

# JOINT UrbanStudies CENTER



## PRE-KINDERGARTEN (PRE-K) AND KINDERGARTEN EDUCATION

JOINT URBAN STUDIES CENTER  
SEPTEMBER 2006

# JOINT **UrbanStudies** CENTER

---

7 South Main Street, Suite 201 Wilkes-Barre, Pennsylvania 18701

t: 570.408.9850 f: 570.408.9854 w: [www.urbanstudies.org](http://www.urbanstudies.org)

## Staff

**Teri Ooms**  
Executive Director

**Marla Doddo**  
Development Coordinator

**Joseph Boylan**  
Research Analyst

Copyright © 2006 JUSC All Rights Reserved. No part of this publication may be copied or reproduced in any form or by any means without permission in writing from JUSC.

### **The Joint Urban Studies Center**

The Joint Urban Studies Center was established to provide essential research, analysis, and consultation to small and mid-size cities aiming for full participation in the new economy of the 21<sup>st</sup> century. The Center mobilizes the resources of regional institutions of higher education to engage communities in planning that is informed by research, energized by broad participation from stakeholders in the community, and validated by successful implementation. As the managing partner in the Center, Wilkes University is joined by Keystone College, King's College, College Misericordia, Luzerne County Community College, Penn State Wilkes-Barre, and the University of Scranton.

### **Note**

The views expressed here do not necessarily reflect those of the educational partners, their offices, trustees or board members, or private businesses that fund the Joint Urban Studies Center (JUSC) or the staff of the JUSC.

### **Acknowledgements**

We would like to acknowledge the Joint Urban Studies Center Advisory Board for its time, effort and commitment to this region:

William P. Montague, Founder  
*Mark IV Industries*

Jim DePolo  
*Commonwealth Telephone  
Enterprises, Inc.*

Michael MacDowell, Ph.D.  
*College Misericordia*

Tim Gilmour, Ph.D., Chairman  
*Wilkes University*

Patricia Donohue, Ph.D.  
*Luzerne County Community  
College*

Melanie Maslow Lumia  
*Maslow Lumia Bartorillo  
Advertising*

William B. Sordoni,  
Vice Chairman  
*Sordoni Construction Company*

Rusty Flack  
*Diamond Manufacturing*

Thomas J. O'Hara C.S.C., Ph.D.  
*King's College*

Thomas Baldino, Ph.D.,  
Chairman Academic Council  
*Wilkes University*

Jeffrey Folk, M.D.  
*Geisinger*

Scott Pilarz, S.J.  
*University of Scranton*

Edward Boehm, Ph.D.  
*Keystone College*

William Host, M.D.  
*Wyoming Valley Health Care  
Systems*

Russell Roberts  
*Bohlin Cywinski Jackson*

John Cefaly  
*Cushman & Wakefield*

Thomas E. Lawson  
*Borton Lawson*

Thomas Romanowski  
*MELRO Corporation*

Scott Dagenais  
*M&T Bank*

William Leandri  
*Huntsville Executive Search*

Eugene Roth  
*Rosenn, Jenkins, and  
Greenwald*

Charles Davis, Ph.D.  
*Penn State Wilkes-Barre*

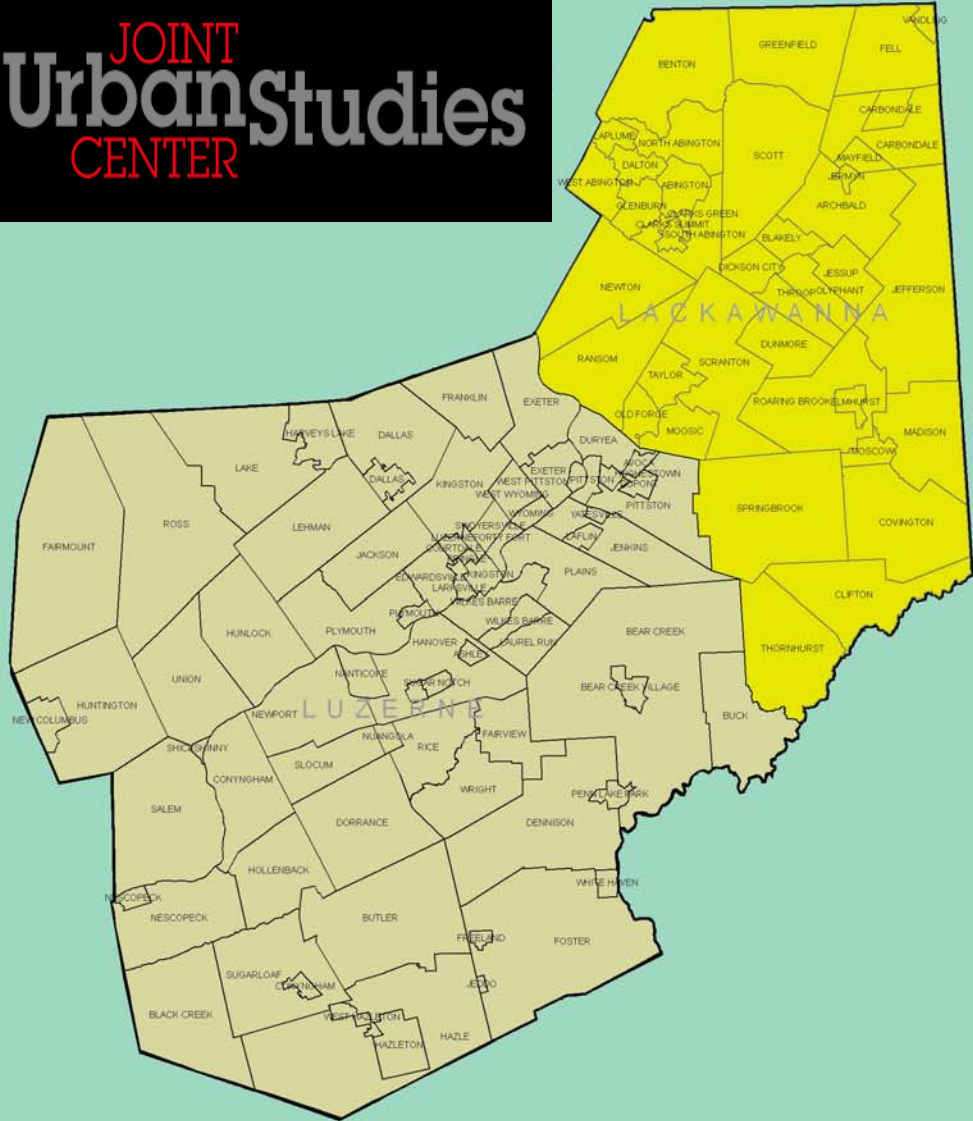
David Lee  
*United Way of Wyoming Valley*

Susan W. Shoal  
*GUARD Insurance Group*

### **Research Team**

Teri Ooms, Marla Doddo, Joseph Boylan, and Thomas Murtaugh

# JOINT UrbanStudies CENTER



Prepared by:  
Wilkes University Center for Geographic Information Sciences  
Department of Geo-Environmental Sciences and Engineering  
03/30/05



## **TABLE OF CONTENTS**

I.	Executive Summary	6
II.	Why are Pre-K and Kindergarten Education Important?	8
III.	Savings Associated with “High Quality” Pre-K and Kindergarten	14
IV.	Economic Benefits of Pre-K and Kindergarten Education	16
V.	Growing Government Support for High Quality Early Childhood Education	20
VI.	Status of Pre-K and Kindergarten in Pennsylvania	22
VII.	Status of Pre-K and Kindergarten in Lackawanna and Luzerne Counties	24
VIII.	Case Studies	27
	Endnotes	34

## **I. EXECUTIVE SUMMARY**

Pre-Kindergarten (Pre-K) and kindergarten education have received much attention in the last fifteen years. As a majority of parents are now enrolling three and four-year-olds in some form of Pre-K, preschool or daycare facility outside the home, a great deal of research has outlined and examined quality early education. Many advocacy groups have been formed in support of increased quality and care for these Pre-K age children. While research has recognized the tremendous social and economic gains that quality early childhood education provides a community, government, at all levels, has been slow to assist in the effort to improve early childhood education.

Following is a listing of the purpose, goals and accomplishments of this report:

- The report's purpose is to increase knowledge of the Pre-K and kindergarten research, trends and systems – providing recommendations for an approach to change the current status of early education through the Luzerne/Lackawanna County region; it should be noted, however, that the report does not provide directives.
- The report aims to provide a broad overview of the state of early childhood education throughout the United States, the Commonwealth of Pennsylvania, and, specifically, in Lackawanna and Luzerne counties.
- The report offers a regional approach to improving early childhood education in Luzerne and Lackawanna counties and advises that the two counties work in tandem for this venture.
- Through the provision of an overwhelming amount of research, the report exhibits the positive impact a quality early education has on its recipients - both in the short and long-run.
- The report describes and lists society and government's long-term benefits of providing a good start for the community's children. Specifically, the report identifies early education as an important economic investment and development tool, which the business community and local chambers of commerce should support.
- The report recommends how the current uncoordinated/unsupported early education system can become unified and comprehensive in delivering to the children of Luzerne and Lackawanna County the best quality early education possible.
- The report provides case studies on what other states have done to develop unified early education systems, which may serve as models for this region's development.

Research on the effect early childhood education has on children and society has grown substantially over the last decade, in terms of scope and precision. Mounting evidence proves that “high-quality” early education programs provide short-term benefits to children, as well as long-term benefits that last a lifetime – in turn boosting all of society. Well educated children translate to tax savings in education, health and welfare, and the criminal justice system. Early childhood education also has a tremendous impact on local and national economies.

Early childhood education employs millions of providers and teachers nationwide, pays billions of dollars in wages, purchases billions more in goods and services, and generates even more in gross receipts. The National Child Care Association estimates that the industry employs over 900,000 people as providers and teachers, with another two million working as “family, friend and neighbor” child care providers.

Even with families' increasing demands for Pre-K, government has been largely unresponsive, and only about 14% of four-year-olds are enrolled in public school-based general education Pre-K programs. Because of the lack of availability of Pre-K programs connected with public schools, families are forced to turn to either private or non-profit early education programs; it should be noted that only about 35% of public schools have Pre-K

programs available on campus. Major problems with the U.S. Pre-K system include the fact that it remains largely unfunded; the system is not assessed and uncoordinated with no specific standards; Pre-K programs provide different curriculums and different levels of teacher training; and available Pre-K programs are often unconnected to the local public school district. Yet in the last decade, there has been a growing effort to establish high-quality early education beginning at age three, if not for all children, then at least for poor, at-risk children. Many states have made strides with full-day kindergarten, and are beginning to fund and coordinate four year-old Pre-K programs.



At the federal level, the Bush Administration has supported early education programs by increasing Head Start's funding by \$750 million in the 2005 budget, and providing 50,000 Head Start teachers with early learning training. The Bush Administration also supports giving states greater opportunity to coordinate Head Start, state Pre-K

programs, and child care programs. Also President Bush's *Reading First* program has provided more than \$2.5 billion to train over 73,000 teachers in effective reading instruction.

Only in the last few years has Pennsylvania recognized the importance of quality early education and the State has recently taken steps to improve and coordinate the existing non-system. Pennsylvania's Pre-K programs remained completely unfunded by the Commonwealth until four years ago, when Governor Rendell set aside a \$200 million Accountability Block Grant (ABG). Through the grant, money is given to school districts to invest funds in Pre-K and full-day kindergarten programs. As evidenced by the latest fiscal year budget, Governor Rendell continues his commitment to invest in Pre-K programs.

Only 51% of Pennsylvania's kindergarten students are enrolled for the full day, compared with the national average of 65%; similarly, according to the Pennsylvania Department of Education, very few children are enrolled in high-quality public school Pre-K. The State's 2004-2005 enrollment figures reflect that Luzerne County recorded no students age four or younger attending Pre-K, while Lackawanna County recorded only three four-year-olds and nine students under age four attending Pre-K. Neither County recorded students attending Pre-K in private or non-public schools.

Non-school based and non-Head Start early learning centers provide the majority of Luzerne and Lackawanna County's Pre-K education. Although no accurate total of children enrolled in other center-based early learning environments exists, the Pennsylvania Partnerships for Children reported that, at 10.9%, Lackawanna County has the third highest number of high-quality early learning centers. Although much lower, at 5%, Luzerne County's availability of high-quality early learning centers surpassed the State's 3.9% average.

High-quality early education is an economic driver. If Pre-K and kindergarten education is considered to be an economic investment, people will begin to view early education in a new light. Yes, early education is a wise economic development investment of public funds; it brings direct payoffs to the community by growing the economy to the benefit of businesses, taxpayers, communities, and families.

