# AN EVIDENCE BASED APPROACH TO ESTIMATING THE NATIONAL AND STATE-BY-STATE COSTS OF AN INTEGRATED PREK-3RD EDUCATION PROGRAM

**Prepared for**
**The Foundation for Child Development**

**By**
**Lawrence O. Picus**
**Allan Odden**
**Michael Goetz**

**Lawrence O. Picus and Associates**

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The Foundation for Child Development (FCD) is a national private philanthropy in New York City dedicated to promoting a new beginning for American education from Prekindergarten through Third Grade (PreK-3rd). The Foundation promotes the well-being of children, and believes that families, schools, nonprofit organizations, businesses, and government at all levels share complementary responsibilities in the critical task of raising new generations.

# An Evidence Based Approach to Estimating the National and State-by-State Costs of an Integrated PreK-3rd Education Program

**EXECUTIVE SUMMARY**

The American public and policy makers are realizing that if all children are to meet their states' education performance standards, an important part of helping them do so is the provision of high quality integrated PreK-3rd education programs. The PreK-3rd approach starts with three-year-olds and focuses on providing educational experiences to three- and four-year-old children on a universal, voluntary basis, followed by required full-school-day Kindergarten. Effective PreK-3rd provides the following components: High-quality and unified learning in well-staffed classrooms; well prepared teachers and aides (for 3 and 4 year olds) to educate children in the 3-8 age range; supportive school district policies; strong principal leadership that includes supporting professional development time for teachers to plan for effective coordination across and between grades; and includes families and communities that share accountability with PreK-3rd schools for children's educational success.

What will a quality PreK-3rd program cost? To answer that question, with support from the Foundation for Child Development, Lawrence O. Picus and Associates developed a comprehensive and flexible costing model that uses our Evidence-Based approach to school finance adequacy (Odden and Picus, 2008). We also conducted site visits in six locations to ascertain whether or not the resources identified in our model were adequate to provide integrated, high quality PreK-3rd programs that would enhance the likelihood that all children would be able to meet their states' educational performance standards.

Assuming the components of the Evidence-Based adequacy model were implemented for all PreK-3rd programs, we estimate that the likely *additional* national costs of providing adequate PreK-3rd programs range from $27.4 billion to $78.7 billion depending on the number of 3-and 4-year-old children eligible for, and electing to participate in PreK programs.[1] On a per-child served (PreK-3rd) basis, additional costs range from $2,095 to $3,975.

If we assume universal eligibility for 3-and 4-year-old children, with a participation rate of 65% -- a number that approximates PreK program participation in Oklahoma, a state

[1] These figures assume that any state that funds PreK-3rd programs above the adequate level estimated using the Evidence-Based approach continue to expend those resources for education. That is, these figures "hold harmless" those states where education expenditures exceed our estimates and therefore represent the national cost to bring every state to at least an adequate level. In addition, these numbers assume a maximum of 65% participation in PreK programs.

with universal access for 4-year-olds – and PreK class size of 20 students with a teacher and an instructional aide, the estimated *total* PreK-3rd costs are $215 billion or $10,867 per PreK-3rd student. This represents an increase of $71.5 billion or $3,626 per PreK-3rd pupil.

In this study we determine the costs of an, integrated PreK-3rd education system by estimating:

- The number of 3-and 4-year-old children in each state
- The costs of providing PreK programs for those children (as well as for subsets of 3-and 4-year-olds stratified by poverty level and participation rates)
- The costs of public school programs for grades K-3 for all children
- Any additional costs associated with integration of Pre-K programs with existing public K-3 schools
- The net public costs of that system

**The Evidence-Based Method of School Finance Adequacy**

This study relied on the Evidence-Based method for estimating the resources necessary for a high quality education program. Although not the only method available for estimating what is known as school finance adequacy, the Evidence Based method has been used in a number of states, and forms the basis for the school funding systems in Arkansas and Wyoming. Moreover, it has been used previously to estimate resources needed for both high quality PreK and K-12 programs, facilitating development of an integrated model.

The Evidence-Based approach relies on the best available educational research to identify strategies that when implemented at the school level will lead to dramatic gains in student achievement over a four-to six-year time frame.[2] Figure S1 identifies the components of the Evidence-Based model. These include:

- Class sizes of 15 in grades K-3 (our model allows estimation of the costs of both 15 and 20 student classes at the PreK level, each with a teacher and instructional aide)

[2] The research supporting the Evidence Based model is described in detail in chapter 4 of Odden, A.R., and Picus, L.O. (2008). *School Finance: A Policy Perspective, 4th edition*. New York, NY: McGraw Hill. We recognize that there are multiple approaches available for estimating an adequate level of resources for public schools, and that there is considerable debate over the efficacy of all of those methods. The goal of all is to provide sufficient resources for schools and school districts to offer high quality education programs for all children. We have chosen to use the evidence based approach because of its grounding in the best available research on educational effectiveness, and because our experience in developing cost estimates suggests this approach results in cost estimates that provide a set of resources adequate for schools to double student performance as measured by state tests and are generally affordable by most states facing school finance adequacy demands.

- Specialist teachers to provide a rich liberal arts program including music, art and PE, and to provide for planning and collaboration time for core teachers. These are resourced at a rate of 20% of core teachers
- Classroom aides in all PreK classrooms (PreK only)
- Strategies for struggling students (K-3 only) including:
    - Certificated tutors for short term intensive help so that students return to the regular program at grade level as quickly as possible, also providing additional resources for children who are at risk of falling behind
    - Extended day programs
    - Summer school
- Resources for children with special needs and/or disabilities
- Funding for professional development including
    - Additional teacher time for comprehensive summer workshops focused on teaching and learning
    - Instructional coaches in each school at a ratio of one coach for every 200 students
    - Funds for trainers and consultants
- Staff for pupil support (guidance counselors, nurses, social workers, family liaison, etc.)
- Staff resources for school site leadership
- Staff resources for district administration
- Dollar resources for:
    - Instructional materials
    - Technology
    - Operations, maintenance and utilities
    - Central office operations

The costs of these resources are estimated for a set of prototypical schools and then summed to the district and state level to provide an estimate of adequate school funding costs. For this study, we estimated the resource needs of existing K-3 students in each state as well as the additional resources that would be needed for PreK programs under a variety of assumptions regarding both PreK eligibility and participation rates. We also developed estimates of program costs for PreK class sizes of 15 and 20 students.

To estimate the costs of an integrated PreK-3rd program, we developed a comprehensive and flexible model that estimates the state-by-state costs of this program. Using data from 2005-06 (the most recent year for which data for all model components was available) the model includes K-3 enrollment by state as well as Census Bureau estimates of the number of 3-and 4-year-old children in each state. We further disaggregate 3-and 4-year-old children based on family income, estimating the total number of 3-and 4-year-olds, the number in families with incomes at the poverty level and the number in families with incomes at 200% of the poverty level. Finally, the model enables us to continuously vary the estimated percentage of eligible 3- and 4-year-olds who actually participate in PreK programs.

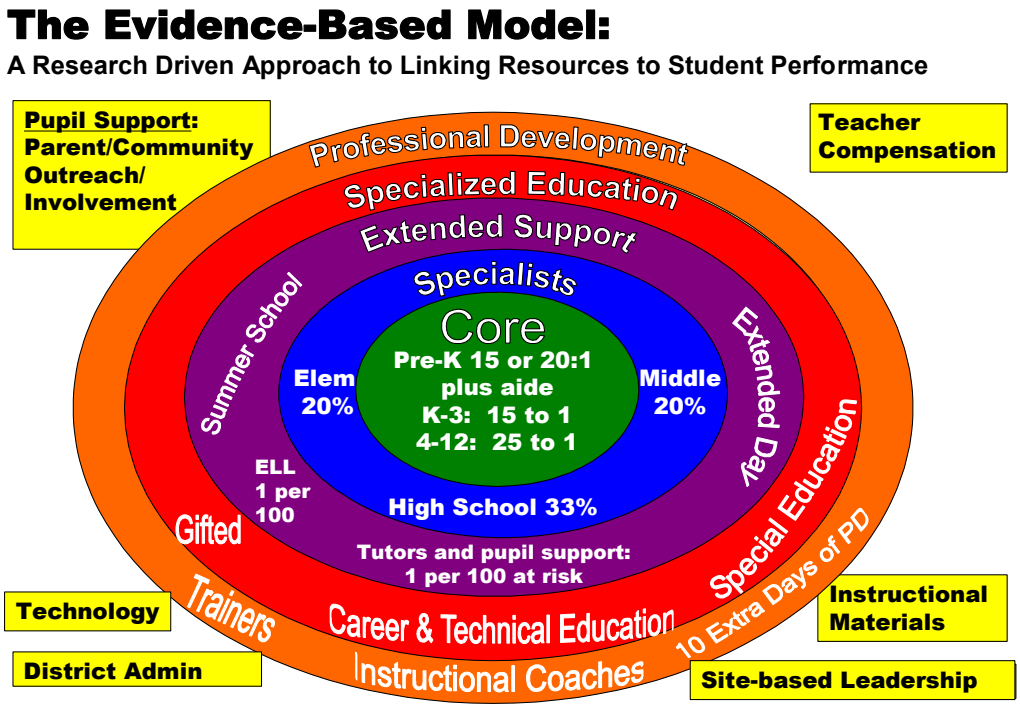


**Figure S1: The Evidence-Based Model**
**The Cost Model**

In addition to allowing for the variation in the number of 3-and 4-year-olds, the model allows us to vary all of the components of the Evidence-Based model. The largest component of the model is for personnel. In the cost estimates provided today, we have used NEA estimates of teacher salaries by state. For other personnel, we have relied on national average salaries adjusted by region for geographical cost differences.

The power of this model is that it allows individuals in each state to estimate the costs of PreK-3rd programs using a variety of assumptions about program components, eligibility and participation rates for PreK children, as well as salaries for school personnel.

**Estimated Costs of an Integrated PreK-3rd Program**

The estimated costs of an integrated PreK-3rd program vary depending on the assumptions made regarding eligibility of 3-and 4-year-old children for PreK programs and on the assumptions made regarding their participation rate. It also varies with the size of PreK classes. Tables S1 and S2 display the variation in the estimated *total* costs and *total* costs per-pupil of an integrated Prek-3rd program. These are displayed using a variety of assumptions regarding eligibility for 3-and 4-year-old children and alternative assumptions regarding the size of PreK classes. For example, if we assumed universal eligibility for 3-and 4-year-old children, with a participation rate of 65% and PreK class

size of 20 students with a teacher and aide, the estimated total PreK-3rd costs are $215 billion or $10,867 per PreK-3rd student. *It is important to note that these are total costs for PreK – 3rd programs and reflect not only quality PreK program costs, but the costs of a quality K-3 program as estimated using the Evidence-Based model – which in many states exceeds current K-3 spending.*

Tables S3 and S4 show how much *additional* revenue would be needed to fund these programs. Assuming the components of the Evidence-Based adequacy model were implemented for PreK-3rd programs in every state, and that parents of 65% of the eligible children elect to place their children in PreK programs, we estimate that the likely *additional* national costs of providing adequate PreK-3rd programs range from $29.8 billion to $78.7 billion depending on the number of 3-and 4-year-old children who are eligible for the program and the average size of PreK classes.[3] On a per child served basis this ranges from $2,237 to $3,975.

**Table S1: Estimated *Total* Costs of Providing PreK-3rd Programs Using the Evidence-Based Model in 2005-06 in States with Spending Currently Below Evidence-Based Adequacy Estimates (Billions of Dollars): Using PreK class sizes of 15 and 20**

| | Number of 3- and 4-Year-Olds | | | | | |
|---|---|---|---|---|---|---|
| | 100% of federal poverty level | | 200% of federal poverty level | | All Children | |
| | Average PreK class size (teacher and instructional aide) | | | | | |
| **Participation Rates** | **15** | **20** | **15** | **20** | **15** | **20** |
| 50% participation | $169.3 | $168.2 | $180.6 | $178.2 | $207.6 | $202.1 |
| 65% participation | $172.4 | $171.0 | $187.1 | $184.0 | $222.2 | $215.0 |
| 100% participation | $179.8 | $177.5 | $202.2 | $197.5 | $256.2 | $245.2 |

[3] These figures assume that any state that funds PreK-3rd programs above the adequate level estimated using the Evidence-Based approach continue to expend those resources for education. That is, these figures "hold harmless" these states where education expenditures exceed our estimates and therefore represent the national cost to bring every state to at least an adequate level. In addition, these numbers assume a maximum of 65% participation in PreK programs.

