

**State of New Mexico**  
**LEGISLATIVE EDUCATION STUDY COMMITTEE**

**REPRESENTATIVES**

Rick Miera, Chair  
Roberto "Bobby" J. Gonzales  
Jimmie C. Hall  
Mimi Stewart  
Thomas E. Swisstack  
W. C. "Dub" Williams

State Capitol North, 325 Don Gaspar, Suite 200  
Santa Fe, New Mexico 87501  
PH: (505) 986-4591 FAX: (505) 986-4338  
<http://legis.state.nm.us/lcs/lesc/lescdefault.asp>

**SENATORS**

Cynthia Nava, Vice Chair  
Vernon D. Asbill  
Mary Jane M. Garcia  
Gay G. Kernan

**ADVISORY**

Ray Begaye  
Nathan P. Cote  
Nora Espinoza  
Mary Helen Garcia  
Thomas A. Garcia  
Dianne Miller Hamilton  
John A. Heaton  
Rhonda S. King  
Sheryl M. Williams Stapleton  
Jim R. Trujillo  
Teresa A. Zanetti



**ADVISORY**

Mark Boitano  
Carlos R. Cisneros  
Dianna J. Duran  
Lynda M. Lovejoy  
Mary Kay Papen  
John Pinto  
William E. Sharer

D. Pauline Rindone, Ph.D., Director  
Frances R. Maestas, Deputy Director

December 12, 2007

**MEMORANDUM**

**TO:** Legislative Education Study Committee

**FR:** Kathleen Forrer *K.F.*

**RE: STAFF REPORT: NEW MEXICO PREK EXTERNAL COST STUDY**

---

The 2007 Interim Workplan of the Legislative Education Study Committee (LESC) includes a presentation by researchers from the Early Intervention Research Institute (EIRI) at Utah State University regarding the costs of New Mexico PreK. The EIRI report, which will be presented to the committee at this meeting, is summarized below (see "Cost-Benefit Study of New Mexico PreK").

In fall 2005, the state selected the National Institute for Early Education Research (NIEER) at Rutgers University to conduct an external, statewide evaluation of New Mexico's PreK program. In order to assess all aspects of the program, NIEER partnered with EIRI, which was tasked with conducting an economic impact analysis of New Mexico PreK and with overseeing the collection of classroom observation and child outcome data.

The first NIEER report, *Child and Classroom Findings from the First Year of the New Mexico PreK Initiative*, was presented to the LESC in December 2006 by Dr. Jason T. Hustedt, Assistant Research Professor, NIEER. Explaining that because of the newness of the program, this first report was only a snapshot of how children were performing in the spring of 2006 rather than a comparison between children who had completed the program and those who were just entering the program, Dr. Hustedt reviewed the results from the variety of assessments administered during spring 2006.

In August 2007, Dr. Hustedt presented the second program evaluation report, which answered some of the questions raised in December through a comparison of the achievement level of children who are just entering pre-kindergarten with the achievement level of children who have

completed the pre-kindergarten program and are just entering kindergarten. However, this report did not attempt to answer a key question asked by the committee in December: Are there any significant differences between programs approved by the Public Education Department (PED) and programs approved by the Children, Youth and Families Department (CYFD)?

**New Mexico PreK Costs:**

In total, the Legislature has appropriated \$28.4 million in General Fund revenue to implement New Mexico PreK in FY 06, FY 07, and FY 08:

- The 2005 Legislature appropriated a total of \$4.95 million: \$4.0 million, which was equally divided between CYFD and PED, for a pre-kindergarten pilot program; and \$950,000 to the Department of Finance and Administration (DFA) for pre-kindergarten services.
- The 2006 Legislature appropriated a total of \$9.5 million: \$4.0 million each to CYFD and PED (\$3,995,800 after “sanding”) for the pre-kindergarten program and an additional \$1.5 million to PED for “one-time pre-kindergarten start-up costs for developmentally appropriate equipment and classroom safety improvements.” (In addition to the \$9.5 million in General Fund revenue, the 2006 Legislature also appropriated \$4.0 million in severance tax bond receipts “to plan, design, construct, equip and furnish pre-kindergarten classrooms statewide.”)
- The 2007 Legislature appropriated a total of \$14.0 million for pre-kindergarten: \$5.0 million each to CYFD and PED in the *General Appropriation Act of 2007* and an additional \$2.0 million each to CYFD and PED in “HB 2 Junior.” Although there was no separate appropriation for start-up costs, as there had been the previous year, CYFD and PED set aside \$500,000 each to provide start-up grants.