## **II. WHY ARE PRE-K AND KINDERGARTEN EDUCATION IMPORTANT?**

U.S. pre-school attendance has risen tremendously in recent decades, yet gaps in enrollment between children from advantaged and disadvantaged families remain.<sup>1</sup> In 2001, 66% of all four-year-olds were enrolled in a center- or school-based Pre-K program - up from 23% just thirty years prior.<sup>2</sup> However, attendance among children from low-income families and with less educated parents remains low. Center-based programs are defined as an educational experience for children four years old or younger that prepares them for further schooling and usually applies educational standards. School-based Pre-K is associated and integrated within the local school district. Children whose mothers have a college degree are nearly twice as likely to be in center-based childcare arrangements as those whose mothers did not complete high school.<sup>3</sup> Growing amounts of data from multiple sources continues to support the children who attend high-quality early education programs before entering kindergarten benefit from short- and long-term gains for themselves and society. So far, effects of early education have proven to be greatest for disadvantaged groups, raising the possibility that policies promoting Pre-K enrollment of children from disadvantaged families may help to narrow the school readiness gap.<sup>4</sup>

In 1990, concern regarding ongoing differences in school readiness among children from more and less economically advantaged families led government leaders to endorse the first of eight national educational goals as part of the "Goals 2000" national education policy. The policy states, "By the year 2000, all children should enter school ready to learn."<sup>5</sup> One of the three objectives under this goal was that all children should have access to high-quality and developmentally appropriate pre-school programs that help prepare them for school. To equalize access to high-quality early education opportunities for all children, there have been numerous calls to expand governmental support of programs for three- and four-year-olds.<sup>6</sup> Research has shown that all students, but particularly children from impoverished backgrounds, who attend Pre-K, regardless of the type of program, perform better on cognitive (knowledge-based) assessments than those who do not attend Pre-K.<sup>7</sup> However, other research has found that students enrolled in school-based Pre-K as a part of the public school system have benefited the most and performed better in reading and math skills through the spring of first grade than any other early education program.<sup>8</sup> Concurrently, a study by Steven Barnett, from Rutgers [University], suggests quality is the most important factor in cognitive development and recommends low child-teacher ratios, highly qualified and well-paid teachers, intellectually rich and broad curricula, active parental participation, and starting programs no later than age three as characteristics of a "high-quality" Pre-K program.<sup>9</sup>

### **Facts on Pre-K and Kindergarten Education**

- ✓ Nearly 40% of the associations between economic disadvantage and young children's lower academic performance are explained by the lower quality of home learning environments.<sup>10</sup>
- ✓ By age three, children in families receiving welfare had vocabularies that were half as wide as those of their more affluent peers - and the disparities persisted throughout childhood.<sup>11</sup>
- ✓ The gap in Pre-K enrollment between low- and high-income four-year-olds was close to 25 percentage points in 2000 (50% vs. 75%).<sup>12</sup>
- ✓ Children from low-income or less educated families may be "doubly disadvantaged" by being less likely to receive stimulating care at home and less likely to be enrolled in educationally-oriented care outside the home.<sup>13</sup>
- ✓ Young children partaking in Early Head Start have stronger cognitive skills, better vocabularies, and more positive attitudes than those who are eligible to participate but do not.<sup>14</sup>
- ✓ Studies have shown that center-based care during the third and fourth years of life is particularly beneficial for children's cognitive development and academic skills, and children with the lowest scores on a measure of cognitive ability gain the most from center-based care.<sup>15</sup>
- ✓ In 2000, 39 states had Pre-K initiatives, but only six states have made substantial per capita investments - Connecticut, Georgia, Illinois, Kentucky, Massachusetts, Ohio, and Oklahoma.
- ✓ Nationally, approximately, 14% of four-year-olds are enrolled in school-based, general education Pre-K programs.<sup>16</sup>
- ✓ 35% of public schools have on-campus Pre-K programs.<sup>17</sup>

### **Short- and Long-Term Benefits of “High-Quality” Pre-K and Kindergarten**

Research on the short- and long-term impact of early childhood education on children and society has grown substantially, in both scope and precision, over the last decade. Mounting evidence supports the fact that “high-quality” early education programs benefit children in the short-term and over the course of their lives. In turn, the impact of early childhood education benefits society by translating to tax savings in education, health and welfare, and the criminal justice system; further, high-quality early childhood education also has a tremendous impact on local and national economies.

#### ***Short-Term Benefits***

Over the last decade, an increased call for stronger government support of early childhood education has honed in research on its substantial short-term benefits. A study of more than 17,000 children by the National Center for Education Statistics, a research arm of the U.S. Department of Education, found that early exposure to books and literacy lessons boosts reading achievement.<sup>18</sup> The study also reveals that children who attend full-day Kindergarten have the ability to demonstrate greater reading knowledge and skill than peers in half-day programs.<sup>19</sup> Further, children who are exposed to literacy activities at a very early age, such as being read and sung to and having access to books and audio resources, are more likely to



perform well in Kindergarten and first grade than peers without such exposure. This presents interesting findings and supports the idea that what happens to children prior to entering Kindergarten is critical to later success.

Another major study published in the spring 2004 issue of the *American Educational Research Journal* found that children who attended a center- or school-based Pre-K program in the year before school entry performed better on reading and math assessments upon entering Kindergarten. As considered in the study, center-based care includes Head Start, private and non-profit early education programs; school-based Pre-K is connected to and overseen by the local public school system; informal early education is home-based and provided by a relative, babysitter or nanny. This was a controlled study that reduced other/external factors (for example, demographics) associated with impacting high academic skills. As per the study, measures gained in reading and math by Pre-K attendees continued when the same group’s skills were tested in the spring of both kindergarten and first grade. Further, those who attended a center- or school-based Pre-K program were less likely to be held back in Kindergarten. Consistent with most other early education studies, the positive effects of Pre-K were greatest for at-risk or disadvantaged children.<sup>20</sup> Such findings give more credence to the idea that promoting Pre-K enrollment for children of disadvantaged families might help to narrow the school readiness gap.

The study described above also considered the effect of different types of early education programs. Children participating in any type of center- or school-based early education program achieved higher reading and math skills than those cared for solely by parents. Out of all the types of center- and school-based programs, the benefits were the greatest for those attending Pre-K programs associated with the local public school district. Other center-based programs considered were divided into pre-school (specifically education oriented), and center-based day care (childcare oriented) for analysis. Public school Pre-K programs provided the greatest benefits, with pre-school programs providing about four fifths of the benefit and daycare programs providing about half the benefit.

After a seven-year analysis of the Early Head Start program, further research, supported by the U.S. Department of Health and Human Services and conducted by Mathematica Policy Research, reported that children who participate in Early Head Start have stronger cognitive skills, better vocabularies, and more positive attitudes than those who are eligible to participate but do not.<sup>21</sup> Launched in 1995 for low-income families with infants and toddlers and for pregnant women, Early Head Start is a federally-financed program. Early Head Start allows for a continuum of support for children, from birth to age five, matching up with the regular Head Start program that serves three- and four-year-olds.<sup>22</sup> Parents of children in Early Head Start were also found to be more likely to support their child's learning, use positive parenting techniques, and improve their own education and job skills than those who did not receive the services.



While the Early Head Start Program utilizes a mix of home- and center-based support, the report also found that the program's center-based aspect consistently enhanced cognitive development and reduced negative social behavior of participating children.<sup>23</sup> Models that used both center- and home-based support were found to more profoundly impact the children's language development, rather than their parents' efforts to obtain employment. The findings regarding the benefits of Early Head Start also supports other research that has shown that increased early education, combined with strong parental involvement, provides the greatest benefits for disadvantaged children.

A school district study conducted in Montgomery County, Maryland, found that academically at-risk children who attended full-day kindergarten were reading at higher levels by the end of the school year than peers who were enrolled in half-day kindergarten. Approximately 71% of students from low-income or non-English-speaking families mastered fundamental reading skills after attending full-day kindergarten, while only 54% of those in half-day programs made the same progress. The study proves a logical assumption - that the more time spent in the classroom, the greater the potential for higher achievement and learning.

Pre-K's overall pattern of favorable short-term effects is promising, particularly since some of the outcomes that the programs improves, such as language and math skills, are key indicators of subsequent school achievement and long-term success.

### ***Long-Term Benefits***

Early childhood education's long-term effects on development have been studied and known for some time - going back to the High/Scope Perry Preschool Project in the mid-1960s.<sup>24</sup> Through the Perry Project, disadvantaged children in Ypsilanti, Michigan, attended a half-day of pre-school over the course of eight months. From 1962 to 1967, the program identified a sampling of 123 low-income, African-American children who were assessed to be at high risk of school failure.<sup>25</sup> Of these children, 58 were randomly selected to attend a high-quality two-year early education program for 2- and 3-year-olds; the others did not attend a pre-school program.

Program teachers held Bachelor's degrees and education certifications. Each teacher was assigned no more than eight students, and met with them for 2.5 hours/day, five days/week. Central to the program's curriculum was the

children’s ability to plan and perform their own activities, and actively learning—individually, in small groups, and in whole-class groups. The final, and key, element of the program was that teachers made home visits once every two weeks.

Researchers at High/Scope Perry have since followed the two groups for the past 40 years. Their findings indicate that, within the control group, those participants who attended pre-school outperformed those who did not in education, economic performance, crime prevention, family relations, and health throughout their lifetime.

Specifically, the program group or those who attended preschool compared to those who did not attend preschool, conducted at age 40:

- Was more likely to have earned high school diplomas or GEDs (71% vs. 44%);
- Was more likely to be employed (76% vs. 62%);
- Earned significantly higher median annual incomes (\$20,800 vs. \$15,300);
- Included a higher percentage of home-owners (37% vs. 28%);
- Was more likely to have savings accounts (76% vs. 50%);
- Experienced fewer lifetime arrests (36% vs. 55% arrested five or more times) and spent significantly fewer months in prison by age 40 (28% vs. 52% sentenced).<sup>26</sup>

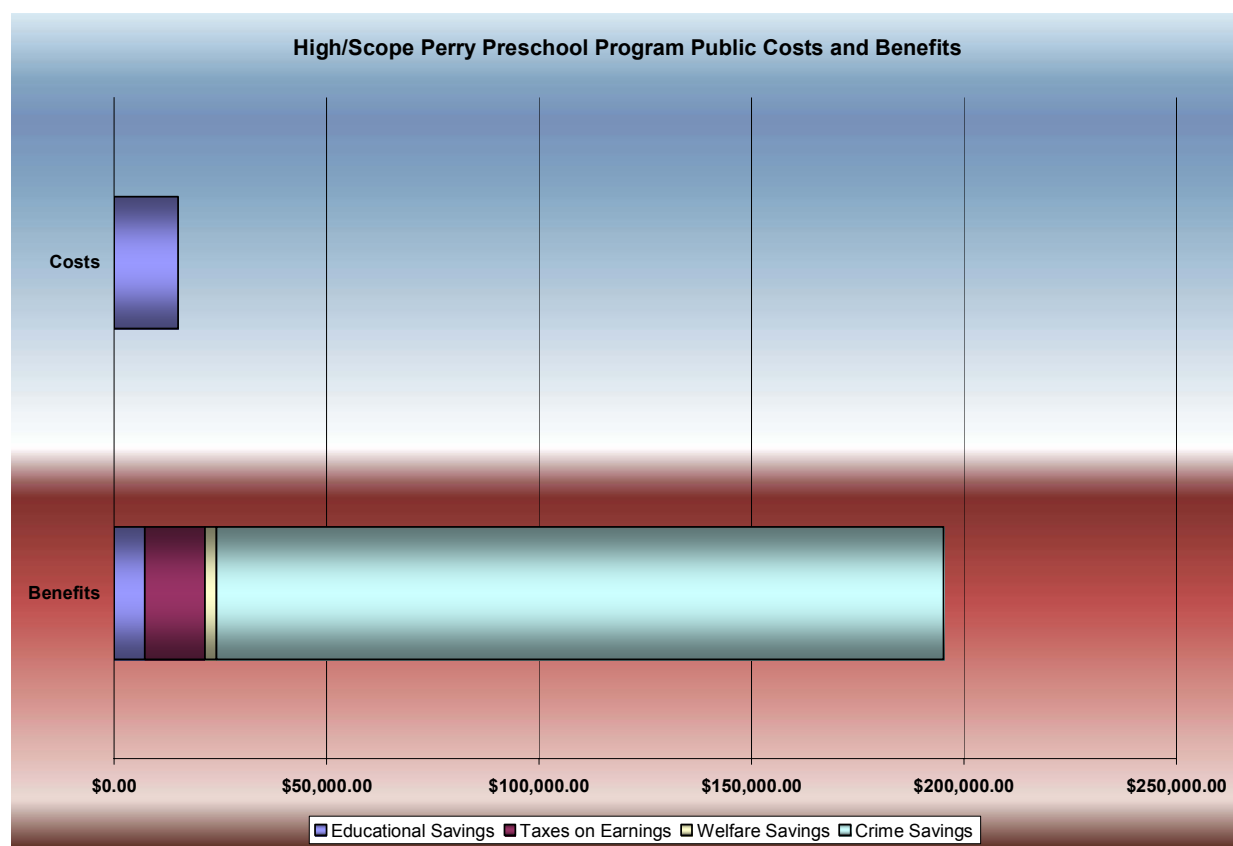


Table obtained from: <http://web.mit.edu/workplacecenter/docs/Full%20Report.pdf>

Evaluating return on investment, High/Scope Perry researchers concluded that 40 years after the pre-school experience, **the public gained \$12.90 for every dollar spent on the program.** Much of the savings came from dollars not spent on incarceration; there were also savings to the public in lower special education costs; taxes paid to public coffers because of higher earnings; and savings in public assistance costs. As for participant

benefits, on average, they earned 14% more per person than they would have earned otherwise – which translates to approximately \$156,490 more over their lifetimes. The cost of the two-year program was \$15,166 per child.<sup>27</sup>

