data for Federal accountability purposes.

Three Sets of Overlapping Issues

Major public policy issues related to preschool can be conceived as falling into three sets of overlapping categories. First, there are the issues about the costs vs. benefits of preschool education for individuals, communities, the state, and the nation. Second are the issues that arise related to public-financing of pre-K programs. Third are the additional issues that arise with respect to calls for universal preschool.

Benefits vs. Costs

Is preschool education a good thing? It seems clear that most policy leaders and most parents think that there are significant benefits to be gained from quality early education experiences. Arguments arise when discussion turns to state-funding in general and initiatives for universal preschool in particular. As is common in such arguments, extremes on either side try to use available data to support their position and minimize/attack any data that doesn't support their side.

As noted, arguments for increasing state-support interpret the limited body of findings as indicating that the benefits of public investment in early education programs not only are significant, but they represent a return that more than compensates for the investment. The return is discussed in terms of enhanced school achievement and fewer school problems, enhanced health, and subsequent employment, earnings, and economic productivity, and reduced delinquency and crime. In addition, the data are interpreted as yielding significant economic returns for a community, state, and the nation as a whole (e.g., Barnett, et al., 2005; Karoly & Bigelow, 2005). Those making such arguments tend not to discuss issues of priority in expending public funds and rarely explore potential iatrogenic effects (of preschool programs per se and of preschool as a funding priority).

Public Financing of Pre-Kindergarten Programs

Opponents of increasing state-support take several tacks. One involves criticizing data on benefits as being inadequate for making generalizations for expanding public support of preschool, especially policy for universal preschool funding. These critics point to the nature of the samples (e.g., special education populations, those representing the most economically disadvantaged) and methodological limitations. Critics also argue against the notion that pre-kindergarten programs are a potent way to counter the disadvantages experienced by children who grow up in poverty. Another tack is to use any available data that counter arguments about benefits or that amplify costs (including indications of iatrogenic effects). For example, critics point to findings suggesting the effects of preschool fade out by third grade. (These data, of course, are critiqued by those on the other side of the argument.) With reference to possible iatrogenic effects, some point to the potential inappropriate over-identification of subgroups for special education, studies are referenced that suggest toddlers who spend long hours in childcare are more likely to be aggressive and disobedient when they reach kindergarten, and concerns are raised about overemphasizing cognitive development at the expense of social and emotional learning and with the risk of overpressuring children and producing negative attitudes about schooling.

Universal Preschool

Additional issues arise when the focus is on universal preschool initiatives. In this context, opponents of increasing state-funding add to the arguments noted above and often are joined by others who favor some degree of state-funding, but not a universal program. First and foremost, the argument is that if such a program is made compulsory, it elevates early education to an inappropriately high policy priority (e.g., there are other arenas, including K-12 education, that are underfunded). Even if the program is voluntary, some argue it will create “a new, government-managed ... entitlement program that subsidizes the preschool choices of middle-class and wealthy families ... [and] change the structure of the current mixed-provider preschool market into a state-controlled monopoly” (Olsen & Snell, 2006). And, there is concern that the rapid increase in demand will further exacerbate quality deficiencies that have plagued the field.

Supporters of universal preschool add to their arguments (noted above) that a commitment to equity and ensuring no child is left behind requires a commitment to universal preschool at least on a voluntary basis. The importance of doing so is to ensure that positive development is promoted and that preventable learning and behavior problems are avoided and problems that are evidenced are addressed early before they become pervasive and severe. Moreover, they stress that other industrialized countries are ahead of the U.S.A. in recognizing the many benefits of such an investment.

Among those who favor universal preschool, policy issues also arise about such matters as

- >Where and how much to invest?
- >How to fund?
- >How to maximize the investment?
- >Who governs?
- >How much should the focus be on cognitive development and school readiness skills?
- >How to enhance quality of existing programs and how to build quality on a large-scale?
- >The role of parents?

(For a discussion of such matters see Mimi Howard’s 2006c policy brief.)

Some Ongoing Basic Program Issues

- >What are the active ingredients in a good pre-kindergarten program?
- >What are the long-term benefits of large-scale efforts?
- >How to minimize iatrogenic effects?
- >How best to ensure access?
- >How best to address diversity among the children in pre-kindergarten programs?