**Table S2: Estimated *Per-Child Total* Costs of Providing PreK-3rd Programs Using the Evidence-Based Model in States with Spending Currently Below Evidence-Based Adequacy Estimates (Dollars): Using PreK class sizes of 15 and 20**

| | Number of 3- and 4-Year-Olds | | | | | |
|---|---|---|---|---|---|---|
| | 100% of federal poverty level | | 200% of federal poverty level | | All Children | |
| | Average PreK class size (teacher and instructional aide) | | | | | |
| **Participation Rates** | **15** | **20** | **15** | **20** | **15** | **20** |
| 50% participation | $11,029 | $10,954 | $11,097 | $10,951 | $11,181 | $10,884 |
| 65% participation | $10,794 | $10,953 | $11,132 | $10,948 | $11,230 | $10,867 |
| 100% participation | $11,091 | $10,950 | $11,207 | $10,944 | $11,323 | $10,836 |

**Table S3: Estimated *Additional* Costs of Providing PreK-3rd Programs Using the Evidence Based Model in 2005-06 in States with Spending Currently Below Evidence-Based Adequacy Estimates (Billions of Dollars): Using PreK class sizes of 15 and 20**

| | Number of 3 and 4 year Olds | | | | | |
|---|---|---|---|---|---|---|
| | 100% of federal poverty level | | 200% of federal poverty level | | All Children | |
| | Average PreK Class Size (teacher and instructional aide) | | | | | |
| **Participation Rates** | **15** | **20** | **15** | **20** | **15** | **20** |
| 50% participation | $28.4 | $27.4 | $38.2 | $36.1 | $64.1 | $58.6 |
| 65% participation | $31.0 | $29.8 | $44.0 | $41.2 | $78.7 | $71.5 |
| 100% participation | $37.3 | $35.3 | $58.8 | $54.1 | $112.7 | $101.7 |

**Table S4: Estimated Per-Child *Additional* Costs of Providing PreK-3rd Programs Using the Evidence Based Model in States with Spending Currently Below Evidence-Based Adequacy Estimates (Dollars): Using PreK class sizes of 15 and 20**

| | Number of 3 and 4 year Olds | | | | | |
|---|---|---|---|---|---|---|
| | 100% of federal poverty level | | 200% of federal poverty level | | All Children | |
| | Average PreK Class Size (teacher and instructional aide) | | | | | |
| **Participation Rates** | **15** | **20** | **15** | **20** | **15** | **20** |
| 50% participation | $2,169 | $2,095 | $2,692 | $2,545 | $3,471 | $3,179 |
| 65% participation | $2,332 | $2,237 | $2,763 | $2,790 | $3,975 | $3,626 |
| 100% participation | $2,623 | $2,500 | $3,281 | $3,099 | $4,981 | $4,494 |

Table S5 displays our estimate of the costs of a high quality integrated PreK-3rd program in all 50 states assuming an average PreK class size of 20 (with both a teacher and an instructional aide) and an average class size of 15 for K-3 programs, along with universal access for all 3-and 4-year-olds, and a participation rate of 65%.

An important component of PreK-3rd is integration between the PreK and K-3 programs. It is important that teachers at both levels have time to understand the curriculum across all levels, and have adequate time for planning and coordination to ensure a well articulated curriculum. To understand the staffing and fiscal resource requirements of this integration, we visited six PreK-3rd programs identified by the Foundation for Child Development. Based on our observations and on interviews with school teachers and administrators, we concluded that the range of personnel funded through the Evidence-Based model is adequate to provide sufficient resources for strong integration across grades PreK-3rd.

**Conclusions**

This study estimates the costs of providing a high quality PreK-3rd education program in all fifty states plus the District of Columbia. Relying on an Evidence Based approach to school finance adequacy, it identifies the staffing resources needed to offer high quality integrated PreK-3rd programs and then estimates the costs of those resources.

By developing a highly flexible model, it is possible to simulate alternative staffing resource configurations for PreK-3rd programs providing a state-by-state estimate of the cost to implement the program. If we assume that 65% of 3-and 4-year-old children will participate in PreK programs, we estimate the additional cost of providing the resources for Prek-3rd ranges from $31 billion if eligibility is limited to 3-and 4-year-olds at 100% of the federal poverty level to $78.7 billion if PreK is universally available to 3-and 4-year-olds. These costs range from $2,169 to $4,494 per student served, and vary considerably by state.

# Table S5
# Estimated Costs of an Integrated PreK-3rd Program By State: 2005-06
# (PreK class size of 20, K-3 class size of 15, all 3- and 4-year-olds eligible, 65% participation in PreK)

| State | PreK-3rd Cost Cost Estimate | PreK-3rd Cost Estimate Per Pupil | Estimate of PreK-3rd Current Expenditures | PreK-3rd Expenditures Per Pupil | Difference | Difference Per-Pupil |
|---|---|---|---|---|---|---|
| Alabama | $2,979,894,704 | $9,611 | $1,923,963,356 | $6,205 | $1,055,931,349 | $3,406 |
| Alaska | $594,381,240 | $11,729 | $415,453,133 | $8,198 | $178,928,107 | $3,531 |
| Arizona | $4,468,226,074 | $10,042 | $1,984,386,840 | $4,460 | $2,483,839,234 | $5,582 |
| Arkansas | $1,891,004,149 | $9,763 | $1,388,076,923 | $7,166 | $502,927,226 | $2,596 |
| California | $31,850,591,952 | $12,355 | $17,336,706,375 | $6,725 | $14,513,885,576 | $5,630 |
| Colorado | $3,179,243,403 | $9,806 | $2,236,083,814 | $6,897 | $943,159,590 | $2,909 |
| Connecticut | $2,800,222,697 | $12,356 | $2,283,009,822 | $10,074 | $517,212,875 | $2,282 |
| Delaware | $617,484,651 | $11,997 | $474,002,928 | $9,209 | $143,481,723 | $2,788 |
| District of Columbia | $440,899,831 | $14,423 | $390,419,340 | $12,771 | $50,480,491 | $1,651 |
| Florida | $11,080,664,407 | $10,006 | $7,045,975,633 | $6,362 | $4,034,688,774 | $3,643 |
| Georgia | $7,180,071,952 | $10,678 | $4,699,172,493 | $6,988 | $2,480,899,459 | $3,690 |
| Hawaii | $860,362,225 | $10,451 | $584,416,554 | $7,099 | $275,945,671 | $3,352 |
| Idaho | $1,010,349,393 | $9,134 | $600,439,457 | $5,428 | $409,909,936 | $3,706 |
| Illinois | $10,145,651,410 | $12,110 | $6,280,879,594 | $7,497 | $3,864,771,816 | $4,613 |
| Indiana | $4,545,325,529 | $10,638 | $2,924,860,476 | $6,846 | $1,620,465,053 | $3,793 |
| Iowa | $1,740,368,211 | $9,218 | $1,188,524,774 | $6,295 | $551,843,437 | $2,923 |
| Kansas | $1,790,617,088 | $9,614 | $1,252,259,938 | $6,723 | $538,357,150 | $2,890 |
| Kentucky | $2,698,769,520 | $9,891 | $1,845,776,125 | $6,765 | $852,993,395 | $3,126 |
| Louisiana | $2,846,067,176 | $9,848 | $2,012,595,113 | $6,964 | $833,472,064 | $2,884 |
| Maine | $674,354,153 | $9,681 | $682,037,695 | $9,792 | ($7,683,542) | ($110) |
| Maryland | $3,840,617,659 | $11,496 | $2,591,716,107 | $7,757 | $1,248,901,552 | $3,738 |
| Massachusetts | $4,633,155,337 | $11,957 | $3,816,456,990 | $9,849 | $816,698,347 | $2,108 |
| Michigan | $7,759,965,769 | $11,572 | $5,369,134,655 | $8,007 | $2,390,831,113 | $3,565 |
| Minnesota | $3,382,479,850 | $10,513 | $2,476,249,701 | $7,697 | $906,230,149 | $2,817 |
| Mississippi | $2,103,146,325 | $9,716 | $1,295,295,380 | $5,984 | $807,850,944 | $3,732 |
| Missouri | $3,542,005,805 | $9,574 | $2,281,809,614 | $6,168 | $1,260,196,191 | $3,406 |
| Montana | $506,508,571 | $9,157 | $371,477,465 | $6,716 | $135,031,106 | $2,441 |
| Nebraska | $1,054,612,654 | $9,266 | $720,038,193 | $6,326 | $334,574,461 | $2,940 |
| Nevada | $1,689,504,931 | $9,925 | $913,591,211 | $5,367 | $775,913,720 | $4,558 |
| New Hampshire | $711,586,239 | $9,771 | $577,258,766 | $7,926 | $134,327,473 | $1,844 |
| New Jersey | $7,067,947,347 | $12,966 | $6,095,448,780 | $11,182 | $972,498,568 | $1,784 |
| New Mexico | $1,331,102,897 | $10,065 | $941,646,903 | $7,120 | $389,455,994 | $2,945 |
| New York | $14,131,711,947 | $12,807 | $11,917,953,306 | $10,801 | $2,213,758,641 | $2,006 |
| North Carolina | $5,979,309,408 | $9,821 | $3,649,499,666 | $5,994 | $2,329,809,742 | $3,827 |
| North Dakota | $313,968,777 | $8,797 | $236,147,544 | $6,616 | $77,821,233 | $2,180 |
| Ohio | $7,976,148,070 | $10,825 | $5,649,112,737 | $7,667 | $2,327,035,333 | $3,158 |
| Oklahoma | $2,401,624,651 | $9,407 | $1,641,937,569 | $6,431 | $759,687,082 | $2,975 |
| Oregon | $2,366,855,891 | $10,644 | $1,570,678,854 | $7,063 | $796,177,037 | $3,580 |
| Pennsylvania | $8,019,397,369 | $11,504 | $6,000,052,342 | $8,607 | $2,019,345,027 | $2,897 |
| Rhode Island | $672,086,432 | $11,585 | $503,647,876 | $8,681 | $168,438,556 | $2,903 |
| South Carolina | $2,796,562,749 | $9,889 | $1,902,521,954 | $6,728 | $894,040,795 | $3,161 |
| South Dakota | $415,532,117 | $8,405 | $312,228,390 | $6,315 | $103,303,727 | $2,089 |
| Tennessee | $3,867,030,948 | $9,712 | $2,207,878,476 | $5,545 | $1,659,152,472 | $4,167 |
| Texas | $18,800,277,588 | $10,025 | $11,611,114,194 | $6,191 | $7,189,163,394 | $3,834 |
| Utah | $2,016,344,085 | $8,886 | $940,924,225 | $4,146 | $1,075,419,860 | $4,739 |
| Vermont | $353,027,452 | $10,060 | $352,334,956 | $10,040 | $692,496 | $20 |
| Virginia | $5,048,902,620 | $10,282 | $3,553,507,372 | $7,236 | $1,495,395,249 | $3,045 |
| Washington | $4,105,746,272 | $10,251 | $2,566,186,640 | $6,407 | $1,539,559,632 | $3,844 |
| West Virginia | $1,049,189,454 | $9,976 | $932,663,076 | $8,868 | $116,526,378 | $1,108 |
| Wisconsin | $3,363,076,187 | $10,319 | $2,671,830,955 | $8,198 | $691,245,232 | $2,121 |
| Wyoming | $328,445,224 | $9,870 | $314,823,162 | $9,460 | $13,622,062 | $409 |
| Totals* | $215,022,420,385 | $10,867 | $143,534,207,436 | $7,254 | $71,495,896,491 | $3,613 |

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# An Evidence Based Approach to Estimating the National and State-by-State Costs of an Integrated PreK-3rd Education Program

## INTRODUCTION

There is growing evidence that a quality PreK program is an effective way to help all children succeed in school (Kauerz, 2006). Research shows that at-risk children who attend PreK programs do not catch up to their peers when they enter low-resourced elementary schools (Takanishi & Kauerz, 2008). However, fewer than half of children ages 3 and 4 participate in some type of early childhood education. While both the Federal Government and individual states are working to expand PreK programs, support for those programs varies across the states as do the program offerings and quality of those programs (Russo, 2007). Moreover, there is a growing recognition that integrating PreK programs with the traditional public school system, particularly the K-3 grades, could strengthen the effect of both PreK programs and Grades 1-3. This PreK-3rd effort focuses on estimating the costs of establishing universally available, voluntary, high quality programs for all three- and four-year-olds, well integrated with K-3.

Russo (2007) identifies the components of a PreK-3rd program to include:

- Voluntary, full-day *Pre-Kindergarten* available to all 3-and 4-year-old children
- Full-day *Kindergarten* that builds on PreK experiences and is available to all children
- Standards, curriculum, instruction, and assessments aligned within and across grades from PreK through grade three
- Curriculum focused on emotional development, social skills, and self-discipline, as well as reading and mathematics
- All early education lead teachers qualified to teach any grade level from PreK through Grade 3 and compensated based on public elementary school teacher salaries
- Families and teachers who work together to ensure the success of all children.