The Abecedarian Project was another early landmark study. Beginning in 1972, the project identified children at birth and provided them full-day care, fifty weeks a year, from birth until they entered school. The project focused on 112 North Carolina children, mostly African-American, whose family situations were believed to put them at risk of poor intellectual and social development. During infancy, the children were randomly assigned to either a quality pre-school program, or to no program. Participants in the quality pre-school program received early and active stimulation from birth - progressively intensifying the level of interaction and stimulation as the children grew.<sup>28</sup> Some children continued in the program until age eight, while others began an enrichment program after entering school.<sup>29</sup> The most recent follow-up of the students, took place when they were 21 years old (in 1993).<sup>30</sup>



From the toddler years through age 21, those who participated in the quality pre-school program scored higher test scores in IQ and achievement. They were less likely to repeat grades and less likely to be placed in costly special education classes – which translates to real economic savings for taxpayers. The quality pre-school participants were more likely to complete high school, and by age 21, they had completed more years of education and were more likely to attend a four-year college.<sup>31</sup> Subjects were also less likely to smoke marijuana and performed better on math and reading tests at ages eight and twenty-one with than those who simply attended regular school.<sup>32</sup>

The long-term cost/benefit analysis of the Abecedarian Project, conducted by Leonard Masse and Steven Barnett, differs from the High/Scope Perry analysis in that researchers looked not only evaluated the children, but also their mothers. Analysts found that because the children were enrolled for five years in high-quality, full-time care and education, their mothers had increased opportunities to obtain employment and training. As a result, mothers in the program group earned significantly more than those in the control group. Masse and Barnett estimate that the program mothers earned approximately \$3,750 more per year more for each of the 21 years of the study than non program mothers – totaling \$78,750 more in earnings over the course of the study.<sup>33</sup>

Since the Perry and Abecedarian studies, many other studies have been completed, which corroborate Pre-K's long-term, lifetime benefits to participants - especially those of impoverished means. One major Chicago study also found that by age 21, early education programs result in higher high school completion rates, fewer participants repeating grades and lower crime rates among project participants.<sup>34</sup> In a report on replicated studies of the Abecedarian Project, results from nine trials indicate that disadvantages experienced by high risk children can be substantially reduced through a high-quality early education program.<sup>35</sup> Research confirms that children who experience early failures in school are more likely to become inattentive, disruptive, or withdrawn. Later, these same students are more likely to drop out of school; to engage in irresponsible, dangerous, and/or illegal behaviors; to become teen parents; and to depend on welfare and other public assistance programs. Evidence from recent scientific research also continues to show that what happens early on in a child's development has lasting and important consequences.<sup>36</sup>

Approximately 70% of subjects in replicated Abecedarian studies were engaged in skilled jobs or enrolled in higher education, in contrast to only 40% of those in the control group. Early childhood education recipients were also three times more likely to attend a four-year college than were control-group children. Another advantage of early childhood education to young adults was the delay, of almost two years, of the birth of their first child; in addition, the frequency of repeating a grade, special education placement, teen pregnancy, smoking and drug use were all significantly lower than in the control group.

Moreover, the resulting impact of the long-term benefits of high-quality early education is substantial and virtually eliminates disadvantages experienced by impoverished children during their early years, which establishes them for a lifetime of success. The savings to society produced by an early education investment for impoverished children can be viewed in the same light as investing in any public infrastructure – particularly as investments in human capital are increasingly more important in today’s economy.

**Real “School Readiness” Gap**

The following findings on “school readiness” corroborate the tremendous benefit of early education to disadvantaged young children.

A number of studies indicate that children from disadvantaged families are entering kindergarten already behind their peers, because of the lack of educational stimulation in early life. Additionally, recent scientific advances in the fields of child development, neurobiology, and early childhood education affirm that the early years are a formative time of rapid growth and development. Collectively, such scientific findings indicate that learning and brain development are inter-related and that what happens early in development has lasting and important consequences.<sup>37</sup>

A 2002 report by the Economic Policy Institute, a Washington, D.C., think tank, reported that evidence of disparity between students from poor families and other students can be found in students’ achievement scores. The report used data from the U.S. Department of Education’s ongoing study of 16,000 children who entered Kindergarten in 1998. The research found that children in the highest socioeconomic group scored 60% higher in mathematics and reading than those in the lowest socioeconomic group. The report identifies examples of inequality - such as 20% of the poorest Kindergartners have a home computer, compared with 85% of those in the top income level. It also notes that children from poorer households spend more time watching television (18 hours/week), compared with those from the highest socioeconomic households (11 hours/week). Further, the study found that Kindergartners in the lowest socioeconomic fifth came from families who owned just 38 books, compared with 108 books for the top socioeconomic fifth. The report’s authors note that poor children’s problems are also made worse by the mediocre schools they attend. This evidence suggests that the “achievement gap” starts prior to students even enrolling in K-12 education and translates to a very real school readiness gap. High-quality Pre-K programs combined with other support for poor families were among the Economic Policy Institute’s recommendations.<sup>38</sup>

Another study conducted by the Georgetown University Center on Health and Education found that the developmental disadvantages experienced by high-risk children can be substantially reduced through high quality Pre-K. The study demonstrated a strong correlation between children’s acquisition of language and their mother’s speech. The report found that by age two, children whose mothers speak to them frequently and responsively have vocabularies that are eight times greater than those of children whose mothers speak less frequently. Such an example proves the importance of providing high-quality, enriched learning environments for disadvantaged children. When given the right type and adequate amounts of language and cognitive experiences in a warm and responsive social environment, high-risk children show gains in intellectual and linguistic competence, the study further reported.

The study also found that high-risk children without a solid Pre-K educational foundation are likely to start kindergarten approximately two years behind peers. Also, children who are developmentally delayed will advance at the same rate of other school children—nine months developmentally in their cognitive and language skills - when they first enter school. Yet, this normal rate of learning when first entering school is still not enough to compensate for entry-level delays or to allow children to catch up. Thus, the focus of protecting high-risk children from school failure turns to prevention of the initial developmental delay.

### **III. SAVINGS ASSOCIATED WITH “HIGH QUALITY” PRE-K AND KINDERGARTEN**

In today’s economy, where education and skill levels determine future earnings, the economic and social costs associated with not taking action to support early childhood education are too great to disregard, especially when the benefits far outweigh such costs. Estimates of social savings on investments in high quality early education programs range from \$3 to as much as \$17 for every \$1 spent. While various organizations have touted returns on investment, all agree that quality early education delivers significant social and economic benefits. Even the more modest social and economic estimated returns of \$3 to \$7 for every \$1 spent are worth the public’s serious attention.

Many diverse organizations conducting research on early childhood education have discovered the immense social and economic return of an initial investment in high-quality early education programs. A 2002 study released by Rutgers University’s National Institute for Early Education Research sites a \$4 return on every dollar invested.<sup>39</sup> The Rutgers Research showed that when young children receive nurturing care in small groups from well-trained teachers, their mothers are able to find better jobs and earn higher incomes. Children enrolled in high-quality education programs were: estimated to earn \$143,000 more over their lifetimes, less likely to require special education programs, and less likely to smoke as adults - saving \$164,000 in health costs over a lifetime. Steven Barnett, author of the cost-benefit analysis, believes that over time, offering all children a high-quality education doesn’t cost Americans a cent. He said, “America could vastly expand and improve early care and education while saving money in the long run.”<sup>40</sup>



Bringing the benefit of providing early childhood education to more tangible terms, a study conducted by an assistant professor of economics and education at Teachers College, Columbia University, found that providing universal Pre-K in New York State could result in long-term savings to the state in costs related to students’ repeating grades and special education needs. According to the study, if New York spent \$7,000 per child for Pre-K, and 80% of the state’s four-year-olds participated, repetition of a grade would fall 9.3% – resulting in savings between

\$22 million and \$51 million over the course of the children’s education. Savings on special education programs would range between \$241 million and \$340 million. The Center for Early Care and Education in New York reported that a redistribution of those saved education funds alone would return between two-fifths and three-fifths of the investment, not to mention the other social savings such as in the criminal justice system, welfare, and healthcare – all of which result in an even greater return on the original investment.

A fact sheet released from the Pennsylvania Partnership for Children, an advocacy group supporting the health, education and welfare of Pennsylvania’s children, reported that children who attend high-quality Pre-K score higher on standardized tests like the PSSAs than those who do not. The organization also reported that a recent study conducted in Pennsylvania found that school districts investing in Pre-K could recoup as much as 78% of

their investment, and some small school districts with high special education expenditures could recoup as much as \$1.16 for every dollar invested.<sup>41</sup>

A 2004 study by the Economic Policy Institute reports that high-quality early education programs consistently generate benefit-cost ratios exceeding 3-to-1 - or more than a \$3 return for every dollar invested. According to the Institute, even economists who are particularly skeptical about government programs make an exception for high-quality early education programs. Follow-up studies of poor children who have participated



in such programs have found solid evidence of substantially better academic performance, decreased rates of criminal conduct, and higher adult earnings of non-participating peers, as has been previously demonstrated.<sup>42</sup> The study also claims that if a comprehensive high-quality early education program were implemented for all poor children, the annual cost of the program would cost billions, but would create much larger budget savings over time; and by the 17-year mark, the net effect on budgets for all levels of government combined would turn positive. Further, within 25 years, the budget benefits would exceed costs by \$31 billion (in 2004 dollars). By 2050, the net budget savings would reach \$61 billion (in 2004 dollars).

A 2005 study by the Massachusetts Institute of Technology Workplace Center and the Legal Momentum's Family Initiative analyzing the economic impact of early childhood education reported that every dollar invested saves up to \$13 in future costs.<sup>43</sup> The Nebraska Department of Education issued a report on early childhood policy and found that the total benefit generated by a high-quality early education program was estimated to be as high as \$17.07 for each dollar invested.<sup>44</sup> A report in *NEA Today*, a periodical of the National Education Association, indicated that early education has a similarly high return of about \$17 for every dollar invested.

#### **IV. ECONOMIC BENEFITS OF PRE-K AND KINDERGARTEN EDUCATION**

Economic impact is an aspect of quality early childhood education that is seldom considered. One reason to support early education, aside from the proof that it helps lead to short- and long-term success, is that it generates economic opportunity. When tax dollars are invested in high-quality early education programs, economic development is spurred in communities in the form of jobs and future tax dollars are saved. In essence, early childhood education is an industry that employs millions of providers and teachers nationwide, pays billions of dollars in wages, purchases billions more in goods and services and generates even more in gross receipts. The National Child Care Association estimates that the industry employs over 900,000 people as providers and teachers, with another 2 million working as "family, friend and neighbor" child care providers.<sup>45</sup> Its conservative calculation of the licensed child care industry's direct revenues in 2002 is \$43 billion.<sup>46</sup>

Although it may be a surprise to state economic development planners and policymakers, the early care and education industry is often one of the largest employers and producers of revenues. In Massachusetts, for example, over 12,000 licensed small child care or early education businesses employ 30,000 teachers and providers, and generate \$1.5 billion in gross receipts (total revenue). The industry's gross receipts put it on par with data processing and pharmaceutical manufacturing, while its number of employees is similar to those in legal services and securities and commodities investment services. In addition, the ripple effects of the industry's

economic multipliers are felt in a myriad of ways. Goods and services purchased by early education centers and schools support manufacturing and local service industries. Employees spend their wages and pay taxes. Parents whose children are being safely cared for are better able to work; they earn and spend wages - increasing tax flow. Businesses benefit as parent employees are more productive, less often absent, and have fewer turnovers. Various chambers of commerce have also reported that the availability of adequate slots for young children may make the difference in a business's decision to relocate. Like adequate highways and housing, early education is part of the infrastructure that supports businesses and parents' ability to work.<sup>47</sup>



High-quality early education is an economic driver. If Pre-K and kindergarten education is thought of as other public economic investments are, taxpayers will see the education of young children in a different light. Education is a wise economic development investment of public funds; it brings direct payoffs to the community by growing the economy to the benefit of businesses, taxpayers, communities, and families.