(For a discussion of such matters, see the various reports developed by Lynn Karoly and her colleagues at RAND – http://www.rand.org/pubs/authors/k/karoly_lynn_a.html)

Concluding Comments

As always, discussions of public policy for children and adolescents are a minefield of unresolved policy and program issues. What are the benefits? What are the costs? How do we decide that the benefits truly outweigh the costs? What are the data? Whose interests will and won't be served? Will quality be enhanced by requiring preschool teachers to have a B.A. degree? How do we ensure quality if we increase the number served?

This brief highlights the issues and provides a guide to available references. It is meant to help stakeholders grasp the current state of preschool policy and action.

At this juncture, two matters are clear: (1) social philosophy continues to dominate interpretation of what is known and (2) decisions must be made with a limited science-base.

Thus, we suggest that the words of Shonkoff & Phillips (2000) probably capture what will continue to be the case for some time to come:

The charge to society is to blend the skepticism of a scientist, the passion of an advocate, the pragmatism of a policy maker, the creativity of a practitioner, and the devotion of a parent to ensure both a decent quality of life for all of our children and a productive future for the nation.

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Additional Resources

The website for the National Child Care Information Center (a service of the Child Care Bureau), Administration for Children & Families, U.S. Department of Health and Human Services has a popular topics section that provides a wide range of relevant information. See <http://nccic.org/poptopics/univprek.html>

Two examples are:

- *Prekindergarten Initiatives* – includes documents with info on activities in States to support State-funded prekindergarten – <http://nccic.org/poptopics/index.html#prekindergarten>
- *Foundations Supporting Early Childhood Care and Education* -- this document includes information on a sample of private foundations that support early childhood care and education, including many that support universal prekindergarten initiatives. It is in the Popular Topics section under the Child Care as a Business topic <http://nccic.org/poptopics/foundations.html>

Appendix A. A Few Examples of Public-Funded Pre-Kindergarten Programs

The following examples are excerpted from several sources. For example, see a document updated in June 2005 entitled: *State and Locally Funded Universal Prekindergarten Initiatives*. The document was developed by the National Child Care Information Center (a service of the Child Care Bureau), Administration for Children & Families, U.S. Department of Health and Human Services. It is online at <http://nccic.org/poptopics/univprek.html>

District of Columbia – Public School Prekindergarten Program Provides developmentally appropriate experience and language-based instruction. Regular all-day classes for 3- and 4- year olds in every elementary school building. Space is limited, first come first served
<http://www.k12.dc.us/dcps/programs/program9.html>

Florida – Voluntary Pre-Kindergarten Education (VPK). Stemming from 2002 State Constitutional Amendment. Enacted in 2004. Voluntary, free prekindergarten education program for 4-year olds in Florida. Unlicensed family day care homes and informal child care providers are not eligible to participate as a program provider.
<http://www.upkflorida.org/index.cfm>

Georgia – Similar to Tennessee, Georgia began its universal pre-K program in 1993 with proceeds from a state lottery. Head Start along with a network of public schools, private and nonprofit preschools is part of the universal pre-K movement. “Bright from the Start,” Georgia Department of Early Care and Learning was created in 2004. The new department assumes the responsibilities of the Office of School Readiness, the Georgia Child Care Council, and the Child Care Licensing Division of the Office of Regulatory Services in the Department of Human Resources. Bright from the Start administers Georgia’s Pre-K Program; licenses center-based and home-based child care; administers the Federal nutrition programs; houses the Head Start Collaboration Office; coordinates the functions of the Georgia Child Care Council; distributes Federal Even Start dollars for early literacy; and works collaboratively with Smart Start Georgia to blend Federal, State, and private dollars to enhance early care and education. School readiness is one of the key measurements as well as a reduction in the education gap between universal pre-K students and the more affluent students whose parents sent them to private programs
<http://www.dec.state.ga.us/> also see
http://www.ppionline.org/ndol/ndol_ci.cfm?kaid=110&subid=180&contentid=253071

Illinois – According to a 2003 issue of CATALYST, the Chicago Public School Districts have been models for providing early education resources for families in low income areas. The Chicago Public Schools have provided a range of services since the 1960s including child-parent centers in low-income communities through to the 1980s by joining many other states in implementing a state-financed pre-kindergarten program for youth at-risk of education failure due to socioeconomic conditions. <http://www.catalyst-chicago.org/arch/04-03/0403main1.htm>.