An important step in making quality PreK-3rd programs available to all children is knowing what it would cost to provide those programs. Describing the components of that cost requires specifying both PreK and K-3 education programs that will provide strong preparation for children to perform at high levels as they continue in school, as well as the costs of coordinating PreK programs (many of which are offered outside of the public school system) with K-3 programs in the public schools.

The purpose of this report, prepared for the Foundation for Child Development, is to begin the process of estimating the costs of integrated, universal PreK-3rd programs in the nation and in each of the 50 states. The goal of this study is to provide initial estimates of:

- The number of 3-and 4-year-old children in each state
- The costs of providing PreK programs for those children (as well as for subsets of 3-and 4-year-olds stratified by poverty level)
- The costs of public school programs for grades K-3 for all children
- Any additional costs associated with integration of Pre-K programs with existing public K-3 schools, specifically time for planning.
- The costs of a universal, integrated PreK-3rd education system
- The net public costs of that system.

In addition, at the request of the staff of the Foundation for Child Development, we visited six schools/districts that the Foundation identified as having successful PreK-3rd programs to develop an understanding of how the staffs at those schools integrate PreK and K-3 offerings, and to get a better sense of whether or not the resources identified through the Evidence-Based approach to adequate funding would be sufficient to meet the staffing needs of these programs including integration of PreK with K-3 programs. We also studied strategies for parent and community outreach and involvement, additional resources provided for in the Evidence-Based model.

Understanding the costs of an integrated PreK-3rd program and development of state-by-state cost estimates is a complex, multi-dimensional undertaking. Our approach is to specify the ingredients or resources needed for PreK-3rd programs using the Evidence-Based costing out method that we have developed to estimate the costs of public school programs in a number of states.[4] While this process has focused mostly on K-12 programs in the past, here we identify the research-based resources specifically needed for K-3 programs that will lead to dramatic improvements in academic performance for students. We also identify a set of Evidence-Based resources for PreK programs.

Using a process described in Odden, Goetz and Picus (2008) and Odden, Picus and Goetz (under review), we developed state-by-state estimates of the costs of providing an integrated Evidence-Based PreK-3rd education program. The model we developed for this project provides the user with flexibility to vary a number of the parameters that drive the final cost estimate. For example, the cost model allows users to vary assumptions regarding the participation rate of 3-and 4-year-old children in PreK programs. The model also allows users to select which 3-and-4 year-old children are eligible to participate in publicly funded PreK programs ranging from the universe of all 3-and 4-years-olds to sub-sets of those children based on poverty levels by state. The model provides flexibility to control for student/teacher ratios at both PreK and K-3 levels as well as flexibility to vary other educational resources. Once these parameters are selected, the model computes the estimated costs of PreK programs and compares that

[4] See Odden and Picus, 2008 for a general description of the Evidence-Based model – in particular chapter 4. See also, Picus, Odden, Aportela, Mangan and Goetz, 2008; Odden, Picus, Archibald, Goetz, Mangan and Aportela, 2007; Odden, Goetz, and Picus, 2008; Odden, Picus, Goetz, Mangan and Fermanich, 2006; Fermanich, Mangan, Odden, Picus, Gross and Rudo, 2006; Odden, Picus and Goetz, 2006; Odden, Picus, and others, 2005; Odden, Picus, Fermanich and Goetz, 2004; Odden, Picus and Fermanich, 2003; Picus, Odden and Fermanich, 2003; and Odden, Fermanich and Picus, (2003). All of the state reports are available at www.lpicus.com.

with estimates of current state expenditures for PreK education. Similarly, the model estimates the Evidence-Based cost of K-3 education programs in each state, which may be more or less than the estimate of the current K-3 education expenditures in each state. The difference is added to or subtracted from our estimated costs of PreK programs to generate a state-by-state estimate of the costs of a universal PreK-3rd education program. These costs include adequate resources for integration between PreK and K-3 programs. Cost estimates are based on national and state-by-state educational expenditures in the 2005-06 school year.

Assuming the components of the Evidence-Based adequacy model were implemented for all PreK-3rd programs, with a participation rate of 65%, which is approximately the participation rate of the Oklahoma program that makes state supported PreK programs universally available to all children whose parents want to enroll them, we estimate that the likely additional national costs of providing adequate PreK-3rd programs range from $27.4 billion to $78.7 billion depending on the number of 3 and 4 year old children eligible for and electing to participate in PreK programs.[5] On a per child served basis the estimated additional costs range from $2,095 to $3,975.[6]

The balance of this report is divided into five sections. Section one provides a brief discussion of the evidence supporting wider availability for PreK education programs and the importance of integrating those programs with the early years of elementary school. Because PreK-3rd integration is a major focus of the Foundation for Child Development's work, this section provides a summary of the key issues surrounding PreK-3rd rather than a comprehensive review of the topic.

The second section describes the resources included in the Evidence-Based approach to school finance adequacy generally. It outlines the Evidence-Based approach and provides links to more detailed descriptions of the research base used to develop the model. In this section we also apply the resource recommendations contained in the Evidence-Based model to PreK programs and compare the resources identified through the model to resource allocations found in widely recognized effective PreK programs (i.e. the High-Scope Perry Preschool Program, Carolina Abecedarian Project and the Child-Parent Center Program), as well as to universal PreK programs in Oklahoma and Georgia and the New Jersey Abbott School district PreK program.

Section three considers the question of whether additional resources are needed to coordinate PreK with grades K-3 to establish an integrated PreK-3rd program. To address

[5] These figures assume that any state that funds PreK-3rd programs above the adequate level estimated using the Evidence-Based approach continue to expend those resources for education. That is, these figures "hold harmless" these states where education expenditures exceed our estimates and therefore represent the national cost to bring every state to at least an adequate level. In addition, these numbers assume a maximum of 65% participation in PreK programs. Section 4 presents additional cost estimates under the unlikely assumption of 100% participation by eligible 3 and 4 year old children in PreK programs.

[6] This figure is computed based on the additional costs of the Evidence-Based model for both PreK and K-3 programs in each of the 50 states and the estimated number of children served includes the assumed eligibility and participation rate figures in each model simulation as well as the number of students enrolled in grades K-3 in each state.

this issue, we conducted site visits in five schools/districts across the United States to develop a better understanding of the work entailed in integrating PreK programs with existing school structures.

In section four, we describe our costing model in detail, identify how our cost estimates were derived and provide a sensitivity analysis for those estimates. While we have confidence in the cost estimates that our model generates, as described in that section, because of the difficulty in estimating K-3 education costs by state, we have less confidence in our estimates of the total resources currently available for PreK-3rd education programs.

Section five offers our conclusions.

## 1. UNIVERSAL PREK-3RD PROGRAMS

Our discussion of universal PreK-3rd programs has three parts. The first briefly summarizes the research base supporting PreK education programs, the second describes existing PreK programs in the United States and the third identifies the research base for integrating PreK programs with K-3 programs into a more unified PreK-3rd program.

### The Case for PreK

Today there is growing policy pressure to establish universal PreK programs for 4 year old children and in some instances for 3 year olds as well. This pressure stems from the increased demands on schools through standards-based education reforms and a growing recognition that early childhood development programs can have an impact on student outcomes well beyond the pre-school years. Much of the research on the effectiveness of PreK-3rd programs has focused on the PreK component, with relatively little considering the advantages of integrated programs that continue from PreK through the 3rd grade.

Reynolds and Temple (2008) identify a number of major studies that find long-term positive effects of pre-school programs on student learning. They construct five pathways that contribute to the effectiveness of early childhood development programs. These include:

- A cognitive advantage pathway that leads to enhanced literacy, language and numeracy skills, and better school readiness (see also Conger, 2008 for evidence on the impact of early learning on acquisition of English language skills for English Language Learners)

- A family support pathway describing benefits from greater parental involvement in education and enhanced parenting skills (see also Kalil & Crosnoe, 2008)

- A school support pathway that argues for high quality education programs beyond pre-school to strengthen the learning advantages of early childhood development programs.

- A social adjustment pathway suggesting benefits from increased classroom and peer social skills and positive teacher-child relationships.

- A motivational pathway arguing that early education programs provide benefits in terms of achievement motivation and commitment to school.

Gault, et. al. (2008) suggest that policy makers have begun to see the benefits of PreK education and are committing substantial resources to expanding PreK programs. Lynch (2007) identifies the benefits of PreK programs by showing that children who participate in high quality PreK programs:

- Require less special education
- Are less likely to repeat a grade
- Are less likely to need child welfare services
- Enroll in K-12 education better prepared resulting in lower spending requirements at that level
- Are less likely to engage in criminal activity as juveniles and adults
- Are less likely to need social welfare support services as adults
- Generally have higher incomes when they enter the labor force
- Pay higher taxes as a result of their higher incomes.
- Are likely to have employer-provided health insurance

Generally, estimates of the benefits of PreK programs are reported as returns to investment. Reynolds and Temple (2008) report that in addition to benefits on child well being and student achievement, high quality PreK programs for low income children at risk for underachievement produced economic returns ranging from $4 to $10 per dollar invested.

Lynch (2007) found that voluntary, high quality, publicly funded PreK programs targeted to the poorest 25% of three-and four-year old children generate substantial benefits that would eclipse the costs of the programs in six years. By 2050, Lynch estimates that the annual benefits of these PreK programs would exceed the program costs in that year by a ratio of 12.1 to 1. He estimates the costs of a high quality half-day program for these children at $6,300 for each of the 2 million children enrolled. He further estimates that if these programs were funded mainly by individual states (rather than the Federal Government), by 2050, all 50 states would realize net benefits in tax revenues from the programs in between four and 29 years.

Lynch (2007) also estimates that if a voluntary, high quality publicly funded universal half-day PreK program for three-and four-year-olds were established, budgetary savings would surpass costs in about nine years and that by 2050 benefits would exceed costs by an 8.2:1 ratio. He assumes these PreK programs would also cost about $6,300 per student and would enroll approximately 7 million children when fully phased in.

Others have found similar benefits to PreK education. The consistently recurring theme in all of the analyses of PreK programs is that the savings accrue to "high quality" programs. Although to a large extent, a high quality program is defined by the individuals employed to run the program and their commitment to their job, as well as a comprehensive array of services beyond just the "school" component," it is possible to identify the resource levels needed to support such high quality programs. In essence the resources are a necessary, but not sufficient condition for having a high quality program because a school with the revenue to higher an adequate number of qualified teachers still needs to find and train them appropriately.

Longitudinal studies of three well known PreK programs (High-Scope Perry Preschool Program, Carolina Abecedarian Project and the Chicago Child-Parent Center Program) have demonstrated substantial benefits to children and to society. All three meet a

generally accepted standard of high quality. Consequently, as we develop estimates of resources needed for a high quality PreK program below, we will compare our Evidence-Based estimates with the resources identified in the provision of each of these three programs.

Researchers have also looked at the success of larger, more universal Preschool initiatives. There is evidence that state-wide universal programs in Georgia (Henry, et. al. 2006), and Oklahoma (Gormley, Jr. et. al. 2005) have improved the performance of students who participated in those programs. In addition, Frede, et. al. (2007) provide evidence that in a select group of urban districts – the Abbott districts – PreK programs have improved student performance as well. While detailed resource information is more difficult to assimilate because of the much larger size of these program, we will compare the costs of these programs with the estimated costs of the PreK-3rd program developed through the Evidence Based model.

In the pages that follow, we provide estimates of the costs of the resources needed to offer a high quality program recognizing this is the first step in ensuring children in PreK through grade three have access to quality programs. First we describe current spending for PreK programs across the United States and then summarize recent research on the importance of looking beyond PreK programs to integrated PreK-3rd services for children.

**Current PreK Programs in the United States**

The National Institute for Early Education Research (Barnett, et. al., 2007) provides the most comprehensive assessment of current expenditures for PreK education in its annual yearbook *The State of Preschool 2007*. The Yearbook reports that in 2006-07, 22% of four-year-old and 3% of three-year-old children were enrolled in state-funded PreK programs. Average spending per PreK child enrolled amounted to $3,642 and ranged from a high of over $10,000 per child enrolled in New Jersey to twelve states that do not have state PreK programs.

In addition, Barnett, et. al. (2007) report a total of 908,412 students enrolled in Federal Head Start and Early Head start programs, another 15,994 children in state-funded Head Start programs and 407,967 children 3-and 4-year-old enrolled in special education programs across the United States.

Although this gives a picture of how many children attend PreK programs, it does little to investigate the question of program quality. The National Institute for Early Education Research (NIEER) has established ten quality benchmarks to help measure program quality. The ten PreK quality standards are:[7]

1. Comprehensive learning standards
2. Teachers with a bachelor degree

[7] See http://nieer.org/yearbook/compare/ for a detailed description of the NIEER quality standards.