As mentioned earlier, research shows that when children start school behind peers, they stay behind. Quality early education programs give them the social, language, and numbers skills they need; they prepare children for school - especially those at-risk. Such programs make children more likely to start Kindergarten ready to learn, and that "school readiness" means that the children perform better throughout their school years and the rest of their lives. As also previously stated, children who receive a good educational foundation are less likely to require expensive special education classes and more likely to graduate high school [and college]. When those children become adults, they are more likely to hold jobs and earn higher salaries; less likely to perpetrate crime; and less likely to receive welfare assistance. The economic multipliers indicate that taxpayers receive financial benefits from a stronger, better-educated workforce, which results in the creation of a higher tax base. In addition, direct savings result from less spending on remedial education programs, prisons, and welfare assistance.

Several prominent economists, including Rob Grunewald and his colleague Art Rolnick, both of the Federal Reserve Bank of Minneapolis, and Nobel Prize winner James Heckman, have evaluated the public "return on investment," and concluded that, viewed purely as an economic development strategy, the return on investment to the public of early childhood development programs "far exceeds the return on most projects that are currently funded as economic development," such as building sports stadiums or relocating businesses. Rolnick and Grunewald view early childhood development programs, particularly for at-risk children, as an investment in the workforce, and conclude that "investment in human capital breeds economic success not only for those being educated, but also for the overall economy."

Rolnick and Grunewald's found that the public (not individuals in the program) reaped 80% of the return on investment - a 12% rate of return according to a 2003 evaluation of the High/Scope Perry Preschool Project. Primarily, such savings are attributed to reduced costs from lower crime, fewer welfare payments, and the reduced need for repeated grades and special education classes.

Economist and Nobel Prize winner James Heckman supports the investment of public dollars in early childhood education out of urgent concern about the U.S. workforce’s low skill level. He fears a continuing decline in skill level in the coming decades, and a disastrous loss of U.S. productivity and economic competitiveness. He concludes that “it makes sound business sense to invest in young children from disadvantaged environments,” since quality pre-kindergarten programs “generate substantial savings to society and promote higher economic growth by improving the skills of the workforce.” Heckman also argues that remediation programs in schools and for young adults who have failed in school, like GED certification and public job training, are both more costly and less effective than quality early learning programs. Therefore, money invested in early learning for at-risk children is more cost effective than money spent later to compensate for earlier disadvantages. In its influential 2002 report, *Preschool for All: Investing in a Productive and Just Society*, the Committee for Economic Development (CED), an independent research and policy organization of some 250 business leaders and educators, presented a business case for federal and state governments “to undertake a new national compact to make early education available to all children age 3 and over.” The CED report says that education should be viewed as an investment, not an expense, which will increase economic productivity and tax revenues, while diminishing crime. CED also argues that it is both morally and ethically unacceptable to fail to safeguard the health and wellbeing of all young children.

In 2003, two additional national business organizations, The Business Roundtable (TBR) and Corporate Voices for Working Families, joined forces to issue *Early Childhood Education: A Call to Action from the Business Community*. The report echoed CED’s findings in citing a solid return on investment of between \$4 and \$7 for every dollar spent on quality early childhood education. TBR and Corporate Voices cite additional business reasons for federal and state investment in early education. Like Heckman, they warn that America’s efforts to develop a first-class workforce for the future will be hampered without high-quality early education preparing children to enter school ready to learn. And, right now, employees who are parents - and therefore the businesses that employ them - benefit from the availability of good early childhood programs.

The benefits of early education don’t stop at the poverty line. High-quality Pre-K improves school readiness for **all** children. Steven Barnett points out that well-to-do parents are quite aware of its benefits: 78% of those who earn more than \$100,000/year send their children to Pre-K, compared with fewer than half of those who earn less than \$50,000/year (see chart below).

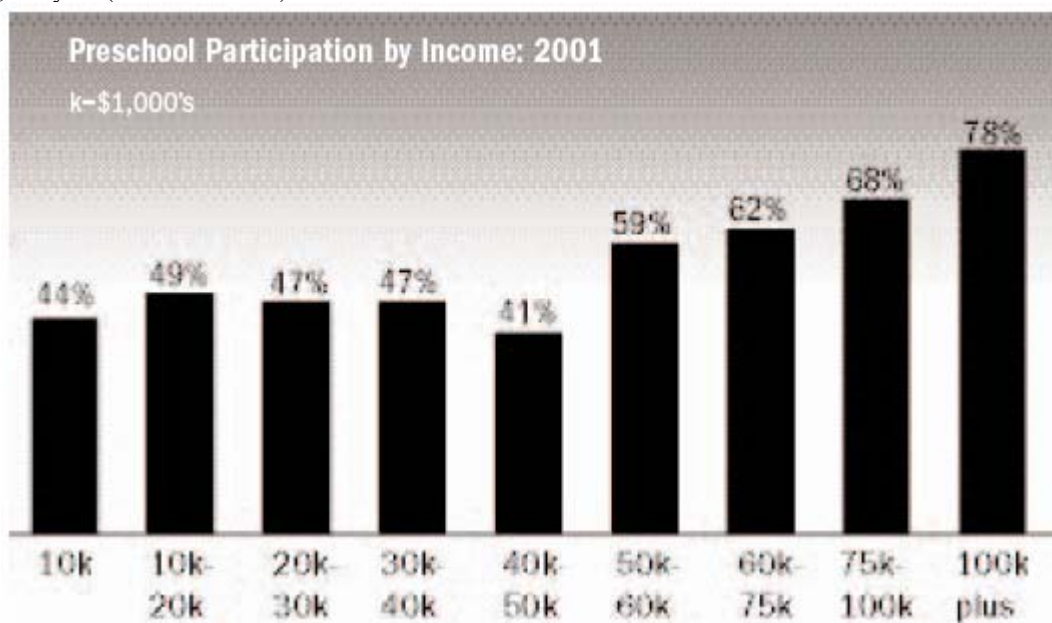


Table obtained from: <http://web.mit.edu/workplacecenter/docs/Full%20Report.pdf>

The value of a quality early education is such that in New York City a few years ago, tabloids were filled with reports of a powerful businessman who allegedly engaged in shady financial dealings as a favor to his boss, who he hoped would use his influence to help the businessman's twins into one of the New York's best pre-schools. While his actions were extreme, many parents sympathized with his desire! What's more, as the benefits of quality early education become more widely known, the increase in the numbers of children attending pre-school from families with a mother not in the workforce has risen at a rate strikingly similar to those of children whose mothers are in the workforce. However, quality pre-school is often financially unavailable to the middle class; those families with the fewest percentage of children enrolled earn between \$40,000 and \$50,000 annually. While, economically, not sending their children to pre-school may be the only choice that middle-income parents have, that decision turns out to be short-sighted. Educational failure is not restricted to poor children; it is common among the middle class as well. Middle-class children often have the same problems that quality early education reduces for poor children. While repeating grades and dropping out of school occurs in higher percentages among poor children, in real numbers, most children who fail and drop out are from families living above the poverty level.



This raises the question of what the effects would be of making quality early education available to all – which was analyzed by several professors from Georgetown University who constructed a study using students in Tulsa, Oklahoma, to test the impact of universally available Pre-K. At 63%, Oklahoma has the highest proportion of four-year-olds enrolled in Pre-K of any state in the union. The quality of education in Oklahoma is high – as teachers must have earned a Bachelor's degree; there are no more than ten students assigned to each teacher; and teachers are paid on the same scale as public-school teachers.

The Georgetown study compared two groups of children of nearly the same age, one of which had attended Pre-K and the other of which had not. The first group of five-year-olds had just missed the birthday cut-off for Pre-K and the other had made it. Thus, the first group of five-year-olds were about to start Pre-K; the other group of five-year-olds - just slightly older - had experienced one year of Pre-K and were now starting kindergarten. Since the children were literally just days or weeks apart in age, one might expect them to have similar skills - unless the Pre-K experience made a difference. Pre-K did make a difference. In three cognitive exams, letter-word identification, spelling, and applied problems, students who had completed Pre-K substantially outperformed those who had not. Statistically, significant differences were found among the students' races (Black, Hispanic, Native American and White), and among every socioeconomic group (determined by those who received

free lunch, subsidized lunch, or paid for full-price lunch).

Utilizing models developed in evaluating the 40th-year High Scope/Perry study, but being more conservative in assumptions about economic gains, Steve Barnett created an estimate of the economic gain over a 40-year period that would have been produced from having children of all socioeconomic groups in quality pre-school (see charts on next page). There would be substantial financial payoff for taxpayers, even if poor students across the country produced only half the benefits that the Perry pre-school children did, and if middle class students produced only one quarter of the benefits that the Perry pre-school children produced. While a universal program serving all

three- and four-year-olds would cost approximately \$50 billion, over the next 40 years it would create over \$213 billion in value – resulting in a net gain of \$163 billion. And even if middle class children generated only 10% (instead of 25%) of the economic benefits experienced by poor children, universal quality pre-school would still pay off; with a cost of \$49.9 billion, at 10% the economic benefit to society would be \$136.5 billion, for a net gain of \$86.6 billion.

In New York State, researcher Clive Belfield of Columbia University Teachers College, found similar substantial savings for taxpayers from reductions in special education, grade repetition, and reduced abuse and neglect of young children. He posed the question of the economic impact on the state from investment in universally available quality early education programs. Measuring what he calls “medium-term” cost savings - meaning the impact during the K-12 years, not the adult years beyond - Belfield estimates cost savings ranging from \$2,591–\$9,454 per program participant.

The combination of social savings and economic drivers provides immediate and future benefits to society, bettering the health and well-being of more individuals along with increasing the economy’s health and vitality – ensuring that it remains competitive. By investing in human capital through investment in high-quality early education, an economy can remain highly inventive and productive keeping that economy in the forefront and ahead of the competition.

**Returns: Targeted v. Universal**

(Assume poor children create only 50 percent of the benefit realized by those in the High/Scope Perry Preschool Study, and assume that students above the poverty line create only **10 percent** of the benefit realized in High/Scope Perry.)

Children Served	Cost	Benefits	Economic Gain (in billions)
50% below poverty 50% above poverty	\$12.5	\$63.0	\$51.4
Universal	\$49.9	\$136.5	\$86.6

Based on presentation by Steve Barnett at conference, December 9, 2004

**Returns: Targeted v. Universal**

(Assume poor children create only 50 percent of the benefit realized by those in the High/Scope Perry Preschool Study, and that students above the poverty line create only **25 percent** of the benefit realized in High/Scope Perry.)

Children Served	Cost	Benefits	Economic Gain (in billions)
50% below poverty 50% above poverty	\$12.5	\$79.9	\$67.4
Universal	\$49.9	\$213.2	\$163.3

Based on presentation by Steve Barnett at conference, December 9, 2004

## **V. GROWING GOVERNMENT SUPPORT FOR HIGH-QUALITY EARLY CHILDHOOD EDUCATION**

The U.S. has a long tradition of resisting major government intrusions into the early years of education because such intervention would suggest a failure on the part of the family. Many Americans have long detested public institutions taking on roles belonging to the family and especially dislike “big government” telling them what’s good for them and their children. The debate over family versus public responsibility of Pre-K education continues today; however, if actions speak louder than words in America’s twenty-first century changing society, in 2001, 66% of all four-year-olds were enrolled in a center- or school-based Pre-K.<sup>48</sup> The majority of American families are now voluntarily delegating the responsibility of Pre-K education to non-family institutions. Yet, according to MIT’s Workplace Center and the Legal Momentum’s Family Initiative, less than half of families who make less than \$50,000/year send their four-year-olds to Pre-K, with the fewest enrolled being middle-class families making \$40,000 - \$50,000/year. Families with less income are most likely choosing to keep their children out of Pre-K because of their financial instability. As the benefits of high-quality Pre-K have become better known, the increasing number of children from families with stay-at-home mothers attending pre-school has risen at a rate similar to that of children whose mothers are in the workforce.<sup>49</sup>

Even with increasing demand for Pre-K from families, government has been largely unresponsive and only about 14% of four-year-olds are enrolled in public school-based general education Pre-K programs.<sup>50</sup> So few children are enrolled in Pre-K programs connected with their local school district primarily because only 35% of public schools have such programs located on campus. This causes families to turn to either private or non-profit early education programs.<sup>51</sup> Major problems with the U.S. Pre-K system include: that it remains largely unfunded; it is not assessed and uncoordinated with no specific standards; it offers different curriculums and varying levels of teacher training; and it is usually unconnected to the local public school district. Yet in the last decade, there has been a mounting effort to establish high-quality early education beginning at age three, if not for all children, then at least for poor, high-risk children. Efforts have been made in many states with regard to full-day kindergarten and four-year-old Pre-K programs.