New Jersey – Abbott Preschool Program. Created in 1998, New Jersey's Supreme Court mandated that 3- and 4-years old children in New Jersey Abbott districts (30 highest poverty districts in the State) receive a high-quality preschool education.
<http://www.state.nj.us/njded/ece/over.htm>

Oklahoma – Their pre-K programming was established in 1998, and "more than 90 percent of the state's school districts now offer voluntary preschool programs, and 65 percent of the 4-year-olds are enrolled in one." Since Oklahoma's system is handled through school districts, teachers for pre-K programs "must have a bachelor's degree and certification in early childhood education."
http://www.ppionline.org/ndol/ndol_ci.cfm?kaid=110&subid=180&contentid=253071

Tennessee – According to the State Office of Early Learning, children in lower socioeconomic conditions start school at a grade level 1.5 years behind other students. It is this learning gap that school officials and education heads are trying to address. In June 2006, the governor signed into law landmark legislation that allows TN to take the next steps in “ensuring every child in Tennessee arrives on the first day of school ready to learn.” In the first year, 106 school systems requested funding for new Pre-K classrooms through the Tennessee Voluntary Pre-K Grant Program and all of those school systems will receive funding for at least one new Pre-K classroom each. (State law allows use of lottery funds. For 2006, the voluntary program will provide 24 million dollars in funding for 300 new Pre-K classrooms across the state to serve roughly 6,000 poor or at-risk four-year olds.) The state also tracks students' progression in the education system via an electronic database that was created via a \$3 million federal grant. <http://tennessee.gov/education/sp/volprek/prekcontact.shtml>

West Virginia – State-funded universal prekindergarten. In March 2002, West Virginia legislation passed SB 247 that stipulated that all West Virginian 4-year old children, regardless of SES, be able to attend State-funded universal prekindergarten if their parents choose by Sept 2012. <http://www.wvdhhr.org.bcf/ece/pieces/>

Wisconsin – In Belfield & Winters (2005) *An Economic Analysis of Four-Year Old Kindergarten in Wisconsin: Returns to the Educational System*, the authors address the economic impact to the K-12 education system in Wisconsin through the expansion of a provision for pre-kindergarten. Known as four-year old kindergarten (4K), this investment will make kindergarten available for a significantly larger population of children in the state. Through a discussion involving "best estimates," authors engage readers in a discussion of net economic impact is available as well as cost-benefit ratios to illustrate the fiscal benefits for one domain of K-12 education in Wisconsin. See http://www.preknow.org/documents/WIEconImpactReport_Sept2005.pdf

Los Angeles County, California – Universal Access to Preschool Including Early Care and Education Initiative LA County officials voted to create \$100 effort to serve all 3- and 4- year olds in the county. Aimed at increasing the availability of quality preschool and early care in LAC. Funding derived from tobacco taxes. New program to build on existing community based, school-based, and Head Start programs, similar to NY. http://www.prop10.org/docs/Partnerships/UPK/Proj_UPK_MasterPlanFinalDraft.pdf.

Appendix B.

Three Frequently Cited Programs

Probably the most discussed preschool programs have been the Chicago Child-Parent Center (CPC) Program, the High/Scope Perry Preschool Project, and the Abecedarian Preschool Project. This is because each has generated longitudinal findings that have been analyzed in terms of cost-benefits and have been argued about for some time.

Below are some brief descriptions and links for accessing more information and reports.