3. Teachers with specialized training in early childhood
4. Assistant teachers with an Child Development Associate credential or the equivalent
5. Teacher in-service training of at least 15 hours per year
6. Maximum class sizes of 20 or less
7. Staff to child ratios of 1 to 10 or better
8. Vision, hearing and health screening and referral and support services
9. At least one meal per day provided
10. Site visits to ensure program quality

The *Yearbook* states that two states – North Carolina and Alabama – met all ten quality benchmarks while eight more met nine of the ten benchmarks. Moreover, only eight of the state-funded PreK programs met less than half of the ten quality benchmarks. Interestingly, the Yearbook estimates that of the 38 states with state-funded programs, half (19) provided adequate funding to meet the benchmarks.

There are, of course, alternative ways to estimate adequate levels of spending. In this report, we estimate the costs of resources needed to put in place a PreK version of our Evidence-Based school finance adequacy program.

**The Case for Integrated PreK-3rd Programs**

The discussion above considers PreK programs, but says little about PreK-3rd programs or their benefits. While there is growing evidence that integration of PreK programs with the primary grades can lead to increased educational benefits, this field has been less explored.

Takanishi and Kauerz (2008) argue that the PreK-3rd grade years are the "cornerstone" of any educational system, and point out the importance of quality integrated PreK-3rd programs in providing strong foundations for lifelong learning, educational excellence and competitiveness in the marketplace. Bogard (2003) suggests that variability in PreK experiences is a strong predictor of children's outcomes, and that the link is even stronger for low-income children. She suggests that a PreK-3rd approach to early childhood education will help to "level the playing field" by supporting better teacher preparation and qualifications, as well as establishing sequential learning experiences from PreK through the 3rd grade.

One of the challenges in thinking about PreK-3rd programs is the need to coordinate traditional education programs in K-3 with PreK programs. This takes on a number of dimensions. First, even if the PreK programs are in the same school, the need to coordinate education programs (curriculum, professional development, school facilities) becomes more complex with the addition of more staff, more students and more grade levels to integrate into the program. Second, most PreK programs are offered by providers other than the public school system – frequently at sites other than the local school. This makes all of the coordination efforts more complex yet.

Finally, this is further complicated by the fact that in the foreseeable future, PreK programs will remain voluntary. This means some children will continue to come to kindergarten without the benefit of PreK programs, and other children who have had access to PreK programs will likely have had very different experiences. In addition, the success of a PreK-3rd program also depends on the quality of the educational program in grades K-3, which varies across schools, school districts and even states. This study addresses that issue by using an Evidence Based model to estimate the resources needed for a high quality program in all PreK-3rd classrooms.

Many of the components of success for high quality PreK programs are also part of the components advocated by PreK-3rd supporters. These include full-day programs with low pupil/teacher ratios staffed by highly qualified teachers and aides, along with support for articulating curriculum, training teachers and helping children with special educational needs. As described in sections 2 and 3 of this report, many of the components of a high quality PreK program are part of the Evidence-Based funding model we have developed for K-3 programs in a number of states.

## 2. THE EVIDENCE-BASED MODEL IN PREK-3RD PROGRAMS

One of the questions education policy makers face on a regular basis is how much it will cost to provide an education program that offers reasonable assurance that all (or most) children will be able to meet their state's education performance standards. Unfortunately, answering this question is not simple or straightforward. Known in the field of school finance as adequacy – as in what level of resources is adequate to meet state established student performance goals – policy makers and education researchers have been wrestling with this issue since at least 1994, when William Clune published his important work defining the concept of school funding adequacy (Clune, 1994). This section describes the Evidence-Based approach to estimating adequacy at both the K-3 and PreK levels. Subsequent sections of the report provide a description of how the two are integrated into a PreK-3rd model and the additional costs of PreK-3rd programs can be estimated.

### Using the Evidence-Based model to Estimate K-3 Program Costs

Clearly, part of estimating the costs of a PreK-3rd education system requires understanding the resources needed (and the subsequent cost of those resources) for both the PreK and the K-3 component of the program. For the latter, there are four approaches available in the literature to estimate adequate levels of funding for schools.

The first of these, the successful district method identifies school districts that meet an agreed upon set of standards and uses those standards to estimate the costs of an adequate program. The drawback to this method is that it generally underestimates the additional costs associated with children who are at risk. Moreover, the existence of agreed upon standards that can be measured for PreK education is less clear than it is in K-12 education, where there is still much room for disagreement.

A second costing approach is the cost function. A cost function is an econometric technique that uses desired test score data along with student, school and district characteristics to estimate the cost of an adequate education. The drawback to using this approach for PreK education is the fact that few standardized tests exist to use for setting student performance standards or goals. When combined with the voluntary nature of PreK education, the potential for non-random samples is also high, limiting the effectiveness of the analysis. Finally, the findings that come from these complex computations often appear as a "black box" to state policy makers.

A drawback to these two approaches to adequacy is while they offer a rationale for a level of spending on schools, they do not provide guidance as to how those resources can be used to produce improved student learning. The general assumption in these models is that local school officials are best qualified to determine how resources can be used to foster gains in student performance. Unfortunately, that may not always be the case. Our research in other states suggests that in many instances, absent some guidance from the state (or some other source) local schools do not choose to establish programs that have

been shown to be successful in other settings, and instead continue to do "more of the same" (see Fermanich, et. al., 2006; and Picus, et. al. 2008).

Two other approaches to adequacy offer suggestions as to how educational resources can be used to produce student learning and offer an advantage over the successful district and cost function approaches. The first of these, Professional Judgment, relies on panels of education professionals and leaders to identify the components of an educational program that will lead to improved student learning, ideally to the state established standards. The costs of these components are then estimated to determine the cost of an adequate education. Moreover, given different professional standards and educational expectations across the 50 states, it seems this approach is better suited to individual state analyses than for making comparisons across the United States using a consistent set of assumptions.

The Evidence-Based approach to adequacy is similar in some respects to the Professional Judgment model. The difference is that rather than rely on panels of educational experts, this model first uses findings from current educational research to identify the resource components needed to deliver a comprehensive, high quality instructional program, and then estimates an adequate expenditure level by placing a price (e.g. an appropriate salary level for personnel) on each component and aggregating the components to a total cost. The use of research or evidence addresses the problem of making cross-state comparisons identified above. The approach is based on evidence from three sources:

1. Research with randomized assignment to the treatment (the "gold standard" of evidence)

2. Research with other types of controls or statistical procedures that can help separate the impact of a treatment

3. Best practices either as codified in a comprehensive school design (e.g., Stringfield, Ross & Smith, 1996) or from studies of schools and districts doubling student performance over a 4-6 year time period (e.g., Odden, Picus, Archibald, Goetz, Mangan & Aportela, 2007).

The Evidence-Based approach to determining school finance adequacy defers to evidence on the level of resources needed to meet performance goals much more strongly than on the professional judgment of educators, though professional educator input is solicited. [8]

[8] In this, and all our recommendations, we are aware that the research is neither completely definitive nor in agreement on all aspects of the resources needed for a high quality educational program. The recommendations identified here, and the research on which we based them, are conclusions we have reached after considerable analysis and are described in more detail in Chapter 4 of Odden and Picus (2008). We recognize that there are multiple approaches available for estimating an adequate level of resources for public schools, and that there is considerable debate over the efficacy of all of those methods. The goal of all is to provide sufficient resources for schools and school districts to offer high quality education programs for all children. We have chosen to use the evidence based approach because of its grounding in the best available research on educational effectiveness, and because our experience in developing cost estimates provide a set of resources adequate for schools to double student performance as

Based on existing research, the Evidence-Based model generally recommends class size of 15 students in grades K-3, and provides enough resources to enable prototype schools to hire enough core teachers to offer classes of this size. In addition, specialist teachers are funded at each elementary school at a level of 20 percent of the core teachers. These specialist teachers work with children on art, music and health/physical education programs (as examples) and provide for planning and coordination time for core teachers during the school day.

Critical to the success of all students, the Evidence-based model provides a comprehensive strategy for struggling students including certificated teacher tutors, extended day programs, summer school and additional pupil support resources. The Evidence-Based model also invests heavily in professional development, providing ten days for professional development activities (generally in a concentrated summer program), instructional coaches at each school at the rate of 1.0 FTE coach for every 200 students, and funds for consultants and learning materials. The model also includes a comprehensive strategy for children with special needs, site based administration, technology and school district administration – including district leadership, maintenance and operations, and other district level costs. Details of the research used to substantiate the resource recommendations contained in the Evidence-Based model, as well as the resource allocation strategies for middle and high schools, can be found in Chapter 4 of Odden and Picus (2008). Figure 1 summarizes the components of the Evidence-Based model. Details of how this can be operationalized at the PreK-3$^{rd}$ level are described below and displayed in Table 1.

Evidence-Based adequacy models have been developed in Arkansas, Wyoming, Wisconsin, Arizona, Kentucky, North Dakota and Washington (see the reference list for complete citations for these studies). In Arkansas, our cost estimate included providing PreK programs for all 3 and 4 year olds from households at 200 percent of the poverty level or below. That model assumed full day programs staffed by certificated teachers and an instructional aide with classes of 15 students. In Arkansas we estimated the costs of a nine month program similar to the length of the K-12 school year.

The usual approach for estimating the costs of adequacy in any individual state is to establish three prototypical schools – an elementary, middle and high school – and to then determine the resources each school would generate based on the model. That model is then used to determine the resources each school in the state would generate. This requires a set of assumptions about how to estimate resource needs based on the actual enrollment and student characteristics observed at each school. The cost of these resource requirements are used to determine the level of funding each school would receive. The school-by-school estimates are then aggregated up to a district level where additional resources for central office administration, operations and maintenance, utilities, food services and transportation are added to the aggregated school level costs to get a district-by-district estimate of the resources needed to fund the model. The sum of

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measured by state tests and are generally affordable by most states facing school finance adequacy demands.

the district level resources is used to estimate adequacy for the individual state in which the study was conducted.

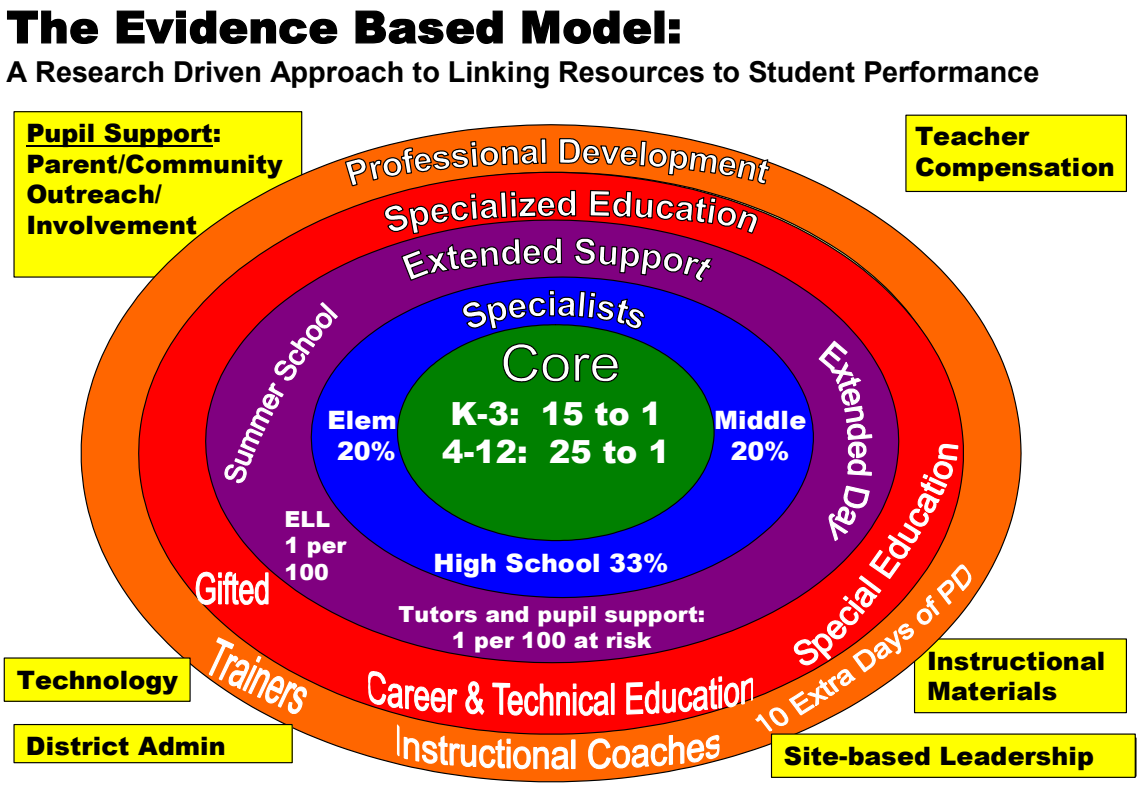


**Figure 1: The Evidence Based Model**

While detailed Evidence-Based cost estimates have only been developed for a handful of states, we have estimated the costs of the model on a national average basis (Odden, Goetz & Picus, 2008). This approach does not offer a school-by-school analysis. Instead, it divides the students in the state into prototype schools and estimates the costs of those prototype schools. To this is added a per pupil estimate of the central administration, operations and maintenance, utilities, etc. This estimate is based on existing costs for those functions, adjusted for inflation.