In its *Public School Support Request for FY 09*, PED has included the following cost proposals for New Mexico PreK:

Purpose	Amount Requested
Pre-kindergarten Program – PED	\$14,815.3
Pre-kindergarten Program – CYFD	\$14,815.3
Pre-kindergarten Start-up Costs (nonrecurring)	\$6,559.0
Pre-kindergarten Classrooms (capital outlay)	\$5,000.0
<b>Total</b>	<b>\$41,189.6</b>

Pre-kindergarten service providers receive reimbursement on a per-child basis. As allowed by the act, CYFD and PED have specified that the funds must be used to supplement—not supplant—pre-kindergarten services existing at the time that the contract to provide New Mexico

PreK services becomes effective. The reimbursement rates for the first three years of the program are:

- FY 06 – \$2,278.81 for each child receiving 540 hours of developmentally appropriate activities;
- FY 07 – \$2,649.93 (\$2,479.93 per child per 540 hours of service plus an additional \$170 per child for instructional materials); and
- FY 08 – \$2,714.95 (\$2,624.95 per child per 540 hours of service plus an additional \$90 per child for instructional materials).

### **Cost-Benefit Analyses of Other Pre-Kindergarten Programs:**

In “The New Economics of Preschool: New Findings, Methods and Strategies for Increasing Economic Investments in Early Care and Education,” a paper prepared for the Early Childhood Funders’ Collaborative, the author defines cost-benefit analysis as:

A ‘scientific’ technique, or a way of organizing thought, which is used to compare alternative social states or courses of action. Cost-benefit analysis shows how choices should be made so as to pursue some given objective as efficiently as possible. By making explicit what the social objectives are, it makes the decision-maker more accountable to the community.

Cost-benefit analysis is not empirical research, although it may rely on the results of empirical research to identify specific benefits. “The New Economics of Preschool” notes that the longitudinal studies conducted on the Perry Preschool Project, the Carolina Abecedarian Project, and the Chicago Child-Parent Center provide empirical evidence “that high quality early childhood programs yield significantly positive benefits for children in terms of IQ, school achievement, grade retention, need for special education, and social adjustment.”

However, “Proven Benefits of Early Childhood Interventions,” a policy brief issued by the RAND Corporation, while very supportive of early childhood interventions, sounds a cautionary note. In summarizing the results from cost-benefit studies done on a number of early childhood interventions, including the three just mentioned, the brief states:

It is important to note that these findings represent the potential effects of well-designed and well-implemented interventions. They do not necessarily imply that all such early childhood interventions, delivered for any given amount of time, would generate benefits that offset costs.

The benefits considered in cost-benefit analyses vary. Some of the most commonly identified for preschool programs are developmental and short-term educational benefits, as well as long-term educational, crime-prevention, and health-related benefits. Future personal income and tax income are also frequently cited. Because not all studies consider the same benefits or evaluate the same types of early childhood programs over the same period of time, the range in calculated cost-benefit ratios varies greatly:

For those programs with benefits that could readily be expressed in dollar terms and those that served more-disadvantaged children and families, the estimates of benefits per child served, net of program costs, range from about \$1,400 per child to nearly \$240,000 per child. Viewed another way, the returns to society for each dollar invested extend from \$1.80 to \$17.07. Some of the largest estimates of net benefits were found for programs with the longest follow-up, because those studies measured the impact for outcomes that most readily translate into dollar benefits (e.g., employment benefits, crime reduction). Large economic returns were found for programs that required a large investment (over \$40,000 per child), but returns were also positive for programs that cost considerably less (under \$2,000 per child).

(“Proven Benefits of Early Childhood Interventions”)

The following studies are representative of the range of cost-benefit analyses that have been done on early childhood interventions.

- In November 2004, the High/Scope Educational Research Foundation released the latest results of its study of students from the Perry Preschool in Ypsilanti, Michigan, showing that, 40 years later, those students continue to demonstrate gains that earlier evaluations had documented: they have higher earnings, they are more likely to be employed, they have committed fewer crimes, and they are more likely to have graduated from high school. The latest study also documented a return to society of more than \$17 for every tax dollar invested in the preschool program.
- Unlike most other early childhood programs, the Carolina Abecedarian Project was a controlled scientific study of the potential benefits of early childhood education for poor children in which four cohorts of children born between 1972 and 1977 were randomly assigned as infants to either an early intervention (preschool) group or a control group. The Abecedarian project differed from other childhood intervention projects because it began in early infancy, and children remained in the program until age five. The children’s progress was monitored at ages three, five, eight, 12, 15, and 21. In 2002, NIEER conducted a cost-benefit analysis of the program in which the researchers calculated that the total costs per child were approximately \$35,864 and the per child benefits of the program were approximately \$135,546, resulting in a cost-benefit ratio of 1 to 3.8.
- Focusing on programs for children in poverty, the Economic Policy Institute has found a benefit-cost ratio of greater than three to one and “solid evidence” of better academic performance, reduced need for remedial and special education, decreased rates of criminal conduct, reduced welfare costs, and higher adult earnings than those of non-participating children. This study further indicates that, over a 25-year period, providing a high-quality preschool program for all of the nation’s three- and four-year-old children living in poverty would produce budget benefits of \$31.0 billion over program costs. Other benefits, this study suggests, would include increasing the gross domestic product, reducing poverty, and strengthening the nation’s global competitiveness.
- A cost-benefit analysis of the Title I Chicago Child-Parent Center Program utilized data from the Chicago Longitudinal Study, which at the time of the analysis included information from family surveys, educational records, and justice system records up to