The Chicago Child-Parent Center (CPC) Program

<http://www.waisman.wisc.edu/cls/Program.htm>

After Head Start, this is the oldest, federally funded preschool program (opened in 1967). The program has 24 sites in high-poverty neighborhoods and provides services for children ages 3 to 9 (e.g., structured educational activities, outreach and parental involvement, health and nutrition services). A quasi-experimental evaluation is being conducted by the Chicago Longitudinal Study (CLS) directed by IRP affiliate Arthur Reynolds. The focus is on the life course development of over 1,500 children born in 1980 (1,000 enrollees and a non-enrolled comparison group of about 500 low-income children who attended full-day kindergarten in randomly selected schools in the same Chicago neighborhoods). The vast majority of these are from low-income African-American families; a small percentage are Hispanic. A full discussion is A. Reynolds, J. Temple, D. Robertson, and E. Mann, "Age 21 Cost-Benefit Analysis of the Title 1 Chicago Child-Parent Centers," *Educational Evaluation and Policy Analysis* 24, no. 4 (2002): 267–303.

The High/Scope Perry Preschool Project

<http://www.highscope.org/Research/PerryProject/perrymain.htm>

(As described in "Social Programs that Work")

<http://www.evidencebasedprograms.org/Default.aspx?tabid=32>)

The Perry Preschool Project, carried out from 1962 to 1967, provided high-quality preschool education to three- and four-year-old African-American children living in poverty and assessed to be at high risk of school failure. About 75 percent of the children participated for two school years (at ages 3 and 4); the remainder participated for one year (at age 4). David Weikart and his colleagues developed the model and initiated the study as a local school district project. Weikart's early childhood work began in 1962 with the Perry Preschool program in the Ypsilanti Public Schools, where he was special education director. Many students had moved to Ypsilanti from a part of the country where some poor and minority students were not beginning their education until after first grade. The preschool was provided each weekday morning in 2.5-hour sessions taught by certified public school teachers with at least a bachelor's degree. The average child-teacher ratio was 6:1. The curriculum emphasized active learning, in which the children engaged in activities that (i) involved decision making and problem solving, and (ii) were planned, carried out, and reviewed by the children themselves, with support from adults. The teachers also provided a weekly 1.5-hour home visit to each mother and child, designed to involve the mother in the educational process and help implement the preschool curriculum at home. The program's cost was approximately \$10,300 per child per school year (in current dollars).

(See *The High/Scope Perry Preschool Study Through Age 40: Summary, Conclusions, and Frequently Asked Questions* (2004), by Lawrence J. Schweinhart, published by the High/Scope Educational Research Foundation.)

Abecedarian Preschool Project

<http://www.fpg.unc.edu/~abc/>

As reported by Leonard N. Masse and W. Steven Barnett (2002) in *A Benefit Cost Analysis of the Abecedarian Early Childhood Intervention* online at <http://nieer.org/resources/research/AbecedarianStudy.pdf>

The Carolina Abecedarian Study is an experiment in the provision of intensive pre-school services to children in low-income families from infancy to five years of age. The program began in 1972, and research on program effects found that experimental group children experienced durable gains in IQ, and achievement in mathematics and reading (Campbell and Ramey 1995). Comparison of the findings for the Abecedarian preschool project to other interventions suggests that effects may be more persistent if a program is preventative, intensive, and starts very early in life (Ramey and Ramey 1998).

The preschool program was center-based with teacher/child ratios that ranged from 1:3 for infants/toddlers to 1:6 for older children. The center was operated from 7:30 a.m. to 5:30 p.m., five days per week, and fifty weeks out of the year, with free transportation available. The curriculum is called "Partners in Learning" and is discussed in Ramey and Ramey (1998). The curriculum emphasized language development, but addressed the needs of children in all developmental domains. Children at the center also received medical and nutritional services. In order to avoid the confounding effects of these factors on intellectual development, the same medical and nutritional services were provided to the children in the preschool control group. The Abecedarian Project, initiated in 1972, provided educational child care and high-quality preschool from age 0-5 to children from very disadvantaged backgrounds (most raised by single mothers with less than a high school education, reporting no earned income, 98% of whom were African-American). The child care and preschool were provided on a full-day, year-round basis; had a low teacher-child ratio (ranging from 1:3 for infants to 1:6 for 5-year-olds); and used a systematic curriculum of "educational games" emphasizing language development and cognitive skills. The average annual cost of the intervention was about \$13,900 per child (in 2002 dollars). Some of the participating children also received a school-age treatment in grades 1-3, in which a home-school resource teacher served as a liaison between the child's home and public school, and encouraged parents to work with their children each day on individualized curriculum packets.