While this approach does not provide the type of detailed school level cost estimates needed to operationalize a school funding system, it does provide a close approximation of the total costs of this model for each state and the nation as a whole. As described below, we used the approach from our national average analysis to estimate the costs of K-3 education programs for each state and combined that with the similarly computed costs of PreK programs for each of the 50 states.

**Applying the Evidence-Based Model to PreK Education Programs**

What would an Evidence-Based resource model for high quality PreK programs look like? It seems likely that to a large extent, the resources required for a high quality K-3 program would also be appropriate for PreK. As described above, Russo (2007) identifies the components of a PreK-3rd program to include:

- Voluntary, full-day *pre-kindergarten* available to all 3 and 4 year-old children
- Full-day *kindergarten* that builds on PreK experiences and is available to all children
- Standards, curriculum, instruction, and assessments aligned within and across grades from PreK through grade three
- Curriculum focused on emotional development, social skills, and self-discipline as well as reading and mathematics
- All early education lead teachers qualified to teach any grade level from PreK through Grade 3 and compensated based on public elementary school teacher salaries
- Families and teachers work together to ensure the success of all children

In addition, Zigler, Gilliam and Jones (2006) suggest the following components of a high quality PreK program:

- A two year universal preschool program for three and four year old children
- Located in elementary schools and administered by public school systems and staffed with certified teachers, school psychologists, social workers and other support personnel (the authors realize that quality programs can also be delivered by other institutions as well)
- PreK personnel would be paid at wages at the same level as other school personnel
- Access to public health services for children with health concerns or disabilities
- Offer school based care for working families beyond the school day
- School services currently available to K-3 students such as special education, transportation, school nutrition programs and mental health assistance would be available to PreK children as well
- A class size of 15 students to one certified teacher and one instructional aide
- Teachers should have a BA and be certified in early childhood education
- Instructional aides should have an AA degree or a Child Development Associate (CDA) degree
- A PreK-3rd curriculum that is aligned so that children experience sequential programs of study during their first five years of school .

It is helpful to look at the resource allocation strategies of successful PreK and PreK-3rd programs to help identify the resources needed to provide quality programs. While there has been a great deal of research on PreK programs and on some PreK-3rd programs, we

focus on six specific programs. The first three – the High-Scope Perry Preschool Project (PPP), The Carolina Abecedarian Project (ABC) and the Chicago Child Parent Center Program (CPC), although relatively old, showed net benefits in terms of the investment of tax dollars. Other research on these three programs has also found long term positive impacts on student achievement and child well-being as (for a discussion of this research see Reynolds & Temple, 2008; Lynch 2007; Zigler, Gilliam & Jones, 2006; and Gromley, 2007).

While these three programs have been widely studied and show considerable success, they are all relatively small in scope. Gormley Jr. et. al. identify six states that offer PreK programs that are universal in "reality or aspiration" – Florida, Georgia, Massachusetts, New York, Oklahoma and West Virginia (2005: p.872). Research in Oklahoma (Gormley, Jr. et. al. 2005) and Georgia (Henry, et. al, 2006) has found positive effects of these programs. Consequently we have included the PreK programs in those two states in our analysis of successful PreK programs as well. New Jersey funds an extensive program for PreK children in the so-called Abbott school districts, a group of poor urban school districts who have successfully challenged the state's school funding system to require they receive additional funds. An important component of funding for Abbott districts is a PreK program for 4 year olds. Frede, et. al. (2007) has found positive impacts of this program as well.

Understanding the resources needed to operate these programs provides a good place to start in terms of understanding whether or not the resources generated through the Evidence-Based model would be adequate at the PreK level. The advantage of using the first three programs is they have been the subject of considerable study over many years and the evidence of their success – despite relatively small numbers of children served—have included both school performance through college and in some instances employment experience as well. Analysis of the programs in Oklahoma, Georgia and New Jersey provide a baseline to which the expenditures computed in our Evidence Based model can be compared. .

*High-Scope Perry Preschool Project (PPP)*

This widely recognized program continues to have influence in PreK circles today. Many PreK programs use the High-Scope curriculum and continue the methods pioneered by the PPP in the mid 1960s. PPP operated in Ypsilanti Michigan from 1962 to 1967 serving 3 and 4 year old, low SES African American children with IQs between 70 and 85 at an elementary school site. Children spent an average of 1.8 years in the program, generally entering at the age of 3 and moving on to kindergarten. PPP offered a half day program (2.5 hours) supplemented by weekly home visits lasting approximately 1.5 hours each. The average class size was 22 children and the overall program had a child to staff ratio of 5.7 to 1. Teachers and other staff were paid at wage rates paid by the public schools. It also offered an array of health support programs and parent and community outreach and involvement.

Extrapolating from data provided by Reynolds and Temple (2006;2008), a child to staff ratio of 5.7 to 1 leads to an estimated staff of approximately 10. The initial program – and the one that was studied so widely – served 58 children. If one assumes this was staffed by three teachers and three aides, the remaining four individuals would have been available for program administration, health services, student support and counseling and parent outreach, including the weekly home visits.

*Carolina Abecedarian Project (ABC)*

This program operated in a university setting in Chapel Hill, North Carolina from 1972 to 1977. The program enrolled 111 high risk children almost all of whom were African American. The children were enrolled when they were less than 4 months old and the program operated for a full day five days a week, 50 weeks a year. Curriculum focused on language development and children's social development. For infants the average class size was 12, with a child to staff ratio of 3:1 for infants and 6:1 for preschool age children. In addition to the school programs, parents were given educational material and training every two weeks or so and expected to engage their children at home with the materials they received.

Identifying staffing configurations for the 3-and 4-year-old component of this project is complicated by the fact that the program served children from infancy through 4 and by the fact that it was an active research project at the University of North Carolina. A 1974 brochure describing the project lists a total of ten teachers and one head teacher (as well as a nursery supervisor) among the staff. In addition, there are four health care professionals, two pediatricians, a licensed practical nurse and a family nurse practitioner. It is unlikely that any of them worked full time for the project. It is not clear how many of the research staff listed also participated in providing services to children.

If one takes Reynolds and Temple's (2006) estimate of a child to staff ratio of 6:1 for preschool children, and assumes that at any given time 40% of the 111 children in the program were 3 and 4 year olds, then at a ratio of 6:1 there would be 7.4 adults to staff the program for those children. For a school of 120 children at this ratio, this would amount to approximately 20 staff positions.

*Chicago Child Parent Center Programs (CPC)*

The CPC program operates under the auspices of the Chicago Public Schools and provides comprehensive educational and family support services for PreK-3$^{rd}$ children who come from economically disadvantaged families. The program is supported through Title I funds and thus children must reside in a neighborhood eligible for Title I assistance to participate. This is slightly different than most programs as the eligibility is based on neighborhood, not student poverty levels. Programs are provided either in elementary schools or in facilities adjacent to elementary schools.

Participation in this part day program is encouraged through outreach counselors and parents are expected to participate in classroom activities, field trips or adult education classes at least half a day per week. Teachers have at least a bachelor's degree and are paid at the rate of a regularly licensed teacher; the program also includes a head teacher, who reports to the principal of the associated elementary school, who is the administrative leader of the site program. All classes have a certified teacher as well as an aide. Maximum PreK class size is 17. Children attend half day programs beginning at age 3. There are full or half day kindergarten programs with maximum class size of 25 and since 1977 an elementary school component was added to the program at many schools. In its initial configuration, the CPC program also included a full time parent resource teacher, paid at a regular teacher salary level, and a full time community liaison coordinator, who was paid at the rate of a para-professional. The original program also included portions of a nurse and speech therapist, and a clerk to provide administrative support.

*The Georgia PreK Program*

In 1993, Georgia established a voluntary pre-kindergarten program for 4 year old children from low income families. In 1995, the program was expanded so that all 4 year olds were eligible making Georgia the first state in the nation to offer a universal, voluntary PreK program (Suitts, 2008). Georgia funds a full day (6.5 hours) program during the regular school year (180 days), with class sizes of up to 20 students staffed by a lead teacher and an aide in each classroom (Henry, et. al., 2006). Teachers are not required to have a BA degree although all must possess a technical school diploma or a 2 year college degree in a field related to early education or child development. Suitts (2008) states that 75% of the teachers have a BA, most with an early education specialization.

The Georgia PreK program has not provided parent support resources to every PreK classroom, and does not appear to provide substantial resources to coordinate and integrate PreK programs with K-3 offerings. In 2007 the program enrolled approximately 75,299 4 year old children – about 54% of the 4 year olds in the state. Spending for the program averaged $4,410 per student in 2006-07, just over half of what was spent on each K-12 student in the state that year. The NIEER 2007 Yearbook shows Georgia meeting 8 of the 10 quality benchmarks for PreK programs, falling short on teacher qualifications and teacher aid qualifications. Overall, the Georgia program appears to support a lower level of resources to PreK programs than we identify in the Evidence Based model.

Henry, et. al. (2006) found positive effects of the Georgia program concluding children who participated in the program were at least as well prepared for kindergarten as were children who benefited from Head Start programs.

*Oklahoma's PreK Program*

Oklahoma has offered voluntary universal PreK access to all 4 year olds since 1998. Today, 97 percent of the school districts in the state take advantage of PreK funding and Oklahoma ranks first in the United States in terms of the percentage of 4 year olds enrolled in PreK programs at 68%. The program meets nine of NIEER's ten quality standards, falling short only on the degree requirements for teacher aides.

Districts can offer half day (2.5 hours) or full day (6 hours) programs which are staffed with fully certificated teachers with early education specializations who are paid at the same rate as other K-12 teachers. Classes are no larger than 20 students, staffed by one teacher and one teacher aide. Although local districts are not required to match state spending, total state spending on PreK amounts to $3,433 per child, while all reported PreK spending totals $6,731 per student (NIEER, 2007).

Gormley, Jr. et. al. (2005) found that the state's universal PreK program has led to enhanced school readiness for the children who participate, and argue that PreK education is a promising path to improving school readiness.

*New Jersey Abbott Preschool Program*

The Abbott Preschool Program is the only recent program? we studied that serves both 3- and 4-year-old children. In 2006-07, the program served over 39,678 children or 78 percent of the student population in the 31 Abbott districts which were eligible for the program. Spending on the program was nearly $500 million or approximately $12,600 per child.

The program focuses on the highest poverty districts in the state and its goal is to offer a high-quality preschool education to prepare children to enter school with the knowledge and skills they need to meet the State's educational standards. The New Jersey Department of Education funds a 180 day six hour program, while a wrap-around program funded by the New Jersey Department of Human Services that offers daily before-and after-care and summer programs. In total, the program offers a ten hour program 245 days a year (Frede, et. al. 2007).

The Abbott Preschool Program Implementation Guidelines[9] describe funding availability for all of the components of the evidence based model including teachers, aides, community outreach, master teachers, professional development and health services.

Frede, et. al. have found that children who attend PreK programs are improving in language, literacy, and math – at least through the end of kindergarten, and those who attend PreK for two years (ages 3 and 4) significantly out-perform those who attend for one year, or who don't attend PreK at all.

**Resources for the Evidence-Based PreK-3rd Model**

[9] http://www.state.nj.us/education/ece/dap/imp_guidelines.pdf

It appears that the staffing configurations of all of the above programs could generally be supported by the number of staff identified in the Evidence-Based model. The one exception to this is that the Evidence-Based model for PreK students presented in this report does not provide appropriate resources to staff PreK centers that serve children under the age of 3 as provided in the Abecedarian project.

Table 1 provides estimates of the resources needed to implement an Evidence-Based PreK-3rd program. The table outlines all of the components of the Evidence-Based model and describes the resources generated by the students at that school. Resources are described either in terms of personnel counts or dollars per student. Once staff numbers have been established, the costs of personnel would vary based on the average salary and price level in each state. Consequently, costs are not identified in Table 1 but are displayed below in the description of our costing model. Here we provide a line-by-line description of the resources in Table 1 and the rationale for any differences observed between the K-3 and PreK columns. The evidence backing up these recommendations can be found in chapter 4 of Odden and Picus (2008) or any of the individual state reports listed in the references and available at www.lpicus.com.