age 21. The Chicago Child-Parent Center provides preschool and early school-age intervention, as well as family support services, for low-income children from ages three to nine. Results of the cost-benefit analysis, done in 2001, indicate that, “with an average cost per child of \$6,730 (1998 dollars) for 1.5 years of participation, the preschool program generated a total return to society at large of \$47,759 per participant.” The largest component of the estimated societal benefit was the increased earning capacity of the individual.

- “The Productivity Argument for Investing in Young Children,” a working paper by the CED’s Invest in Kids Working Group, says that, on productivity grounds alone, investing in young children from disadvantaged environments seems to make sound business sense, largely because enriched early childhood programs are the least expensive and most effective way of reducing crime. This paper also estimates that providing such a program to all children under five currently living in poverty in the United States would yield over \$102.0 billion in benefits to the participants and more than \$409.0 billion in benefits to the public, although the paper does not specify the time period.

### **Cost-Benefit Study of New Mexico PreK:**

The EIRI report, “The Economics of Investing in New Mexico’s State-Funded Pre-K Program,” prepared by Dr. Linda D. Goetze and Tingting Li, seeks to answer two questions:

1. What is the direct benefit for participants, society as a whole, and local, state, and federal government if preschool education is provided to all four-year-olds in New Mexico?
2. What are the indirect benefits, projected or intangible, for society if New Mexico implements preschool services for all four-year-olds and their families?

In attempting to answer those questions, the authors base their analyses on the following set of assumptions regarding New Mexico PreK that, according to the authors, was provided by PED, CYFD, the Governor’s Office, and DFA:

- all four-year-olds will have access to the program;
- the program is based on comprehensive early learning standards;
- the program provides 540 total hours of service, 450 of which are direct instruction;
- the maximum class size is 20;
- the staff-to-child ratio is 1:10;
- the lead teacher has a bachelor’s degree and the associate teacher has a Child Development Associate (CDA) credential or the equivalent;
- all teachers receive at least 15 hours a year of in-service;
- vision, hearing, health, and developmental support services are provided to participants;
- at least one meal a session is provided to participants;
- programs are monitored by means of site visits; and
- the only funding used to support the program comes from the state.

Basing their study on the benefits identified in the Chicago Child-Parent Center Program study, the authors project benefits that they believe will be derived once New Mexico PreK is fully implemented. Therefore, the dollar amounts attributed to these benefits—education outcomes,

child welfare outcomes, juvenile crime outcomes, the value of childcare, college attendance, adult crime outcome, labor market earnings, and health care—assume that of a total of 30,000 four-year-olds in New Mexico, 70 percent will participate in New Mexico PreK. The authors note that to the extent possible, they have adjusted the weightings used in the Chicago analysis to reflect actual conditions in New Mexico.

Using an estimated cost per child of \$2,961 and an estimated gross benefit per child of \$14,811, the authors calculate that \$5 is returned to New Mexico for every dollar that the state spends on New Mexico PreK. However, the authors also project that full implementation of the program will result in an increase in the cost of K-12 and postsecondary education because fewer children are likely to exit the system. When this cost is taken into consideration, the net benefit per child is estimated to be \$11,850, and the resulting return on investment is approximately \$4 for every dollar spent on state-funded pre-kindergarten.

**Policy Options:**

In order to make the best possible decisions regarding the future of New Mexico PreK, the committee has asked staff to draft a letter for the committee’s approval requesting that the Office of Education Accountability (OEA) require that future external program evaluations disaggregate both the achievement and the cost data so that programs approved by PED and programs approved by CYFD can be compared and contrasted in terms of their impact upon student achievement and the funding required to achieve optimum results. Until such time as the resulting analyses become available, the committee may wish to consider funding New Mexico PreK programs at the current level of \$14.0 million.

In order to expedite future analyses, the committee may wish to require that the relevant data associated with all New Mexico PreK programs be moved into the Student Teacher Accountability Reporting System (STARS) so that they are more readily accessible.

**Presenter:**

Dr. Linda D. Goetze, Economist, Early Intervention Research Institute, Utah State University, will present *The Economics of Investing in New Mexico’s State Funded PreK Program*, a cost-benefit analysis of New Mexico’s voluntary pre-kindergarten program.