The program followed an experimental design and originally involved 112 children, mostly of African American descent, who were born between 1972 and 1977 and whose family situations were believed to put the children at risk of retarded intellectual and social development. A "High-Risk Index" was used to determine risk for retarded cognitive development. The index was constructed based on factors such as household income, parental education, school histories of family members, welfare payments, parental intelligence, and parental occupations (Ramey and Campbell 1984). Selected background characteristics at program entry were: maternal education of approximately 10 years, maternal IQ of 85, 25 percent of households with both parents, and 55 percent of households on Aid to Families with Dependent Children - AFDC (Ramey and Campbell 1984; Campbell et al. 1998). Between 6 and 12 weeks of age children were randomly assigned to either a preschool program or a control group. By 1978, 104 participants remained in the study and the follow-up at age 21 involved all 104 of these participants.

APPENDIX C. Using the Center's Quick Find on Early Childhood Development

The Center's online clearinghouse *Quick Finds* provide a gateway to a wealth of resources on over 100 topics. To access these, go to the website at <http://smhp.psych.ucla.edu/> and click on *Search & Quick Find*. Or go directly to the search page at <http://smhp.psych.ucla.edu/websrch.htm>

All relevant Center developed resources and direct links to major documents, materials, reports, centers, etc. related to this brief on preschool programs can be found under the Center's clearinghouse topic *Early childhood Development*. The direct URL for this Quick Find is <http://smhp.psych.ucla.edu/qf/earlychildhood.htm>

By way of introduction, the contents of this Quick Find are listed on the following pages.

Quick Find On-line Clearinghouse

<http://smhp.psych.ucla.edu/qf/earlychildhood.htm>

TOPIC: Early Childhood Development and Education

The following reflects our most recent response for technical assistance related to this topic. This list represents a sample of information to get you started and is not meant to be exhaustive.

(Note: Clicking on the following links causes a new window to be opened. To return to this window, close the newly opened one.)

Center Developed Documents, Resources, and Tools

Center Brief

- [Early Development and School Readiness from the Perspective of Addressing Barriers to Learning \(Center Brief\)](#)
- [Preschool Programs: A Synthesis of Current Policy Issues \(Center Policy & Practice Analysis Brief\)](#)

Introductory Packet

- [Early Development and Learning from the Perspective of Addressing Barriers \(Introductory Packet\)](#)

Technical Assistance Sampler

- [A Sampling of Outcome Findings from Interventions Relevant to Addressing Barriers to Learning \(Technical Assistance Sampler\)](#)

Other Relevant Documents, Resources, and Tools on the Internet

Community and Schools

- [Bringing It Together: State-Driven Community Early Childhood Initiatives](#)
- [Community Interventions to Promote Healthy Social Environments: Early Childhood Development and Family Housing](#)
- [Enhancing the Transition to Kindergarten: Linking Children, Families, & Schools](#)

Fact/Statistics

- [Early Child Development in Social Context: A Chartbook \(The Commonwealth Fund, 2003\)](#)
- [Even Start: Evidence from the Past and a Look to the Future](#)
- [The Foundation for Child Development Index of Child Well Being, 1975-2003 with Projections for 2004 \(2005\) Duke University](#)
- [Kith and Kin—Informal Child Care: Highlights from Recent Research \(2001\)](#)
- ["Living at the Edge: Low Income and the Development of America's Kindergartners" \(2003\) E. Gershoff, National Center for Children in Poverty](#)
- [National Data on Kindergartners](#)
- [White House Conference: Early Childhood Development and Learning: What New Research on the Brain Tells Us About Our Youngest Children](#)

Funding and Policy

- [Exceptional Returns: Economic, Fiscal, and Social Benefits of Investment in Early Childhood Development. \(2004\) R. Lynch, Economic Policy Institute](#)
- [Child Care Funding and Policy Issues](#)
- [Policies and Programs that Affect Young Children Fail to Keep Pace with Scientific Advances, Changing Society](#)
- [Policy Issues in Early Care and Education: Recent Citations from the ERIC Database](#)
- [Rethinking U.S. Child Care Policy](#)
- [A Science-based Framework for Early Childhood Policy](#)
- ["Supporting Early Childhood Initiatives: Legislative Strategies for Everyday People" \(2003\) The Finance Project](#)