**Detailed Analysis of Table 1**

Table 1 contains four columns. The first describes the resources included in the Evidence-Based model. The second column shows the resources the model generates for a prototypical K-5 elementary school of 432 students. This is a school with 72 students at each grade level and thus an average class size of 18. In this configuration there are four class sections for each grade level. The third column shows the resources generated through the Evidence-Based model for 288 students in grades K-3 assuming an average of 18 students per class and four class sections at each grade level (18 students times four class sections times four (K-3) grade levels. The last column shows the additional resources the school would need to serve 144 PreK children (eight classes of 18 three and four year olds). We have elected to present the data this way so that the school configuration shows a typical school with roughly the same number of children moving from grade to grade each year. In the cost estimates in the following section, we estimate national and state-by-state costs for class sizes of 15 and 20 PreK children in each class. Clearly, the costs for class sizes of 18 would be in between these estimates, a bit less than for class sizes of 15 and a bit more than for class sizes of 20.

It is important to note that in many instances, fractional teachers are identified. This is not to suggest that a school would have to hire individuals for what are in some instances part time positions, but rather we would anticipate these represent allocations of time among the full and part-time staff in the school, and what is important to consider is the number of teacher and other positions that would be funded for the prototype schools through the model if it were implemented.[10]

[10] A complete description of the Evidence Based model can be found in Odden and Picus, 2008

*School Characteristics*

The first eight lines of Table 1 provide information on the characteristics of the prototype school. The first line identifies the grades served in each column. The second line shows a prototypical school of 432 K-5 children, of which 288 are enrolled in grades K-3 and an additional 144 students would be added for PreK programs.[11] The next line shows the class size used to generate certificated teachers which averages to 18 in the K-5 prototype, so we use class size of 18 for K-3 and PreK to make comparisons within the prototype clearer.

The fourth line of Table 1 indicates that the elementary school includes a full day kindergarten program. Following that on line 5, we assume that both schools are staffed with certified teachers, and that they have 190 day contracts, which allow for ten days of intensive professional development activities as well as 180 days of instruction.

We assume that 12% of the children in each prototypical school have mild or moderate disabilities and that at the elementary school 50% qualify for free and reduced price lunch programs. In the costing model, we use the actual percentage of students who qualify for free and reduced price lunches in each state. For PreK students, this figure depends on the parameters established regarding who is eligible for PreK programs. If services are available to children who come from families at 100% or 200% of the poverty level, then all would qualify for free and reduced price lunch. If that constraint is relaxed (e.g. if all students are eligible for PreK) we use the actual number of 3 and 4 year old children in each state. In this table we assume that 100% of the children qualify for free and reduced price lunch to indicate how resources are generated.

Finally, for the purpose of this example we have assumed that 10% of the children at each prototypical school are English Language Learners. Again the actual cost model uses the average ELL population in each state to estimate resource needs.

*Personnel Resources*

The Personnel Resources section of Table 1 shows the personnel that would be deployed at the prototypical schools. As indicated above, personnel counts are shown as Full Time Equivalents (FTE), and it is assumed that where fractional FTEs are displayed, one individual might well serve in multiple capacities at a school. For more details on the evidence backing each of these recommendations and a more detailed description of how the staff positions fit together, see chapter 4 in Odden and Picus (2008).

Line 1 – Core Teachers: Core teachers are what are commonly thought of as the regular classroom instructors in an elementary or PreK setting. The class size used in the prototype exhibited in Table 1 is 18 students so the K-3 component of the school would generate 16 core teachers and the PreK program 8 core teachers. This would provide classes about the size of the three comparison programs (CPC, Perry and Abecedarian).

[11] In the cost model it is possible to vary assumptions about which children would receive PreK services.

Line 1a – Instructional Aides: The research base for instructional aides suggests that they add little to improved student performance in grades K-3. Consequently, the K-3 component of the model does not provide resources for aides. However, research on PreK programs stresses the importance of an aide in every classroom (see for example Zigler, Gilliam & Jones, 2006). Therefore the prototypical PreK school has 8 FTE aides, one for each class of 18. This results in a classroom child to staff ratio of 9.0:1 in PreK program components. This figure is slightly but not much higher than the child teacher ratios observed by Reynolds and Temple (2006; 2008) in the Perry and Abecedarian programs.

Line 2 – Specialist Teachers: In addition to core program teachers, schools need specialist teachers who can offer programs in music, art, PE and other liberal arts subjects. These specialist teachers, who at the PreK and elementary levels would replace the core teacher in the classroom for a period of time on a regular basis, make it possible for the core teachers to have time for curriculum planning and collaboration with other teachers both at their grade level and more broadly across the grade spectrum at the school. Specialist teaches are provided in numbers equal to 20% of the core teachers, or 3.2 at the K-3 level and 1.6 at the PreK level in the prototypical school in Table 1.

Line 3 – Instructional Facilitators/Coaches: A critical component of a successful school is the availability of professional development programs to help all teachers improve their teaching skills. Evidence suggests that one of the most powerful ways to provide professional development for teachers is to have instructional coaches available at the school level on a regular basis. The model funds one coach or facilitator for every 200 students in a school which amounts to 1.44 at the K-3 level and 0.72 at the PreK level for the prototypical schools in Table 1.

Lines 4,6 & 7 – Tutors for Struggling Students: These lines represent staff for three coordinated strategies for students who are struggling in class. Certified teachers serving as tutors provide instruction to students who teachers identify as struggling with the core curriculum in a one-to-one, one-to-three or possibly one-to-five setting. The concept is to provide students with intensive help to get them up to speed and back to the regular classroom. Extended Day and Summer School programs are the remaining two strategies for struggling students. Tutors are estimated at a rate of one tutor for every 100 students who are at risk. A proxy for at risk students is the number of students who qualify for free and reduced price lunch programs. For extended day and summer school, staff are resourced at levels to provide two hours of instruction five days a week during the school year, and to offer a six hour a day (four hours in core subjects) six week summer school program. The concept of struggling with the PreK curriculum seems somewhat hard to establish – except for students with disabilities who require special education – consequently, resources for these strategies are not included in the PreK prototype and only in the K-3 prototype.

Line 5 – ELL: English Language Learners require additional assistance, which the model resources at the level of one FTE certified teacher for every 100 ELL students. This

represents 0.29 positions at the K-3 level and another 0.14 at the PreK level assuming 10% of the students require ELL services.

Lines 8 & 9 – Students with Disabilities: Resources are provided using a "census" approach at the prototypical schools to provide services for students with mild and moderate disabilities. Staff are provided at a ratio of one professional position for each 150 students enrolled in the school (providing more special education staff as enrollment in the school grows) along with a half time aid for each special education teacher. At the prototypical schools in Table 1 this amounts to 1.92 teachers and 0.96 aides at the K-3 level and 0.96 teachers and 0.48 aides at the PreK level. We assume 2% of special education students have severe disabilities and the costs of providing these children with services averages approximately $42,000 a year. This is estimated by determining how many of these students exist in each state, summing the total cost of services for children with severe disabilities and then estimating this total as a function of total state enrollment.

Line 10 – Gifted and Talented: In many instances, programs for gifted children can be provided by accelerated learning programs or advancing them to higher grades. The Evidence-Based model provides $25 per student for gifted programs in each school.

Line 11 – Substitutes: Costs for substitutes are estimated at a rate of ten days per FTE teacher (core and specialist).

Line 12 – Pupil Support Staff: Resources for pupil support are staffed at a rate of one for every 100 students who qualify for free and reduced price lunch. At the K-3 prototype in Table 1 this would amount to 1.44 positions at both the K-3 and the PreK levels. These staff can be used for counseling, family outreach, or other services as determined at the local school site.

Line 13 – Supervisory Aides: These positions are used to provide supervision during non-class times and before and after school. They supervise bus loading and un-loading and at lunch time. The model allocates 2.0 aides to prototypical schools.

Line 14 – Librarians: The model allocates 1.0 librarian to prototypical schools. The 0.67 librarian indicated for the K-3 component would be part of the 1.0 librarian in an K-5 elementary school, and the 0.33 librarian is that portion of a librarian that would be added if 144 PreK children were added to the prototypical school. Thus, a PreK-5 school of 576 children would generate 1.33 librarians, one for the K-5 portion of the school and 0.3 for the PreK program.

Line 15 – Principal: All schools need a principal.. The model allocates 1.0 principal to prototypical schools. The staff allocations for the K-3 and PreK schools were computed similarly to the librarian.

Line 16 – School Site Secretary: The model allocates 1.0 secretaries and 1.0 clerical staff to prototypical schools. Table 1 shows the proportion of secretaries and clerical staff generated by the K-3 and PreK components of the school.

*Dollar Per Pupil Resources:*

For the balance of the resources needed for a school, we have estimated the level of resources needed on a dollar per pupil basis. The figures used in the model for both K-3 and PreK programs are:

| School Element | Per Pupil Amount ($) |
|---|---|
| Professional Development | 100 |
| Technology and equipment | 250 |
| Instructional materials including textbooks and formative assessments | 165 |
| Student Activities | 25 |
| Operations and Maintenance | 940 |
| Transportation | 390 |
| Food Services | 340 |

These resources appear to be adequate to meet the needs of a PreK-3 integrated curriculum. If one takes the child to staff ratios of 5.7 to 1 for Perry and 6 to 1 for Abecedarian estimated by Reynolds and Temple (2006; 2008), 144 students would generate between 24 and 25.3 staff positions. Summing the staff positions identified in the fourth column of Table 1 shows a total of 24.66, thus providing a similar level of staff to programs that research has shown to have significant, long term positive impacts.

When considering how this compares to the CPC program, column four shows adequate staffing to include the full-time parent resource teacher, full-time community liaison coordinator, and the time for portions of a nurse and speech therapist, as well as a clerk to provide administrative support. CPC relies on a lead teacher who provides both administrative help and instructional coaching assistance and could be funded through the combined resources identified for the principal and instructional coach positions.

One major concern is providing adequate time and resources to coordinate PreK and elementary programs either within the school, or in the case were PreK is provided in another facility, across buildings. To ascertain whether or not resources identified above are adequate, we conducted site visits to five programs as described in the next section. As that section shows, the resources identified in Table 1 appear to be considerably more than any of the programs we visited are able to allocate for Prek-3rd programs today.

**Table 1**
**Recommendations for Adequate Resources for Prototypical Elementary Schools**

| School Element | Prototype K-5 Elementary School | K-3 Component of Prototype Elementary School | Additional Resources for a PreK Program |
|---|---|---|---|
| **School Characteristics** | | | |
| School configuration | K-5 | K-3 | 3 and 4 Year Olds |
| Prototypical school size | 432 | 288 | 144 |
| Class size | K-3: 15<br>4-5: 25<br>Average = 18 | K-3: 18 | 18 |
| Full-day kindergarten | Yes | Yes | N/A |
| Number of teacher work days | 200 teacher work days, Including 10 Days for intensive Training | 200 teacher work days, Including 10 Days for intensive Training | 200 teacher work days, Including 10 Days for intensive Training |
| Percent of students with disabilities | 12% | 12% | 12% |
| Percent Poverty (free & reduced lunch) | 50.0% | 50.0 % | 100% |
| Percent ELL | 10.0% | 10.0% | 10.0% |
| **Personnel Resources** | | | |
| 1. Core teachers | 24 | 16 | 8 |
| 1a. Instructional Aides | 0 | 0 | 8 |
| 2. Specialist teachers | 20% more or 4.8 | 20% more or 3.2 | 20% or 1.6 |
| 3. Instructional Facilitators/Coaches (ratio of one for every 200 students) | 2.2 | 1.44 | 0.72 |
| 4. Tutors for struggling students | one for every 100 poverty students:<br>2.16 | one for every 100 poverty students:<br>1.44 | N/A |
| 5. Teachers for ELL students | An additional 1.0 teachers for every 100 ELL students<br>0.43 | An additional 1.0 teachers for every 100 ELL students<br>0.29 | An additional 1.0 teachers for every 100 ELL students<br>0.14 |
| 6. Extended Day | 1.8 | 1.0 | N/A |
| 7. Summer School | 1.8 | 1.0 | N/A |