Although government efforts to expand early education programs have been slow moving, in the last decade each government level has made strides and, if considered together, more resources are being directed to early education. The first form of government support for Pre-K education began with the 1964 formation of Head Start. Developed by a panel of child development experts to help communities meet the needs of disadvantaged Pre-K children, the original program began as an eight-week summer session offered by the Office of Economic Opportunity; its goal was to help break the poverty cycle. In the first few years, many summer-only programs became nine-month, half-day programs; such programs have since continued to expand.<sup>52</sup>

Today, at the federal level, the Bush Administration has supported early education programs by increasing Head Start’s funding by \$750 million in the 2005 budget and providing 50,000 Head Start teachers with early learning training. The Bush Administration also supports the effort to give states greater opportunity to coordinate Head Start, state Pre-K programs, and child care programs. Also the President’s *Reading First* program has provided more than \$2.5 billion to train over 73,000 teachers in effective reading instruction.<sup>53</sup>

It is not just the federal government that has realized the importance of early childhood education, as states have supported the belief that high-quality early education establishes students for lifelong success. A 2005 report by the National Institute for Early Education Research (NIEER) detailed the status of preschool nationally, updating the individual progress of all 50 states. NIEER is a research based institute that supports early childhood education by providing objective, nonpartisan information to policy makers. The Institute also offers independent research-based advice and technical assistance to policy makers, journalists, researchers and educators, with the hope of advancing the cause of early education for every American child beginning at age three. In 2002, the Rutgers’ Center for Early Education Research (CEER) was merged with NIEER to create a larger pool of support for early childhood education.<sup>54</sup>

NIEER's 2005 report focused on analyzing states' performance on access to Pre-K programs, program quality and government spending.<sup>55</sup> According to the report, in the 2004-2005 school year, 38 states offered state-funded Pre-K. Across those states, 48 distinct Pre-K initiatives existed, since some states funded multiple initiatives. Twelve states did not offer any state-funded Pre-K program in 2004-2005, including: Alaska, Florida, Idaho, Indiana, Mississippi, Montana, New Hampshire, North Dakota, Rhode Island, South Dakota, Utah, and Wyoming. However, Florida has since started a Pre-K initiative.<sup>56</sup>

The NIEER report also found that in the 2004-2005 school year, the percentage of four-year-olds enrolled in state funded Pre-K increased by three percent over the 2001-2002 school year, with 17% of the nation's four-year-olds enrolled in 2004-2005. At just 3%, the number of three-year-olds enrolled in Pre-K remained steady during this time period. From fiscal year 2002 to fiscal year 2005, state spending actually decreased by \$278 per child enrolled, in inflation-adjusted dollars. A total of 801,902, three- and four-year-olds were enrolled in state Pre-K initiatives in 2004-2005. Not surprisingly, quality standards varied from state to state, and just more than half of the state Pre-K initiatives met the important benchmark of requiring all lead teachers to have a Bachelor's degree. Funding for state Pre-K totaled about \$2.8 billion during the 2004-2005 school year. Although some state Pre-K initiatives also reported financial support from local and federal sources, per-child spending in state Pre-K was still much less than total state, local, and federal spending in grades K-12.<sup>57</sup>

The NIEER report also found that, nationally, 61.3% of three-year-olds attend no Pre-K program; 7.3% attend Head Start; 3.9% attend some special education program; 24.8% attend some other outside the home early education or day-care program; and only 2.7% attend state funded Pre-K. Four-year-olds fared better, with only 31.6% not attending any Pre-K; 17.3% attending state Pre-K; 11.3% attending Head Start; 6.2% attending a special education program; and 33.6% attending some other outside the home early education program. The average state spending per child enrolled is \$3,351, while the federally-funded Head Start program's per child spending is \$7,222 and the average K-12 education per child spending is \$10,092.<sup>58</sup>

Overall, in the last decade states have shown much more Pre-K education support. Yet, although much progress has been made when considered on a national scale, when analyzing individual states, it is clear that progress has been uneven.

In 2004-2005:

- 38 states funded a pre-school education program.
- The state-funded programs served 801,902 children, increasing enrollment by 109,507 children (a 20% increase in age four students and an 8% increase in age three students) over 2001-2002 enrollment of 692,395.
- Of the 38 states with programs, 26 increased enrollment during the period.
- State preschool programs served more than 17% of the nation's four-year-olds, making states an even larger provider than the federal Head Start program, which served 11% of all four-year-olds.
- Pre-school special education programs served another 6% of the nation's four-year-olds
- 35% of all four-year-olds were served by some public education program – an increase of four percentage points over the 2001-2002 time period.<sup>59</sup>

Beyond national averages, however, lies a complex picture. Oklahoma is the only state that can truly be said to offer virtually all children pre-school education. In 2004-2005, over 90% of Oklahoma's four-year-olds enrolled in a state preschool program (including pre-school special education) or Head Start. Georgia followed suit with 67% of its four-year-olds attending a public pre-school program during the same program year. Remarkably, six of seven states providing more than 30% percent of their four-year-olds with state Pre-K are in the Southern U.S. – as defined by the U.S. Census.

Few state Pre-K programs have yet to focus on three-year-olds, and, as a result, state programs enroll only 3% of the population of children this age. By contrast, Head Start enrolls 7% of the nation's three-year-olds, and another 4% are in special education, yielding a maximum of 14% of all three-year-olds. Trends over time suggest that

Head Start has at least slightly shifted its emphasis toward three-year-olds as state programs have served more children at age four. Statistical analysis indicates that a ten percentage point increase in a state's pre-school enrollment of four-year-olds is associated with a two point increase in the percentage of a state's Head Start enrollment devoted to three-year-olds.<sup>60</sup>

The seemingly small progress being made overall and by individual states represents important increases that give hope for future Pre-K program support. In 2005–2006, with no prior program, Florida is estimated to have added about 100,000 four-year-olds to the total noted above. State-funded Pre-K is on the increase, raising the prospect that in the near future, state Pre-K enrollment will exceed federal Head Start enrollment at all ages. Despite difficult times for state budgets, state spending on pre-school education grew by 7.5% - even after adjusting for inflation - and neared \$3 billion.<sup>61</sup>

## **VI. STATUS OF PRE-K AND KINDERGARTEN IN PENNSYLVANIA**

Pennsylvania Pre-K programs were completely unfunded by the State until four years ago, when the Rendell administration set aside a \$200 million Accountability Block Grant (ABG). The ABG enabled school districts to invest funds in Pre-K programs and full-day Kindergarten, and allowed individual school districts the flexibility to use the funds for a range of purposes other than Pre-K, including full-day Kindergarten and reducing class sizes.<sup>62</sup> Hundreds of school districts in the Commonwealth chose to invest in various early education programs to ensure students enter school ready to learn. For the 2004-2005 school year, Pennsylvania also for the first time expanded federal Head Start Pre-K program funding with \$15 million in state funding. The following year, the State doubled Head Start funding to \$30 million - providing high-quality Pre-K to an additional 4,700 children.<sup>63</sup> In next year's approved budget, funding for such purposes was increased by another \$15 million, which will permit the State to enroll an additional 6,250 children in Head Start.<sup>64</sup>

According to a 2006 fact sheet produced by Pennsylvania Partnerships for Children, during the 2005-2006 school year, 318 school districts spent more than \$117 million of the \$200 million ABG to serve 58,318 children in full-day kindergarten. The fact sheet also reported that since the ABG began, 183 school districts have begun offering full-day Kindergarten. In the same year, 40 school districts used ABG funds to place 3,052 children in high-quality in-school Pre-K, through which 17 school districts offered Pre-K.<sup>65</sup> In next year's budget, ABG funding will increase an additional \$50 million - to \$250 million.<sup>66</sup>

Despite Pennsylvania's progress in supporting early education over a short period of time, other states remain largely ahead. Only 51% of Pennsylvania's Kindergarten students are enrolled in full-day Kindergarten, compared with 65% nationally.<sup>67</sup> According to NIEER, about a third of the State's school districts voluntarily provide Pre-K education to four-year-olds. Program participants are included in districts' daily membership counts for public school attendance and are partially funded through the State's basic instructional subsidy formula. Additional funding is provided through local taxes, Title I, or Head Start partnerships. Pre-K programs for four-year-olds are not required to follow any specific State early childhood standards whatsoever. NIEER ranked Pennsylvania 30<sup>th</sup> out of 38 states that offer Pre-K in terms of access for four-year-olds, and 19<sup>th</sup> in terms of three-year-old access. Pennsylvania was ranked 25<sup>th</sup> in terms of providing resources for Pre-K programs. Access to Pre-K was based on the number of children enrolled in the program, compared with the total number of children that age who are not enrolled. Resources are dependent on the amount of money spent per child enrolled that includes state funding, federal funding and local funding.

In the 2005-2006 school year, Pennsylvania enrolled in Head Start a total of 33,864 children age three and four by combining State and federal dollars. An additional 2,351 children up to age two participated in the Commonwealth's Early Head Start program. The total cost of Head Start in Pennsylvania was about \$260 million with the State contributing \$30 million of the cost.<sup>68</sup>

What remains unknown about Pennsylvania’s early education system are the number of children enrolled in early education centers outside the home and the number of those receiving no Pre-K. NIEER figures do tell us that 1% of three-year-olds are enrolled in State-funded Pre-K, 7% are enrolled in Head Start and 5% are enrolled in a special education program. 5% of four year olds were enrolled in state Pre-K programs, 11% in Head Start and 7% in special education. The national average for four-year-olds enrolled in state-funded Pre-K is 17% and 3% for three-year-olds placing Pennsylvania below average in state funding.<sup>69</sup> Out of the 87% of three year olds and 77% of four year olds not enrolled in any of these programs, it is not known how many attend school district supported Pre-K, or other outside the home early education centers and how many receive no high quality Pre-K education experiences.<sup>70</sup> However, a 2001 national survey by the National Center for Education Statistics found that about 57% of three- year-olds do not attend center- or school-based Pre-K, while about 44% of four-year-olds do not.<sup>71</sup> Even if Pennsylvania’s statistics are close to the national average, it still means about half of the State’s three- and four-year-olds receive no formal Pre-K education.

<i>Child care arrangements of preschool children, by age and race/ethnicity: 2001</i>				
<b>Characteristic</b>	<b>Percent in nonparental arrangements</b>			<b>Percent with parental care only</b>
	<b>Relative care</b>	<b>Non- relative care</b>	<b>Center- or school- based programs<sup>1</sup></b>	
<b>Total</b>	22.8	14.0	56.4	26.1
<b>Age</b>				
<b>3 years old</b>	23.6	14.7	42.8	33.8
<b>4 years old</b>	22.5	13.6	65.9	20.4
<b>5 years old</b>	20.9	13.1	73.0	18.0
<b>Race/ethnicity</b>				
<b>White, non-Hispanic</b>	19.6	16.5	59.1	25.3
<b>Black, non-Hispanic</b>	36.7	8.5	63.1	15.1
<b>Hispanic</b>	22.8	11.3	39.9	39.0
<b>Other</b>	22.8	10.8	61.8	23.7

*Table obtained from: <http://nces.ed.gov/fastfacts/display.asp?id=4>*

One effort in Pennsylvania that is not specifically aimed at early education based centers or school Pre-K programs but rather at the child-care industry is “Keystone STARS,” which seeks to improve the quality of early learning in day-care facilities without any direct financial support from the government. STARS is a voluntary program that recognizes regulated child care providers who exceed state health and safety certification requirements. STARS provides a quality rating system through which each STAR designation has its own

research-based performance standards or benchmarks linked to improving learning outcomes for children. STARS focuses on providing quality environments that contribute to increased social and emotional development, learning skills and school readiness.<sup>72</sup> STARS is the largest, most comprehensive voluntary quality rating in the nation. In its first full year, 60% of Pennsylvania's child care centers enrolled and demand continues to grow. The Commonwealth offers intensive technical assistance and financial incentives to support staff development and increased staff compensation. Credential- and degree-granting programs and a career lattice are now being created.<sup>73</sup> The STARS system provides concerned consumers with standards to select child care centers and indirectly raise the quality of early childhood education.