General

- [Building Your Baby's Brain: A Parent's Guide to the First Five Years](#)
- [Caring for Infants and Toddlers: Issues and Ideas \(pdf document\)](#)
- [Child Care Aware](#)
- [Children of the Cost, Quality, and Outcomes Study](#)
- [Common Vision, Different Paths](#)
- [Definitions of Quality in Early Childhood Care and Development](#)
- [Developmental Outcomes and Assessments for Young Children – Podcast and Presentations](#)
- [Early Childhood Mental Health: Selected Resources Lists](#)
- [Early Childhood Longitudinal Study](#)
- [The Early Reading and Mathematics Achievement of Children Who Repeated Kindergarten or Who Began School a Year Late](#)
- [Early Childhood Research Working Group](#)
- [Education for All Young Children: The Role of States and the Federal Government in Promoting Prekindergarten and Kindergarten\(PDF 452K\)](#)
- [Four-Year-Olds and Public Schooling](#)
- [From Neurons to Neighborhoods: The Science of Early Childhood Development](#)
- [Healthy Childcare, special Oct-Nov issue devoted to mental health in the early childhood settings](#)
- [Helping Your Child Become a Reader With Activities for children from infancy through age 6](#)
- [Losing Ground in Early Childhood Education](#)
- [Improving the Odds for the Healthy Development of Young Children in Foster Care \(2002\)](#)
- [Infant Child Care](#)
- [Investing in our Children: What We Know and Don't Know about the Costs and Benefits of Early Childhood Intervention](#)
- [Kindergarten: The Overlooked School Year \(PDF, 2528KB\)](#)
- [A Practical Guide for Improving Child Development](#)
- [Promising Practices in Early Childhood Mental Health](#)
- [Promoting Effective Early Learning: What Every Policymaker and Educator Should Know](#)
- [Promoting the Well Being of Children and Families - A Series-](#)
 - [Promoting Resilience: Helping Young Children and Parents Affected by Substance Abuse, Domestic Violence, and Depression in the Context of Welfare Reform \(2000\)](#)
 - [Building Services and Systems to Support the Healthy Emotional Development of Young Children - An Action Guide for Policy Makers \(2002\)](#)

- [Ready to Enter: What Research Tells Policymakers About Strategies to Promote Social and Emotional School Readiness Among Three- and Four- Year- Old Children \(2002\)](#)
 - [Making Dollars Follow Sense: Financing Early Childhood Mental Health Services to Promote Health Social and Emotional Development in Young Children \(2002\)](#)
- [Quality Counts 2002: Building Blocks for Success. \(2002\) Education Week.](#)
- [Reaching All Children? Understanding Early Care and Education Participation Among Immigrant Families: A Brief](#)
- [Readiness: School, Family & Community Connections \(2004\)](#)
- [The Economics of Investing in Universal Preschool Education in California](#)
- [School Involvement in Early Childhood](#)
- [School Readiness Indicators Initiative](#)
- ["Schools' Use of Assessment for Kindergarten Entrance and Placement: 1998-1999" \(2003\)](#)
- [Set for Success: Building a Strong Foundation for School Readiness Based on the Social-Emotional Development of Young Children" \(2002\)](#)
- ["Starting Early Starting Smart"](#)
- [Starting Points: Meeting the Needs of our Youngest Children](#)
- [Teaching Young Children in Violent Times, Educators for Social Responsibility](#)
- [The Effects of Investing in Early Education on Economic Growth](#)
- [Using Mental Health Strategies to Move the Early Childhood Agenda and Promote School Readiness \(2000\)](#)
- [Young Children's Social Development: A Checklist](#)
- [When Children Aren't Ready for Kindergarten \(2003\)](#)

Head Start

- [Early Head Start Research](#)
- [Head Start Program](#)
- [Head Start Performance Standards on Family and Community Partnerships](#)
- [Head Start and Even Start: Greater Collaboration Needed \(2002\) General Accounting Office. \(PDF\)](#)
- [Family and Child Experiences Survey of the Head Start Program](#)