**Table 1 (Continued)**
**Recommendations for Adequate Resources for Prototypical Elementary Schools**

| School Element | Prototype K-5 Elementary School | Elementary Schools | PreK Programs |
|---|---|---|---|
| 8. Students with mild disabilities | Additional 1 professional teacher positions per 150 students and 0.5 aides for each special education teacher or 2.88 teachers and 1.44 aides | Additional 1 professional teacher positions per 150 students and 0.5 aides for each special education teacher or 1.92 teachers and 0.96 aides | Additional 1 professional teacher positions per 150 students and 0.5 aides for each special education teacher or 0.96 teachers and 0.48 aides |
| 9. Students with severe disabilities | 100% state reimbursement minus federal funds | 100% state reimbursement minus federal funds | 100% state reimbursement minus federal funds |
| 10. Resources for gifted/talented students | $25/student | $25/student | $25/student |
| 11. Substitutes | 10 days per FTE | 10 days per FTE | 10 days per FTE |
| 12. Pupil support staff | 1 for every 100 poverty students: 2.16 | 1 for every 100 poverty students: 1.44 | 1 for every 100 poverty students: 1.44 |
| 13. Supervisory Aides | 2.0 | 2.0 | 2.0 |
| 14. Librarians/media specialists | 1.0 | 0.67 | 0.33 |
| 15. Principal | 1.0 | 0.67 | 0.33 |
| 16. School Site Secretary** | 2.0 | 1.34 | 0.66 |
| **Dollar per Pupil Resources** | | | |
| Professional development | Included above: Instructional facilitators 10 summer days Additional: $100/pupil for other PD expenses – trainers, conferences, travel, etc. | Included above: Instructional facilitators 10 summer days Additional: $100/pupil for other PD expenses – trainers, conferences, travel, etc. | Included above: Instructional facilitators 10 summer days Additional: $100/pupil for other PD expenses – trainers, conferences, travel, etc. |
| Technology and equipment | $250/pupil | $250/pupil | $250/pupil |
| Instructional materials, including textbooks, formative assessments | $140/pupil | $140/pupil | $140/pupil |
| Student Activities | $25/pupil | $25/pupil | $25/pupil |

**Table 1 (Continued)**
**Recommendations for Adequate Resources for**
**Prototypical Elementary Schools**

| School Element | Prototype K-5 Elementary School | Elementary Schools | PreK Programs |
|---|---|---|---|
| **Other Expenditures*** | | | |
| Operations and Maintenance | $940 per pupil | $940 per pupil | $940 per pupil |
| Transportation | $390 per pupil | $390 per pupil | $390 per pupil |
| Food Services | $340 per pupil | $340 per pupil | $340 per pupil |

* Note: "Other Expenditures" are carried forward in this model; actual state expenditures for operations and maintenance, transportation, and food are used. National averages for these and all other elements are listed in the Table 1. In typical studies by Lawrence O. Picus and Associates, the cost of food services is assumed to be a self-supporting enterprise activity; where such services operate at a loss, the model recommends out-sourcing the function to a private sector company whose core business is food services, such as ARA Services. In this model, in an attempt to ease comparisons between actual expenditures and the costs associated with the evidence-based model, these expenditures are carried forward.

## 3. PREK-3RD PROGRAM SITE VISITS

An important part of our study was to visit six programs identified by the staff at the Foundation for Child Development to develop a better understanding of the resources in those programs and particularly the resources they used to coordinate Prek-3rd programs and to ascertain whether or not the resources identified in the Evidence Based model are adequate high quality and coordinated PreK programs with K-3 programs.

We visited the following six locations:

- The New School at Columbia Park in Seattle, Washington
- The Bremerton (Washington) School District
- The Montgomery County Public Schools and the Vier Mills Elementary School PK-5 Program
- The Lorraine Hansberry CPC and K-8 School in Chicago
- The North Kenwood/Oakland Charter School in Chicago
- The Miami Dade County School District

Detailed descriptions of our findings at each site are presented in Appendix A.

The programs represented in the six site visits represent a number of different approaches to providing integrated PreK-3rd programs for children. There are two versions of the long standing and successful CPC program in Chicago. There is a single school in Seattle that benefits from a tremendous influx of private funds each year to design an integrated PreK-3rd program. There are two large urban school districts, one (Montgomery County) with a highly focused school improvement strategy that operates across grade levels to help all students meet performance standards and a second (Miami-Dade) facing substantial funding cutbacks and looking for ways to maintain preschool programs that are in varying states of integration/coordination. Another district (Bremerton) uses the limited resources it has available to create incentives for preschool programs to integrate with the district's PreK-3rd program goals by purchasing curriculum materials and including staff of community preschool programs in professional development activities, and by encouraging parent involvement programs across all PreK providers who are interested in participating.

Class sizes for PreK programs ranged from 15 to 20, all staffed with certificated teachers paid on the regular district salary schedule and an aide. Beyond these staffing configurations, the schools relied on additional professional support in the schools to meet the needs of PreK children along with children enrolled in K-3 classes. Strategies for struggling students varied, and in many instances, outside of children with disabilities requiring special education services, most schools/districts seemed to feel that PreK was too early to really identify and single out struggling students, preferring to rely on the small classes with the aides to help children work through the various academic, developmental, and social problems they might exhibit.

Consequently, the major focus of integrating PreK-3rd services is around ongoing collaborative professional development focused on aligning curriculum and tracking student progress. In Bremerton for instance, the district has a kindergarten assessment tool it uses for placement in school programs. If partner PreK programs are interested, the district shares the results of those assessments with the preschools so they can adjust instructional practices if they would like.

In Montgomery County, the district has a PreK-5 aligned curriculum with formative and benchmark assessments; schools focus on integration of services from PreK through elementary school, and professional development activities and strategies for struggling students are integrated across the grades present at each school, including PreK.

The most tightly coordinated programs seem to be the CPC programs in Chicago. In these programs, PreK teachers have regular planning and preparation periods just like regular K-5 teachers; this provides time for collaboration around curriculum and instructional issues during the regular school day. In addition, ongoing professional development is provided to PreK teachers by the CPC head teacher, who in this professional development role functions like the instructional coaches in the regular K-5 program. Interestingly, in Miami-Dade schools, PreK-3rd program integration is hampered – at least in the school we visited – because of enrollment lotteries at both the PreK level and again when children enroll in kindergarten limiting the effectiveness of any integration efforts.

All of the programs have resources for parent outreach. Montgomery County does this with staff from the central early childhood offices who visit schools periodically, while the early CPC programs relied on a full time parent resource teacher and a full time community liaison. Today, those CPC resources have been cut from the program and all functions of those resources appear to have been rolled into the responsibilities of the head teacher position. In the New School in Seattle, parent outreach is a critical component of the program, although staff are paid for by funds from a private foundation. Bremerton works hard to coordinate parent outreach with the regular school programs to encourage parents to send their children to PreK programs. Miami's parent outreach appears to be less focused.

The Evidence-Based model provides adequate resources for these components of the program through the pupil support staff element, and the additional site leadership time the model would fund for PreK children at an existing school (as enrollment grows, so does support for site leadership.

Overall, our sense is that the resources available through the Evidence-Based model and identified above in Table 1 exceed those in all of the PreK programs visited and are adequate to meet the service delivery and integration needs of schools providing comprehensive PreK-3rd programs. Indeed, the Evidence-Based model provides resources for the PreK program that would match that in the original CPC program in

Chicago,[12] which over time has seen the initial staffing dramatically reduced. The Evidence-Based model's staffing totals appear to match the number of staff in schools with PreK-3rd programs even at the New School in Seattle, which had substantial outside funding. And the superintendent of Bremerton, who as described in the case study has considerable familiarity with the Evidence-Based model, seemed to feel that if the PreK and K-3 resources were all funded as described in the model, integration of programs across the Prek-3rd spectrum would not be a problem.[13]

[12] We note that the research on the long term impacts of the CPC program is on its original program configuration, not the reduced program configuration we found in the schools visited.

[13]Many of the resources that support students and teachers are enrollment driven and thus increase as the number of children increases – even if they are 3-and 4-year olds)

## 4. COST ESTIMATES

To estimate the costs of providing a PreK-3rd program on a national basis, we adapted a costing model developed to estimate the state-by-state costs of the Evidence-Based model for K-12 education programs. The model uses the resources identified in Table 1 above and applies them to state-by-state enrollment counts to establish an estimate of the costs of the Evidence-Based model for each state. It is designed to allow us to vary many of the assumptions in the model including such things as the grade-by-grade pupil teacher ratio, salaries of personnel, whether or not programs for struggling students such as tutors, extended day or summer school are included, and the per-pupil funding level of resources that are funded on that basis. For our PreK-3rd model we added the ability to determine the estimated number of children who are eligible for and who participate in the program.

Our approach to estimating the cost of a PreK-3rd program on a national basis was to add capacity to the model for making estimates of program costs for 3 and 4 year old children, add that to our cost estimates for grades K-3, and subtract current expenditures for Prek-3rd programs. The result, computed for each state and summed to a national total provides an estimate of the additional costs of providing a PreK-3rd program. It should be noted that in some states current funding for PreK and K-3 funding exceeds our estimate of the additional funding needs of the Evidence Based model. It is likely this occurs in states with high K-12 expenditures and is a result of spending at that level, not because of high expenditures for PreK programs. In those instances, we did not assume reductions in funding, but rather only estimated the additional funding needs in those states where current funding levels are below our estimate.

### Enrollment Estimates

The first step in developing our cost model was to estimate the number of 3 and 4 year olds who would participate. Because PreK programs are voluntary, in addition to estimating the number of children eligible for PreK programs, we also needed to be able to adjust the percent of eligible children we anticipate will enroll in PreK programs.

Working with the Population Dynamics Research Group at the University of Southern California, we used the American Community Survey data available from the United States Census Bureau to determine the number of 3-and 4-year-old children by state as well as the number of children in each state living in families at or below 100% and 200% of the poverty level. Table 2 displays the total number of 3-and 4-year-olds we estimate would participate in PreK programs depending on the assumptions made regarding participation rate and eligibility criteria. Appendix B contains our state-by-state estimates of the number of potential PreK children by state.

**Table 2: Estimated Number of 3 and 4 Year Old Children in PreK Programs by Poverty Level and Participation Rates, 2005**

| | Number of 3 and 4 year Olds | | |
|---|---|---|---|
| **Participation Rate** | **100% of poverty level** | **200% of poverty level** | **All** |
| 50% | 852,391 | 1,772,081 | 4,063,871 |
| 65% | 1,108,108 | 2,303,705 | 5,283,032 |
| 100% | 1,704,781 | 3,544,161 | 8,127,742 |

Source: Population Dynamics Research Group at the University of Southern California, and the United States Census Bureau

Because PreK programs are voluntary, the model needs to accommodate variations in the estimated number of children who will enroll as well as variations in the resources in the model. For the cost estimates that follow, we identified 18 possible options. These include the number of 3-and 4-year-olds in the United States in 2005, as well as the number living in families at 100% and 200% of the poverty level.

To accommodate the fact that PreK programs are voluntary we also include estimates that assume all children will participate as well as estimates using participation rates of 50% and 65%. These participation rates were chosen because 50% is often stated as a national goal for PreK participation in state funded programs, and because 65% represents a participation rate that approximates the 68% participation rate in Oklahoma, the state currently offering universal PreK programs with the highest participation rate (Barnett, et. al., 2007). Finally, we also provide estimates for each of the parameters identified above with PreK class size of 15 and PreK class size of 20. This results in 18 separate cost estimates that use: three eligibility options (all 3- and 4-year-olds, 3-and 4-year-olds at 100% and at 200% of poverty); three participation rates for eligible children (50%, 65% and 100%); and two alternative PreK class size options (15 and 20).

**Other Cost Factors**

There are a number of other variables in the model that impact the total costs of the Evidence-Based model. The most important is personnel compensation (salaries and benefits). For teacher salaries, which are the largest component of educational costs, the model allows us to use either national average teacher salary or state-by-state salary estimates developed by the National Education Association (NEA, 2007). If national average salaries are used, adjusted by a Comparable Wage Index (CWI) (Taylor & Fowler, 2006), the model allows the user to include a regional cost adjustment factor if desired. For all other personnel compensation, we have used national averages. Appendix C includes tables identifying the compensation estimates used in the cost estimates below. For the analyses provided here, we have used state average salary data as we believe it more accurately reflects the estimated costs of providing staff in each state.

The compensation data allow us to estimate the costs of the staff resources in the Evidence-Based model which can be added to the per pupil costs identified in Table 1 above. For each state, we estimate the number of PreK children (which varies based on assumptions identified below) and the number of students enrolled in K-3 programs. We then estimate the costs of the Evidence-Based model as if they were all enrolled in prototype size schools. We are confident that this approach offers accurate estimates of the costs of this model.

In individual states where we have made school-by-school cost estimates, our approach is to pro-rate the resources linked to individual schools on the basis of actual enrollments.[14] Thus the per pupil costs would be very close to the estimates derived by assuming all children are in prototypical sized schools. In some states we have developed additional tools to estimate the additional costs incurred by very small schools due to dis-economies of scale.