Pennsylvania has also developed early childhood teacher certification requirements. In addition, the State has recently implemented early childhood education standards and assessments, which link with Pennsylvania's existing standards. Through workshops, Pennsylvania also intends to better train early education practitioners.<sup>74</sup>

The State's Build Initiative works as a multi-state partnership helping to construct a coordinated system of programs, policies and services that are responsive to the needs of young children and their families. It supports individuals and groups who set early education policy, provide services and advocate for children from birth through age five to ensure they are safe, healthy, eager to learn and ready for school. The Build Initiative serves as a catalyst for change and as a national resource on early childhood education. Pennsylvania is one of five partner states involved in The Build Initiative. The State's Build Initiative team is comprised of representatives from the Commonwealth's executive branch and education partners, including the Governor's Office; the Departments of Education, Public Welfare and Health; and Head Start.<sup>75</sup> The Build Initiative has issued a number of reports advocating ways to bolster and expand the State's early childhood education.

## **VII. STATUS OF PRE-K AND KINDERGARTEN IN LACKAWANNA AND LUZERNE COUNTIES**

### **Pre-K**

According to the Pennsylvania Department of Education, very few children are enrolled in high-quality public school Pre-K. The 2004-2005 enrollment figures reflect that no four-year-old students are recorded as attending Pre-K in Luzerne County, and only three four-year-old children were recorded as attending Pre-K in Lackawanna County. In addition nine children in Lackawanna County who were younger than age four were also recorded as attending Pre-K. Neither county reflected any students attending Pre-K in private or non-public schools. According to NIEER, about 17% of four-year-olds in the Commonwealth of Pennsylvania are enrolled in school-based general education Pre-K programs. NIEER also reported that only 5% of Pennsylvania's four-year-olds attend state-funded, school-based Pre-K, which probably indicates that Pennsylvania is below the national average in offering school-based Pre-K. Pennsylvania's total Pre-K enrollment is unknown. Approximately 1,065 three- and four-year-old children in Lackawanna County are enrolled in the regular Head Start program, 382 of which are financed by the State's supplemental funding; 52 children are enrolled in the Early Head Start Program. In

Luzerne County, approximately 836 three- and four-year-old children are enrolled in the regular Head Start Program, 96 of which are funded by the supplemental state grant; 96 children participate in the Early Head Start program.

Non-school based and non-Head Start early learning centers provide the majority of Pre-K education in Lackawanna and Luzerne counties. Although there does not exist a precise number of children enrolled in other center-based early learning environments, Pennsylvania Partnerships for Children reported that, at 10.9%, Lackawanna County has the third highest number of high-quality early learning centers in Pennsylvania. At 5%, Luzerne County has more high-quality early learning centers than the State average of 3.9%. Quality was determined by accreditations received by either the National Association for the Education of Young Children (NAEYC), the National Association for Family Child Care (NAFCC) or the achievement of the highest rating (four stars) through Pennsylvania's Keystone STARS program.

According to the 2000 census, there are approximately 7,046 children in Lackawanna County between the ages of three and five, about 86% of which are enrolled in nursery school, pre-school or Kindergarten. In Luzerne County, there are approximately 10,070 children between the ages of three and five, about 79% of which are enrolled in nursery school, pre-school or kindergarten. Luzerne County's outside the home early learning and Kindergarten rates match the State's average attendance – approximately 79%. If it is assumed that nearly 100% of children attend kindergarten, then the percentage of three- and four-year-olds attending some kind of outside the home early education drops significantly. Based on Lackawanna County's population of three- and four-year-olds and the number of children attending an early education program outside the home, about 75% of three- and four-year-olds are enrolled. In Luzerne County, enrollment for three- and four-year-olds is only 66%, a full 2% lower than the State average of 68%. Based on this estimate, both counties fared much better than the national average provided by the National Center for Education Statistics, which estimates only about 54% of three- and four-year-olds attend outside the home early education programs.



If traditional public school systems and other government agencies do not pick up the slack of educating the remaining three- and four-year-olds, and especially disadvantaged children, then other non-profit social agencies such as the United Way and the Child Development Council will have to continue efforts to bolster school readiness for those left behind. Important programs targeting early education, health care, and social and emotional development in children aim to service children prior to entering kindergarten. The United Way of Lackawanna County's "Success By 6" initiative seeks to improve the quality of early learning child care centers by helping them meet accreditation requirements.<sup>76</sup> The Child Development Council, which operates several locations in Luzerne County, is a member agency of United Way and attempts to provide the highest-quality early learning environment possible.

### **Kindergarten**

As would be expected, all public school districts in Lackawanna and Luzerne counties offer kindergarten. Yet, there is a great disparity between the counties in the number of students who attend half- versus full-day kindergarten. In Luzerne County, all but one school district provides full-day kindergarten and 94.4% of kindergarten students attend for a full day. Conversely, in Lackawanna County, although seven of 11 school districts offer full-day kindergarten, only 52.6% of students attend for a full day. In the Scranton School District,

Lackawanna County's largest district, 39.7% of eligible students are enrolled in full-day kindergarten, while 60.3% of eligible students are not. If Scranton were to offer full-day kindergarten to all students, the percent of children in Lackawanna County enrolled in full-day kindergarten would jump from 52.6% to 73.9%.<sup>77</sup> Although Lackawanna County's percentage of classrooms offering full-day kindergarten is low, it remains slightly higher than the State average of 51% but below the national average of 65%.<sup>78</sup>

As previously indicated, small class size has a proven positive impact on early education quality. According to statistics provided by the Pennsylvania Partnerships for Children, the mean percentage of students in Pre-K through third grade who are in classes with 17 or fewer students is 23.8%; in Luzerne County, it is 7.9%.

Luzerne County is well on its way to offering universal full-day kindergarten and Lackawanna County is slightly above the Pennsylvania average in offering full day kindergarten, but still below the national average. The trend of full-day kindergarten should only increase, as increased progress reflects success in readying students for school and preparing them for long-term success (not to mention increased benefits to working parents). Fortunately, increased state funding made available for early education through the ABG has allowed local school districts to expand and improve the quality of kindergarten.

The national trend is to strive toward universal Pre-K through the public school system for four-year-olds first and then for three-year-olds. Doing so through the public school system makes sense because Pre-K prepares students to start school ready and there's no better place for a child to begin school than to do so in the school district he will be entering. Also, school-based Pre-K ensures a standard of high-quality because teachers will be required to have at least a Bachelor's degree in early childhood education. Learning standards for Pre-K can also be easily integrated and monitored within the public school system. Teachers will be able to expand their knowledge and keep up with the latest methods by attending in-service programs. Also, many states already impose minimum class size requirements that are proven to increase quality. And various support services, such as health screenings, meals, social and emotional development, are already built in to the public school system. Although no public schools in either county offer Pre-K in mass, three-quarters of children in Lackawanna County and two-thirds of children in Luzerne County attend some kind of out of home center-based early education. With 66% of parents enrolling their children in center-based early education, the demand is clearly palpable for high-quality Pre-K to be provided through the public school system. Government support is all that is needed to provide an adequate Pre-K system.

Like the rest of the nation, the non-public school system has created a mix of various Pre-K options, which differ in quality, quantity and cost. It remains that parents are children's' first best teachers and should maintain discretion over which early learning is best prior to age five. However, most parents are choosing with their dollars and judgment that center- or school-based early education is best. Above the desire to give their children the best, most parents are working full-time jobs and are not able to keep children by their side while on the job; additionally, most jobs do not provide pre-school as a benefit. A handful of states have recognized the demand and trend toward center-based early education and have worked toward offering it to every child; to date, they have succeeded in taking the first steps toward that goal.



## **VIII. CASE STUDIES**

The first large project aimed at developing and implementing a practical high quality early education system was coordinated by the National Association of State Boards of Education (NASBE).<sup>79</sup> An early childhood education network was formed between NASBE and six states - Wyoming, Illinois, Kansas, Ohio, Louisiana, and Massachusetts - to design coordinated, coherent systems that ensure all children start school ready to learn.<sup>80</sup> The project required states to implement a results-oriented process to guide state planning around how to achieve the goal of school readiness. The states collaborated to address a range of issues including: designing and communicating the state's vision for an early childhood education system; the development of Pre-K through 3<sup>rd</sup> grade standards based on early learning research; assessing program performance; and increasing training and professional development of early education practitioners.<sup>81</sup>

Taking the information compiled in the first phase of the effort to implement a high quality early education system, the six network states began a second phase focusing on teacher quality using state board authority to adopt new early childhood teacher standards, certification rules and professional development criteria to align Pre-K education with the existing kindergarten through grade three education system. The NASBE report describes how each Network state began building the structure to create and manage a cohesive early education system and an overview of the early education system each state implemented as a result of early efforts with NASBE.<sup>82</sup>

NASBE also points out that although efforts to increase investment in early education have stepped up in the last decade, few programs have sought to ensure improvements of quality. It was also found that more money has been spent without any coherent state-wide planning and without using research-based knowledge of effective pre-school environments. As a result of such uncoordinated funding efforts, NASBE has found the outcome in many states to be a "patchwork of programs and services that are at best inaccessible or mediocre (or both)."<sup>83</sup>

### **Illinois**

Illinois has a strong record of providing quality, free early education and services to three- and four-year-olds. In 2004, the National Institute for Early Education research awarded the state nine out of ten benchmarks it uses to assess quality of Pre-K programs. Through partnerships, Illinois has been working to develop a cohesive infrastructure for all early childhood programs. In order to increase access to quality programs for its neediest children, the state has encouraged agencies outside the public school system, such as childcare centers and Head Start, to compete directly for state funding. The incentive works to improve overall quality as in order to receive state funds, agencies must comply with the same quality standards that apply to public schools.<sup>84</sup>

For its participation in the NASBE network, Illinois focused on ways to further improve its well established, quality Pre-K system. In the first phase of the network project, Illinois decided to partner its State Board of Education with the Division of Early Childhood and Special Education, the Illinois Department of Human Services, Bureau of Child Care and Development, Head Start, and the Governor's Office. In phase one, the partnership developed an initiative to increase access and equity for children with disabilities and their families. The outcome was a guidebook to be used by special education providers and child care directors to expand the implementation of high quality inclusive practices and a training curriculum that provides rationale, strategies and resources for inclusion of children with disabilities in natural environments. In the second phase, the initiative supported higher education early childhood faculty in preparing personnel to work with children with special needs and other diverse populations.<sup>85</sup>

As a result of developing partnerships across the state focusing on a statewide comprehensive plan for improving early childhood education, since 2001 Illinois has trained 275 individuals on inclusion strategies for children with disabilities into the state's existing Pre-K system. Those trained represented agencies like Head Start, school districts, Ounce of Prevention, ARC, Easter Seals, Boys and Girls Club, Jane Adams Hull House, YMCA, Jewish Children's Bureau, and various health departments. Higher education faculty members from around the state were mentored on using different methods, models, and materials that include children with disabilities in normal

Pre-K education environments. A strategy was also developed to work with administrators and special education directors to expand inclusive pre-school options for young children with disabilities.<sup>86</sup>

### **Kansas**

In 1998, Kansas began a state-wide program that serves children with risk factors such as developmental delay, migrant status, and eligibility for free lunch. The number of children served by the program has doubled since its inception. The at-risk program serves four-year-olds and operates



in the public schools. Kansas has also focused on child and family investments with widespread support. The Kansas Department of Education has also developed certain criteria for school readiness, a single set of teaching standards, and readiness indicators that apply to Head Start, childcare, public and private pre-school programs and the Individuals with Disabilities Education Act (IDEA) programs.<sup>87</sup>

In phase one of its participation in the NASBE network, Kansas successfully tackled problems of fragmentation across many early childhood projects and policies launched in the 1990s. The state brought together policymakers, the Department of Education, higher education, Head Start, and private and public practitioners to create readiness indicators and new early childhood teaching standards. The group also developed a series of informational materials designed to help families find and receive services across different programs and agencies. Licensing standards for early childhood and early special education were merged into a unified teacher licensure for early childhood teachers of children up to age eight.