Intervention and Transition

- [Beyond Transition: Ensuring Continuity in Early Childhood Services](#)
- [Building a Bridge from Birth to School: Improving Developmental and Behavioral Health Services for Young Children, The Commonwealth Fund](#)
- [Connecting with Parents in the Early Years](#)
- [Early Childhood Intervention: Views from the Field](#)
- [Extended Childhood Intervention Prepares Children for School and Beyond](#)
- [Proven Benefits of Early Childhood Interventions](#)
- [What is Early Intervention?](#)

Organizations

- [American Academy of Pediatrics Mental Health Website](#)
- [Child Care and Early Education Research Connections](#)
- [The Future of Children](#)

Preschool

- [Eager to Learn: Educating our Preschoolers](#)

- [Pre-K: Shaping the System that Shapes Children \(2006\)](#)
- ["Preschool for All: Investing in a Productive and Just Society" \(2002\)](#)
- [Proposition 82: The Preschool for All Act: A June 2006 Ballot Measure, Preschool California](#)
- [State Funded Pre-Kindergarten: What the Evidence Shows](#)
- [The State of Preschool: 2005 State Preschool Yearbook](#)
- [Universal Preschool Benefits Miscalculated and Overstated RAND study compares apples and oranges, exaggerates pre-k's benefits, underestimates costs](#)
- [Universal Preschool Is No Golden Ticket](#)
- [What to Look for in a Preschool](#)

Programs and Recommendations

- [Appropriate Public School Programs for Young Children](#)
- [Caring for our Children: National Health and Safety Performance Standards: Guidelines for Out-of-Home Child Care Programs](#)
- [Clinical Interventions to Enhance Infant Mental Health: A Selective Review](#)
- [Child-Care Structure, Process, Outcome: Direct and Indirect Effects of Child-Care Quality on Young children's Development \(2002\)](#)
- [Current State and Local Initiatives to Support Student Learning: Early Childhood Programs and Innovative Programs to Better Address the Needs of Youth](#)
- ["Early Childhood Programs and Evaluation" \(2004\) The Evaluation Exchange](#)
- [Creating a Shared Vision: How Policy Affects Early Childhood Care and Development \(pdf document\)](#)
- [Early Childhood Comprehensive Systems that Spend Smarter: Maximizing Resources to Serve Vulnerable Children](#)
- [Early Head Start: A Dynamic New Program for Infants and Toddlers and their Families](#)
- [Full-Day Kindergarten Programs](#)
- [Guidance for Program Design: Addressing the Mental Health Needs of Young Children and their Families in Early Childhood Education Settings](#)
- [Initial Results from the 2005 National Household Education Surveys Program](#)
- [Multiple Perspectives on the Quality of Early Childhood Programs](#)
- [Targeted Early Intervention Programs and Their Benefits](#)

Socio-economics

- [Building Their Futures: How Early Head Start Programs Are Enhancing the Lives of Infants and Toddlers in Low-Income Families \(Web Optimized PDF document\)](#)
- [The Economic Benefits of High-Quality Early Childhood Programs: What Makes the Difference?](#)
- [The Economic Promise of Investing in High Quality Preschool](#)
- [Children at Risk: Consequences for school readiness and beyond](#)
- [New National Institutes of Health website for child health and human development](#)
- [School Readiness: Closing Racial and Ethnic Gaps](#)
- [State Early Childhood Policies: Improving the Odds \(2007\). National Center for Children in Poverty.](#)

States and Government

- ["Growing Up Healthy: What Local Governments Can Do to Support Young Children and their families" \(PDF, 849KB\)](#)
- [State Approaches to Promoting Young Children's Healthy Mental Development](#)

Clearinghouse Archived Material

- [Assessing the Development of Preschoolers, and Lasting Benefits of Preschool Programs](#)
- [Long-Term Outcomes of Early Childhood Programs: Analysis and Recommendations](#)

Related Agencies and Websites

- [Center on the Social and Emotional Foundations for Early Learning](#)
- [Earlychildhood.Com](#)
- [Early Childhood Care and Development](#)
- [Early Childhood Longitudinal Study](#)
- [Early Childhood Institute on Culturally and Linguistically Appropriate Services](#)
- [Early Head Start National Research Center](#)
- [Early Mental Health Initiative](#)
- [The Future of Children](#)
- [I am Your Child Foundation](#)
- [Links to Early Childhood Development Sites](#)
- [National Association for the Education of Young Children](#)
- [National Center for Early Development & Learning](#)
- [National Early Childhood Technical Assistance Systems \(NECTAS\)](#)
- [National Head Start Association](#)
- [National Institute on Early Childhood Development and Education](#)
- [National Institute for Early Education Research- California's Preschool for All Act \(Proposition 82\): A Policy Analysis](#)
- [National Research Center on Early Development and Learning Begins Work by Building Partnerships](#)
- [Parent-Child Home Program](#)
- [Preschool Education](#)
- [UCLA Center for Healthier Children, Families & Communities](#)
- [UNESCO: Early Childhood and Family Education Unit](#)
- [Universal Preschool.com](#)

Relevant Publications That Can Be Obtained Through Libraries

- *Approaches to Early Childhood Education*. By Roopnarine, Jaipaul; Johnson, James E. Prentice Hall. 2008
- Benefits, Costs, and Explanation of the High/Scope Perry Preschool Program, Presented at the Meeting of the Society for Research in Child Development. By Schweinhart, Lawrence. (2005).
- Changing early childhood development through educational intervention. By Weikart, David P. *Preventive Medicine: An International Devoted to Practice & Theory*. 1998 Mar-Apr. 27 (2): p. 233-237.
- Child development, cultural diversity, and the professional training of early childhood educators. By Bernhard, Judith K. *Canadian Journal of Education*. 1995 Fal. 20 (4): p. 415-437.
- Day care and early childhood settings: Fostering mental health in young children. By Zigler, Edward F.; Gilman, Elizabeth D. *Child & Adolescent Psychiatric Clinics of North America*. 1998 Jul. 7 (3): p. 483-498
- Effortful control in early childhood: Continuity and change, antecedents, and implications for social development. By Kochanska, Grazyna; Murray, Kathleen T.; Harlan, Elena T. *Developmental Psychology*. 2000 Mar. 36 (2): p. 220-232.

- **Examining contributions of child development theories to early childhood education.** By Aldridge, Jerry; Sexton, David; Goldman, Renitta; Booker, Bobby; Werner, Melissa. *College Student Journal*. 1997 Dec. 31 (4): p. 453-459.
 - **Imaginative play in early childhood: A foundation for adaptive emotional and cognitive development.** By Singer, Jerome L. *International Medical Journal*. 1998 Jun. 5 (2): p. 93-100.
 - **Investing in Our Children: What We Know and Don't Know About the Costs and Benefits of Early Childhood Interventions.** Karoly, Greenwood, Everingham, Hoube, Kilburn, Rydell, Sanders, and Chisea. *International Medical Journal*. (1998).
 - **Needs, urges, and feelings in early childhood: Helping young children grow.** By Furman, Erna. International Universities Press, Inc: Madison, CT, USA, 1998. viii, 129pp.
 - **Perspectives on early childhood education: Growing with young children toward the 21st century.** Elkind, David, Ed. National Education Association: Washington, DC, USA, 1991. 262pp.
 - **Social and emotional development in early childhood: The identification of competence and disabilities.** By Wittmer, Donna; Doll, Beth; Strain, Phil. *Journal of Early Intervention*. 1996 Fal. 20 (4): p. 299-317.
 - **Standardized Childhood: The Political and Cultural Struggle over Early Education.** By Bruce Fuller. Stanford University Press, Stanford, CA., 2007
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We hope these resources met your needs. If not, feel free to contact us for further assistance. For additional resources related to this topic, use our [search](#) page to find people, organizations, websites and documents. You may also go to our [technical assistance page](#) for more specific technical assistance requests.

If you haven't done so, you may want to contact our sister center, the [Center for School Mental Health](#) at the University of Maryland at Baltimore.

If our website has been helpful, we are pleased and encourage you to use our site or contact our Center in the future. At the same time, you can do your own technical assistance with "[The fine Art of Fishing](#)" which we have developed as an aid for do-it-yourself technical assistance.