In phase two, the state focused on sustaining partnerships among multiple stakeholders to improve the quality of early childhood education teachers and childrens' school readiness skills by having them participate in quality early childhood education programs. Early childhood standards were developed for children up to age five that were consistent with K-12 standards. By considering policy issues across organizations, a shared definition of quality early childhood programs was established. To ensure the common standards were understood, presentations and other information materials were given to school boards, administrators, principals, and special education administrators. To measure how all these efforts impacted the early education system, the state hired graduate students to collect observational data on Kindergarten classrooms that will be used to further refine school readiness indicators.<sup>88</sup>

### **Louisiana**

Louisiana's main early childhood program is the "LA 4" voluntary pre-school initiative. Administered by Louisiana's Department of Education, "LA 4" serves four-year-olds from low-income families through local school districts. "LA 4" provides ten hours of service – comprised of six hours of pre-school and four hours of before- and after-care enrichment activities. The state has begun consolidating other state Pre-K initiatives such as "Starting Points", which provides six hours of Pre-K to four-year-olds. Along with increasing access to early education, Louisiana has focused on upgrading the quality of its programs. The state approved the Louisiana Standards for Four-Year-Old Children in line with guidelines established by the National Association for the Education of Young Children, the Council for Exceptional Children, Division of Early Childhood, and the Head

Start Performance Standards. The state has implemented grade level expectations that add specificity to the early learning standards and now several systems to collect data on the programs offered and their effectiveness.<sup>89</sup>

For its participation in the NASBE network, Louisiana created inter-agency groups among Head Start, legislators, the Department of Education, the Department of Health and Human Services, and higher education to address state and local policies that dealt with the birth to eight population. Through a competitive grant process, the state implemented the “LA 4” pre-school program in eleven parishes (counties). The state worked on-site with each parish to coordinate local public and private services systems. Many of the Pre-K programs shared funding from other sources, such as “IDEA Part B-619”, to provide children with disabilities with programs and services in inclusive settings. The state also developed standards for all Pre-K programs that incorporated research-based instructional practices. Louisiana continued its partnerships to support a special education training effort, since many children served in community settings and Head Start programs have special needs. Teachers receive training on how to design developmentally appropriate activities that incorporate early learning standards. The state focused on training practitioners from Head Start and childcare centers because neither program requires the same level of pre-service training as practitioners in the “LA 4” Pre-K program.<sup>90</sup>

Louisiana focused on professional development tailored to current practitioners unmet training needs. It worked with practitioners to develop effective classroom environments and methods of developmentally appropriate teaching practices for math, science, language, and social studies. Further, Louisiana administered information on effective classroom management and appropriate strategies for classrooms serving children with disabilities.<sup>91</sup>

### **Massachusetts**

Massachusetts has recently been focusing on laying the foundation for a comprehensive and accessible, high-quality system of programs and services for young children and their families. The state has identified the need to create a single set of standards for all programs that address health, safety, and education. *Early Childhood Program Standards and Guidelines for Preschool Learning Experiences* was approved by the Massachusetts Board of Education in 2003 and applies to all early childhood programs that accept state funding. A Department of Early Education and Care was formed to integrate existing early education and care functions into the new agency.<sup>92</sup>

In phase one of the network activities, like other states, Massachusetts also focused on working with various state agencies to identify the best plan of action. As part of the NASBE grant to coordinate early childhood education and services, the state convened forums to examine models to promote a seamless transition to a new early childhood system that integrated children with disabilities. The final plan resulted in the development of a guidebook - *Best Practices in Early Childhood Transitions Guide*. The state then approved Early Childhood Standards and Guidelines, which requires all newly hired teachers to attain a college degree, a minimum of an Associate’s degree, by 2010 and a Bachelor’s degree by 2017. The *Early Childhood Program Standards and Guidelines for Preschool Learning Experiences* was disseminated to all partners involved in early childhood education. Through IDEA, Massachusetts then began seeking ways to coordinate programs and providers.<sup>93</sup>

In phase two, activities focused on integrating initiatives across all colleges and universities, state agencies, vocational high schools, and other early childhood training sites. Materials were distributed, training sessions were held, professional development core competencies were advanced and an Associate’s degree accreditation project was launched in selected institutions. As a result, 23 institutions of higher education have been certified to offer the new cohesive early childhood education certification program.<sup>94</sup>

### **Ohio**

Prior to 2001, public schools, vocational schools, educational service centers, and federally-funded Head Start received direct funding from general revenue sources that targeted services to children from low-income families. When general revenue was no longer available for state-funded Head Start, Ohio redirected Temporary Assistance

for Needy Families (TANF) funding. In 2004, Head Start Plus was created to provide full-day, full-year education and care services. The state also began to move toward integrating state-funded subsidized child care and Head Start services.<sup>95</sup>

In phase one, Ohio formed a collaborative panel that included child care providers, government departments, higher education, legislators, and local practitioners. The panel produced a report that outlined a plan of action. The plan called for funding for state-of-the-art professional development pre-service and in-service opportunities for early education and child care professionals. Amending rules across state agencies to increase access to services and coordinate grants and legislation to blend funding streams were suggested. Including the participation of families in all levels of the decision-making process was also recommended. Training for current practitioners in community-based programs was also suggested in order to better educate and care for children with disabilities in the least restrictive environment.<sup>96</sup>

In phase two, a policy framework for the roles, responsibilities and performance indicators of practitioners was developed and guidance for higher education training programs and professional development was designed. As a result of the planning, Ohio has developed curriculum materials and designed train the trainer models for in-services professional development. A faculty institute on pre-service training was developed and a website that serves as a resource for practitioners was established.<sup>97</sup>

### **Wyoming**

Wyoming does not have a separate state-funded Pre-K program, but does provide \$1.5 million/year in federal funding through the Temporary Assistance for Needy Families (TANF) to augment pre-school quality. [Yet, the state's Department of Education, in collaboration with the Children's Action Alliance, higher education, the Department of Family services, and local providers have systematically addressed critical areas to enhance early education quality, such as examining gaps in statewide data collection, developing early learning standards, and designing higher education early childhood endorsement programs.] In 2004, an early childhood endorsement program was established and a pre-school certification program implemented.<sup>98</sup>

In phase one, Wyoming created an early childhood education team comprised of representatives from four agencies to address the development of an early education infrastructure. A statewide report emphasized the need to create a common systems approach to assessment, indicators, and diagnostic evaluation in order to ensure that early childhood education promoted school readiness. In phase two, Wyoming designed a collaborative strategy to implement an early childhood birth-to-five endorsement program. The program targets students enrolled in a Bachelor's degree program in child development; allows post-graduate students in elementary education, child development, and related fields to take the required courses at a graduate level; and provides extensive online coursework to serve the needs of trainees scattered throughout the state. As part of the endorsement program, Wyoming has since successfully launched a training program for children birth to five years of age.

The similarity in the approach of each of the six states to take first steps toward a statewide high-quality early childhood education system is worth noting. It is a plan of action that can be duplicated by other states and even on a regional level. First, a diverse group of interested parties was formed to set goals. Such goals were then used to develop a plan of action. Many of the states opted to first develop education standards and a better-trained, professional practitioner workforce. Creative funding was utilized and many states used inclusionary planning for students with disabilities as many government funding streams now require. Getting all stakeholders on the same page and working in the same direction towards better early childhood education was the successful accomplishment of each state and the most important objective of any comprehensive system.

## **IX. RECOMMENDATIONS**

### **For System Development**

*Partnerships:* Government, non-profit, and private partnerships are essential in developing a comprehensive and innovative plan for improving early childhood education in Lackawanna and Luzerne Counties. As was exemplified by the six National Association of State Boards of Education (NASBE) Network states, collaboration is essential in the creation of a working cohesive system. Intergovernmental cooperation between federal, state, and local agencies is essential for any comprehensive plan to work well. Including non-profit groups, such as higher education, the United Way, Boys and Girls Club, and the YMCA, increases community collaboration and support. Reaching out to local chambers of commerce and the business community brings another perspective and often helpful financial support. PNC Bank already has established a Grow Up Great program, which could be integrated with any system. United Way in both counties has launched a Success by Six campaign, with much the same aim as Grow Up Great. Pooling resources toward the same effort would be much better than working separately and without communication.

Any collaborative effort would require a conference to merge various stakeholders to outline goals and develop committees to create a plan in line with such goals. Bringing together various stakeholder representatives with early childhood education providers during the planning stages promotes that each organization remains onboard throughout the process.

*Complete Local Plan:* Lackawanna and Luzerne counties do not have to wait for Pennsylvania to develop a comprehensive Pre-K and kindergarten education plan. The counties are already very similar in their demographics, social services organizations, and businesses; in essence, the counties form a distinct metropolitan region. Lackawanna and Luzerne counties are also home to resource-rich state, community and private colleges and universities, many of which are willing to assist in some capacity. Although the noted case studies are based on statewide models, the actions taken by the six states fit well for Pennsylvania, because the state has already completed some work that encourages local planning for an augmented early education system. For instance, local school districts could utilize increased state ABG funds to start school-based Pre-K for four-year-olds, while the local Head Start could use its increased state funding to enroll more three-year-olds in quality Pre-K.

The Pennsylvania Department of Education has already developed early learning standards for Pre-K and kindergarten and an early childhood assessment for children from birth to age eight. With implementation of the Build Initiative, the Commonwealth has offered its first workshop to train the trainers, through which those trained will in turn train early childhood practitioners on newly developed standards. Local higher education institutions that teach early childhood education would also be able to assist in the professional development of current practitioners. Pennsylvania has also developed program standards for Head Start.<sup>99</sup>

*Cohesive System:* A patchwork of unconnected and uncoordinated programs and efforts for better early childhood education is the “non-system” that exists today in Lackawanna and Luzerne counties. What is needed is a unified effort to establish, promote and manage a single early childhood education system. That system should be guided by already-established standards, and it should capitalize on funding, training, and support offered by the Commonwealth. Such a well-managed local system could become a model for other regions in the state, lowering the overall state expenditure for quality early childhood education.

*Creative Funding:* Pennsylvania’s new fiscal year budget already provides for funding that promotes early education; yet, perhaps the state could be persuaded to use more creative revenue streams for early education – such as tobacco settlement money or federal TANF and IDEA funds. Each of the various groups may not have raw funds to offer, but may propose other valuable services. The reality is that neither national nor state governments will be funding universal Pre-K for three- and four-year-olds, thus a comprehensive early education system for Lackawanna and Luzerne counties will have to rely upon creative funding methods.

*Professional Development:* Quality early education is linked to practitioners’ professional development. High-

quality practitioners who are knowledgeable and well- trained provide students with a higher quality of early education. Local higher education institutions will play a central role in practitioners' professional development. Professional development workshops on early education currently being developed by the state will also assist in the process. Furthermore, the Pennsylvania STARS initiative also promotes practitioners professional development and quality.

*Curriculum Standards:* Curriculum standards are necessary for a unified system that meshes with the rest of Pennsylvania's K-12 education standards. Because the state has already developed standards for early education, those standards should be used to guide curriculum development in Lackawanna and Luzerne counties' regional plan.

*Program Assessment:* Monitoring of any new system created by the Lackawanna and Luzerne Early Education Partnership should be ongoing as the system gets up and running. It is important to measure whether or not the Pre-K system implemented is effective in making more students ready to learn as they enter kindergarten and early elementary grades. Perhaps higher education departments of education could make graduate students and faculty available to carry out such research. Inviting outside researchers to study the program may also work.

*Lobby State:* Invite various early education stakeholder groups at the state level to assist the Partnership in developing and implementing a comprehensive system. Develop an awareness and lobbying committee to advocate that the state do even more to support early education. The committee can also increase support for the region's early education system.

#### **For High-Quality Early Education System**

*Low Child-Teacher Ratios:* Many researchers have noted that low child-teacher ratios are important factors in delivering high-quality early education. Any system developed for three- and four-year-old Pre-K students should have a class size of 20 or less, with a staff-child ratio of 1:10 or better, as recommended by NIEER.



*Highly Qualified Teachers:* The lead practitioner in any early childhood classroom should be professionally-trained and knowledgeable. The Commonwealth already has in place extensive certification procedures and requirements for early childhood education teachers. An early childhood teacher certification would be the highest qualification an early childhood education practitioner would receive and a comprehensive system should strive for increasing the region's number of early childhood certified teachers.

*Rich Curricula:* Using the Pennsylvania Early Education Academic Standards should guarantee a solid and consistent curriculum, as it has been designed to prepare Pre-K students for meeting the K-12 Pennsylvania standards.

*Parental Participation:* Any sound education system involves parents in their children's learning and development. Parents act as children's' first best teachers and need to be active participants in any comprehensive early childhood education system. This report demonstrates that children learn and develop better when parents are actively involved in their education.

*Support All-Day Kindergarten:* Research shows that children who attend all-day kindergarten perform better in language and math skills in the early grades, which helps them gain more confidence and perform better in later years. Luzerne County nearly has universal full-day kindergarten, while Lackawanna County lags behind. The

first objective of a comprehensive system is to instate universal full-day kindergarten.

*Continue Support and Expansion of Voluntary Pre-K for Four-Year-Olds:* Increasing enrollment in high quality Pre-K for four-year-olds should be the second priority in a comprehensive system. When enrollment is limited, preference should first be given to at-risk and underprivileged children, as research shows they receive the greatest benefit. Middle-income children should be given next preference, as this income group currently enrolls the fewest percentage of children in high-quality Pre-K.

*Voluntary Early Education Beginning at Age Three:* Many researchers claim that the greatest benefit children receive happens when they enter high quality early education at age three. Again, evidence suggests that at-risk and underprivileged children receive the greatest benefit because their home environment is less stimulating with fewer resources.

### **Internet Resources**

#### ***National Websites***

The National Center for Education Statistics (NCES)  
<http://nces.ed.gov/>

The National Child Care Information Center (NCCIC)  
<http://www.nccic.org/>

The National Institute for Early Education Research (NIEER)  
<http://nieer.org/about/>

The National Association of State Boards of Education (NASBE)  
<http://www.nasbe.org/>

The National Association for the Education of Young Children (NAEYC)  
<http://www.naeyc.org/>

Pre-K Now  
<http://www.preknow.org/>

#### ***Pennsylvania Websites***

Pennsylvania Department of Education  
[http://www.pde.state.pa.us/pde\\_internet/site/default.asp?g=0](http://www.pde.state.pa.us/pde_internet/site/default.asp?g=0)

The Build Initiative  
<http://www.buildinitiative.org/>

Pennsylvania Partnerships for Children  
<http://www.papartnerships.org/>

Pennsylvania Child Care Association  
[http://www.pacca.org/About\\_PACCA.htm](http://www.pacca.org/About_PACCA.htm)

**Endnotes:**

1. Katherine A Magnuson, *Marcia K Meyer, Christopher J Ruhm, Jane Waldfogel*. "Inequality in Preschool Education and School Readiness," *American Educational Research Journal*, **Washington**: Spring 2004. Vol. 41, Iss. 1, p. 115-157: obtained via Proquest.
2. Ibid.
3. Ibid.
4. Ibid.
5. Ibid.
6. Ibid.
7. Regena Fails Nelson. "The Impact of Ready Environments on Achievement in Kindergarten," *Journal of Research in Childhood Education*, Olney: Spring 2005. Vol. 19, Iss. 3, p. 215-221: obtained via Proquest.
8. Magnuson et al.
9. W. Steven Barnett, "Early Childhood Education".  
<http://www.asu.edu/educ/eps/EPRU/documents/EPRU%202002-101/Chapter%2001-Barnett-Final.htm>
10. Magnuson et al: obtained via Proquest.
11. Ibid.
12. Ibid.
13. Ibid.
14. Linda Jacobson. "Study: Early Head Start Children Outpace Peers," *Education Week*, Washington: Jun 12, 2002. Vol. 21, Iss. 40, p. 10: obtained via Proquest.
15. Ibid.
16. Ibid.
17. Ibid.
18. Kathleen Kennedy Manzo, Erik W Robelen. "Study: Full-day kindergarten boosts reading achievement," *Education Week*, Washington: Jun 11, 2003. Vol. 22, Iss. 40, p. 9: obtained via Proquest.
19. Ibid.
20. Magnuson et al: obtained via Proquest.
21. Jacobson. "Study: Early Head Start Children Outpace Peers": obtained via Proquest.
22. "Early Head Start," U.S. Department of Health & Human Services: Administration for Children & Families, June 15, 2006.  
<http://www.acf.hhs.gov/programs/hsb/programs/ehs/ehs.htm>
23. Jacobson. "Study: Early Head Start Children Outpace Peers": obtained via Proquest.
24. Gerald W. Bracey, Authur Stellar. "Long-term studies of preschool: Lasting Benefits far outweigh costs," *Phi Delta Kappan*. Bloomington: June 2003 Vol. 84, Iss. 10 p. 780-783, 797: obtained via Proquest.
25. Leslie J. Calman, Linda Tarr-Whelan. "Early Childhood Education for All: A Wise Investment," *Legal Momentum's Family Initiative; MIT Workplace Center*. New York, NY: April 2005, p. 11-12.  
<http://web.mit.edu/workplacecenter/docs/Full%20Report.pdf>
26. Ibid. p. 12.
27. Ibid. p. 12-13.
28. Bracey et al: obtained via Proquest.
29. Ibid.
30. Bracey et al: obtained via Proquest and Calman et al.
31. Ibid.
32. Jacobson. "Study: Early Head Start Children Outpace Peers": obtained via Proquest.
33. Bracey et al: obtained via Proquest.
34. Ibid.
35. Craig T Ramey, *Sharon L Ramey*. "Early Learning and School Readiness: Can Early Intervention Make a Difference?" *Merrill - Palmer Quarterly*. Detroit: Oct 2004. Vol. 50, Iss. 4; pg. 471, 21 pgs.
36. Ibid.
37. Ramey et al: obtained via Proquest.
38. Linda Jacobson. "Kindergarten study links learning deficits to poverty," *Education Week*. Washington: Oct 2, 2002. Vol. 22, Iss. 5, p. 10: obtained via Proquest.
39. Linda Jacobson. "Early Years: A Good Return," *Education Week*. Washington: Dec 11, 2002. Vol. 22, Iss. 15; pg. 12: obtained via Proquest.
40. Ibid.
41. "Pre-K and Full Day Kindergarten in Pennsylvania 2006 Fact Sheet," Pennsylvania Partnerships for Children.  
[http://www.papartnerships.org/pdfs/factsheet\\_prek06.pdf](http://www.papartnerships.org/pdfs/factsheet_prek06.pdf)
42. Robert G. Lynch, "Exceptional Returns," Economic Policy Institute: 2004  
[http://www.epinet.org/books/exceptional/exceptional\\_returns\\_\(full\).pdf](http://www.epinet.org/books/exceptional/exceptional_returns_(full).pdf)
43. Leslie J. Calman, Linda Tarr-Whelan.  
<http://web.mit.edu/workplacecenter/docs/Full%20Report.pdf>
44. "Nebraska Early Childhood Policy Study Report Summary," September 23, 2005.  
[http://www.nde.state.ne.us/ech/EC\\_PolicyStudy\\_0106.pdf](http://www.nde.state.ne.us/ech/EC_PolicyStudy_0106.pdf)
45. Leslie J. Calman, Linda Tarr-Whelan.  
<http://web.mit.edu/workplacecenter/docs/Full%20Report.pdf>

46. Ibid.
47. Ibid.
48. Magnuson et al: obtained via Proquest.
49. Leslie J. Calman, Linda Tarr-Whelan.  
<http://web.mit.edu/workplacecenter/docs/Full%20Report.pdf>
50. Ibid.
51. Ibid.
52. "Head Start History: 1965-Present".  
[http://www.paheadstart.org/UserFiles/File/General\\_History.pdf](http://www.paheadstart.org/UserFiles/File/General_History.pdf)
53. President George W. Bush Record of Achievement, "Improving American Education".  
<http://www.whitehouse.gov/infocus/achievement/chap12.html>
54. "The State of Preschool 2005" The National Institute for Early Education Research, p. 2.  
<http://nieer.org/yearbook/pdf/yearbook.pdf#page=8>
55. Mission Statement, The National Institute for Early Education Research.  
<http://nieer.org/about/>
56. The State of Preschool 2005, p. 2.  
<http://nieer.org/yearbook/pdf/yearbook.pdf#page=8>
57. Ibid. p. 3.
58. Ibid.
59. Ibid. p. 5.
60. Ibid. p. 4.
61. Ibid.
62. Ibid. p. 126.  
<http://nieer.org/yearbook/pdf/yearbook.pdf#page=8>
63. "Early Childhood Education," Edward G. Rendell: Governor, Commonwealth of Pennsylvania.  
<http://www.governor.state.pa.us/governor/cwp/view.asp?a=1114&q=437902>
64. Commonwealth of Pennsylvania, 2006-2007 Budget in Brief, Budget Highlights, p. 6.  
[http://www.budget.state.pa.us/budget/lib/budget/2006-2007/bib/2006\\_07\\_Budget\\_In\\_Brief.pdf](http://www.budget.state.pa.us/budget/lib/budget/2006-2007/bib/2006_07_Budget_In_Brief.pdf)
65. Pre-K and Full Day Kindergarten in Pennsylvania 2006 Fact Sheet.  
[http://www.papartnerships.org/pdfs/factsheet\\_prek06.pdf](http://www.papartnerships.org/pdfs/factsheet_prek06.pdf)
66. Commonwealth of Pennsylvania, 2006-2007 Budget in Brief, Budget Highlights, p. 6.  
[http://www.budget.state.pa.us/budget/lib/budget/2006-2007/bib/2006\\_07\\_Budget\\_In\\_Brief.pdf](http://www.budget.state.pa.us/budget/lib/budget/2006-2007/bib/2006_07_Budget_In_Brief.pdf)
67. Ibid.
68. Pennsylvania Head Start Association, "Overview: Headstart in PA".  
[http://www.paheadstart.org/index.cfm?mm\\_id=2&page=28](http://www.paheadstart.org/index.cfm?mm_id=2&page=28)  
"PA's Head Start Programs' Federal and State Funded Enrollment 2005-2006"  
[http://www.paheadstart.org/index.cfm?mm\\_id=2&page=61](http://www.paheadstart.org/index.cfm?mm_id=2&page=61)
69. "The State of Preschool 2005", p. 2.  
<http://nieer.org/yearbook/pdf/yearbook.pdf#page=8>
70. "The State of Preschool 2005", p. 127  
<http://nieer.org/yearbook/pdf/yearbook.pdf#page=8>
71. National Center for Education Statistics, "Child care arrangements of preschool children, by age and race/ethnicity: 2001".  
<http://nces.ed.gov/fastfacts/display.asp?id=4>
72. Pennsylvania Department of Public Welfare, "Keystone Stars Child Care Quality Initiative".  
<http://www.dpw.state.pa.us/Child/ChildCare/KeyStoneStarChildCare/>
73. "The Build Initiative in Pennsylvania".  
[http://www.buildinitiative.org/BuildFactSheets05/PennsylvaniaFactSheet\\_05.pdf](http://www.buildinitiative.org/BuildFactSheets05/PennsylvaniaFactSheet_05.pdf)
74. Pennsylvania Department of Education, "Standards, Curriculum and Assessment for Early Childhood Education".  
[http://www.pde.state.pa.us/early\\_childhood/cwp/view.asp?A=179&Q=101706](http://www.pde.state.pa.us/early_childhood/cwp/view.asp?A=179&Q=101706)
75. "The State of Preschool 2005", p. 2.  
<http://nieer.org/yearbook/pdf/yearbook.pdf#page=8>
76. "Success Initiative Gets Off to Strong Start" Staff Report, *The Times-Tribune*: November 11, 2003.  
[http://www.thetimes-tribune.com/site/index.cfm?newsid=10494104&BRD=2185&PAG=461&dept\\_id=415898&rfti=8](http://www.thetimes-tribune.com/site/index.cfm?newsid=10494104&BRD=2185&PAG=461&dept_id=415898&rfti=8)
77. Pennsylvania Partnerships for Children, School Readiness Indicators - 2005.  
<http://www.papartnerships.org/sr/Indicators.pdf>
78. Pre-K and Full Day Kindergarten in Pennsylvania 2006 Fact Sheet.  
[http://www.papartnerships.org/pdfs/factsheet\\_prek06.pdf](http://www.papartnerships.org/pdfs/factsheet_prek06.pdf)
79. "From Planning to Practice: State Efforts to Improve Early Childhood Education," National Association of State Boards of Education, 2005, p. 4.  
[http://www.nasbe.org/projects/From\\_Planning\\_to\\_Practice.pdf](http://www.nasbe.org/projects/From_Planning_to_Practice.pdf)
80. Ibid.
81. Ibid. p 4-5.
82. Ibid. p 5.
83. Ibid. p. 8.
84. Ibid. p. 17.

85. Ibid. p. 19.
86. Ibid. p. 20.
87. Ibid. p. 21.
88. Ibid. p. 23.
89. Ibid. p. 25.
90. Ibid. p. 27.
91. Ibid. p. 28.
92. Ibid. p. 29.
93. Ibid. p. 31.
94. Ibid. p. 32-33.
95. Ibid. p. 34.
96. Ibid. p. 36.
97. Ibid. p. 37.
98. Ibid. p. 38.
99. Pennsylvania Department of Education, "Standards, Curriculum and Assessment for Early Childhood Education".  
[http://www.pde.state.pa.us/early\\_childhood/cwp/view.asp?A=179&Q=101706](http://www.pde.state.pa.us/early_childhood/cwp/view.asp?A=179&Q=101706)



7 South Main Street, Suite 201  
Wilkes-Barre, Pennsylvania 18701  
t: 570-408-9850  
f: 570-408-9854  
w: [www.urbanstudies.org](http://www.urbanstudies.org)

JOINT URBAN STUDIES CENTER  
SEPTEMBER 2006