Once we have estimated the costs of the Evidence-Based model for each state, we subtract current state expenditures for PreK-3rd programs. Data for estimates of current expenditures for PreK programs were provided by NIEER for the 2005-06 fiscal year and represent NIEER's estimates of state funding for PreK programs. Estimates of state-by-state expenditures for K-3 programs are difficult to obtain. Typically states (and school districts) do not collect or report fiscal data by grade level. In fact in many states it is not even possible to distinguish between elementary and secondary school expenditures, only by districts which typically serve students in grades K-12. Consequently, our approach to estimating current expenditures for K-3 education was to take 4/13 of the per pupil expenditures for education in each state and multiply that figure by K-3 enrollment. This figure was then subtracted from the estimated K-3 costs of the Evidence-Based model. It is important to note that using this approach, some states currently spend more for K-3 education than the model estimates is needed to fund the resources identified in Table 1 (for more details on this issue see Odden, Goetz & Picus (2008),; and Odden, Picus & Goetz, under review). Finally all per child cost figures presented here are computed by dividing our cost estimates by the number of PreK-3rd students we estimate are served, a number which varies based on the PreK enrollment assumptions in the model.

Our view is that the 100% participation rate is unlikely to be reached, and that a rate of 65% represents a more likely participation rate in the long term. We base this on Oklahoma's participation rate of about 68% for 4 year olds in its universal PreK program.

The cost estimates provided below are based on estimates of 3-and 4-year-old children in 2005, and use cost data for the 2005-06 fiscal year, the last year for which we had complete data for all components of the funding model. We have also estimated the

[14] As an example of how this works, if a prototype school has 240 students, a school with 480 students would receive twice the level of teacher resources (core and specialist) as well as double the number of coaches, support staff, etc. Depending on available data and model parameters, staff for struggling students would either be doubled (if based on state averages as done for this report) or based on the actual count of free and reduced price lunch students or other proxy for at risk children as determined in the individual state.

national and state-by-state costs of the PreK component of the model under varying class size assumptions, using both 15 students in a class and 20 students in a class. For all cost estimates presented here, we have used both class size parameters. The estimates show the national costs and the change in costs per child for PreK-3rd programs using the Evidence-Based model under a variety of assumptions regarding the number of 3 and 4 year old children eligible and electing to participate in the PreK component of the PreK-3rd model (Barnett, et. al., 2007).

**Cost Estimates**

*PreK Program Costs*

Assuming universal access to PreK programs for all 3-and 4-year-olds, and a participation rate of 65%, we estimate the total national costs of PreK programs using our Evidence Based model with PreK class sizes of 20 children to be $56 Billion, or an average of $10,617 per enrolled child. State per child costs for PreK programs under these assumptions range from a low of $8,390 in South Dakota to a high of $13,783 in the District of Columbia. Table 4 shows the state-by-state estimated costs of an Evidence-Based PreK program for all 50 states plus the District of Columbia if all 3-and 4-year olds are eligible and the participation rate is 65%.

By way of comparison, our model estimates PreK costs of $9,018 per child in Oklahoma (which has universal access and a 68% participation rate), compared to NIEER's current spending estimate of $6,731 ($3,433 from state sources and the balance from local funds).

In New Jersey, which has the highest PreK spending per child, our model estimates costs of $12, 822 per child compared with NIEER's estimate of $11,831 per child. In Georgia (like Oklahoma, a state with universal PreK access for 4-year olds) our model estimates per pupil costs of $10,289 compared with NIEER estimated spending of $4,111 per child.

Reducing average class size in PreK programs to 15 increases the national cost to $97.3 billion or $11,974 per child served. Under this assumption, per child costs range from a low of $9,394 in South Dakota to a high of $15,377 in the District of Columbia. Costs per child in Oklahoma are estimated at $10,121. In New Jersey, with class size of 15 estimated costs per child increase to $14,394 and in Georgia the are estimated at $11,622 per child.

Table 4 displays the estimated total and per child costs of the Evidence-Based PK model for all of the states. These figures only represent the costs of PreK programs. Below, we provide more comprehensive estimates of the costs of a PreK-3rd integrated program for all 50 states.

## Table 4
## Estimated Costs of an Evidence-Based PreK Program by State
## (Universal Eligibility with 65% Participation)

| State | PK Enrollment Universe | PK Adequacy Cost Per-Pupil | State Cost |
|---|---|---|---|
| Alabama | 77,433 | $9,295 | $719,747,829 |
| Alaska | 11,649 | $11,393 | $132,717,881 |
| Arizona | 117,151 | $9,777 | $1,145,412,523 |
| Arkansas | 47,077 | $9,336 | $439,529,844 |
| California | 705,540 | $11,794 | $8,321,046,465 |
| Colorado | 88,422 | $9,743 | $861,535,301 |
| Connecticut | 57,980 | $12,169 | $705,584,971 |
| Delaware | 15,348 | $11,683 | $179,311,690 |
| District of Columbia | 9,715 | $13,783 | $133,899,824 |
| Florida | 289,448 | $9,750 | $2,822,210,568 |
| Georgia | 175,439 | $10,289 | $1,805,079,147 |
| Hawaii | 26,280 | $10,088 | $265,106,692 |
| Idaho | 30,555 | $8,899 | $271,909,929 |
| Illinois | 227,278 | $11,694 | $2,657,772,455 |
| Indiana | 115,037 | $10,394 | $1,195,721,546 |
| Iowa | 48,456 | $9,121 | $441,948,792 |
| Kansas | 50,018 | $9,405 | $470,419,824 |
| Kentucky | 72,893 | $9,490 | $691,784,340 |
| Louisiana | 84,642 | $9,393 | $795,010,046 |
| Maine | 14,291 | $9,600 | $137,185,848 |
| Maryland | 97,171 | $11,309 | $1,098,927,445 |
| Massachusetts | 105,160 | $11,801 | $1,240,995,349 |
| Michigan | 172,053 | $11,237 | $1,933,401,034 |
| Minnesota | 85,335 | $10,401 | $887,601,687 |
| Mississippi | 61,236 | $9,058 | $554,683,778 |
| Missouri | 100,946 | $9,492 | $958,141,359 |
| Montana | 13,923 | $8,960 | $124,743,821 |
| Nebraska | 30,295 | $9,181 | $278,147,440 |
| Nevada | 42,374 | $9,812 | $415,789,271 |
| New Hampshire | 17,599 | $9,857 | $173,463,638 |
| New Jersey | 152,864 | $12,822 | $1,960,085,721 |
| New Mexico | 32,986 | $9,706 | $320,180,164 |
| New York | 321,192 | $12,378 | $3,975,678,703 |
| North Carolina | 159,430 | $9,655 | $1,539,224,624 |
| North Dakota | 8,372 | $8,758 | $73,322,394 |
| Ohio | 200,282 | $10,656 | $2,134,245,821 |
| Oklahoma | 63,289 | $9,018 | $570,720,244 |
| Oregon | 57,268 | $10,264 | $587,795,064 |
| Pennsylvania | 183,600 | $11,249 | $2,065,253,002 |
| Rhode Island | 15,896 | $11,295 | $179,543,748 |
| South Carolina | 73,234 | $9,510 | $696,457,656 |
| South Dakota | 13,424 | $8,390 | $112,625,421 |
| Tennessee | 103,893 | $9,451 | $981,908,455 |
| Texas | 480,742 | $9,884 | $4,751,827,746 |
| Utah | 61,361 | $8,927 | $547,790,492 |
| Vermont | 9,669 | $9,904 | $95,760,467 |
| Virginia | 133,005 | $10,417 | $1,385,485,553 |
| Washington | 102,123 | $10,200 | $1,041,688,898 |
| West Virginia | 22,955 | $9,770 | $224,269,007 |
| Wisconsin | 88,303 | $10,256 | $905,677,773 |
| Wyoming | 8,399 | $9,682 | $81,325,995 |
| Total | 5,283,032 | $10,617 | 56,089,697,285 |

*Prek-3rd Program Costs*

Tables 5 and 6 show the estimated total and total per-pupil costs of integrated PreK-3rd programs. Tables 7 and 8 show the estimated increase in total and increase in per-pupil costs of integrated Prek-3rd programs. The tables show 18 estimated costs that vary according to the class size of the PreK program, whether the program is for students at or below 100% of the poverty level, 200% of the poverty level or a universe program, and at three different participation rates: 50%, 65% and 100%.[15]

Assuming average class size of 20 (with a teacher and an aide) for PreK programs and an average class size of 15 for K-3 programs, along with universal access for all 3-and 4-year olds, and a participation rate of 65%, our Evidence Based model estimates total PreK-3rd costs to be just over $215 billion, or an increase of approximately $71.5 billion over the $143.5 billion we estimate is currently spent for Prek-3rd spending. Our estimate amounts to $10,867 per pupil or an increase of $3,626 per pupil compared to our estimate of current spending of $7,280 per pupil.

If we assume a PreK class size of 15 with a teacher and an aide, Table 7 shows estimated additional total PreK-3rd costs for the Evidence-Based model range from $28.4 Billion if enrollment is limited to 3-and 4-year-old children at 100% of the poverty level and a participation rate of 50%, to a total of $78.7 billion for universally available PreK programs and a 65% participation rate (the highest rate we think is reasonably feasible in the short and medium term). If a class size of 20 is used, these estimates range from $27.4 billion (eligibility at 100% of poverty and a 50% participation rate) to $71.5 billion if all students are eligible and 65% participate. Detailed tables in Appendix D provide estimates of the costs of PreK-3rd programs by state under all 18 options.

Table 8 shows these data on a per Prek-3rd student basis. If we assume a class size of 15 in PreK, national average additional costs per PreK-3rd student in states that currently do not provide adequate levels of funding would be between $2,169 for 100% of poverty eligibility and 50% participation, to $3,975 per child for universal PreK with 65% participation. If we estimate PreK class sizes of 20, these figures range from $2,095 (100% poverty, 50% participation) to $3,626 (universal eligibility, 65% participation).

[15] There are a total of 18 cost estimates because of the variety of assumptions that can be made regarding the number of 3-and 4-year-olds who receive PreK services. Our model allows the number of 3-and 4-year-olds to be varied on the basis of eligibility (all, 100% or 200% of poverty), participation rate (continuously variable in the model but estimated at 50%, 65% and 100% in the tables that follow), and PreK class size (15 or 20). This leads to 18 possible combinations of 3-and 4-year-old enrollment counts.

**Table 5: Estimated *Total* Costs of Providing PreK-3rd Programs Using the Evidence Based Model in 2005-06 in States with Spending Currently Below Evidence-Based Adequacy Estimates (Billions of Dollars): Estimated PreK class size of 15 and 20[16]**

| | Number of 3 and 4 year Olds | | | | | |
|---|---|---|---|---|---|---|
| | 100% of poverty level | | 200% of poverty level | | All | |
| Average PreK Class Size | 15 | 20 | 15 | 20 | 15 | 20 |
| 50% participation | 169.3 | 168.2 | 180.6 | 178.2 | 207.6 | 202.1 |
| 65% participation | 172.4 | 171.0 | 187.1 | 184.0 | 222.2 | 215.0 |
| 100% participation | 179.8 | 177.5 | 202.2 | 197.5 | 256.2 | 245.2 |

**Table 6: Estimated *Per-Child Total* Costs of Providing PreK-3rd Programs Using the Evidence Based Model in States with Spending Currently Below Evidence-Based Adequacy Estimates (Dollars): Estimated Class Size of 15 and 20[17]**

| | Number of 3 and 4 year Olds | | | | | |
|---|---|---|---|---|---|---|
| | 100% of poverty level | | 200% of poverty level | | All | |
| Average PreK Class Size | 15 | 20 | 15 | 20 | 15 | 20 |
| 50% participation | 11,029 | 10,954 | 11,097 | 10,951 | 11,181 | 10,884 |
| 65% participation | 10,794 | 10,953 | 11,132 | 10,948 | 11,230 | 10,867 |
| 100% participation | 11,091 | 10,950 | 11,207 | 10,944 | 11,323 | 10,836 |

[16] These data assume no funds are recaptured from states spending above an adequate level given the Evidence-Based approach.

[17] These data are based on the weighted average per pupil resource needs for states requiring additional resources to meet estimated adequacy levels.

**Table 7: Estimated *Additional* Costs of Providing PreK-3rd Programs Using the Evidence Based Model in 2005-06 in States with Spending Currently Below Evidence-Based Adequacy Estimates (Billions of Dollars): Estimated PreK class size of 15 and 20[18]**

| | Number of 3 and 4 year Olds | | | | | |
|---|---|---|---|---|---|---|
| | 100% of poverty level | | 200% of poverty level | | All | |
| Average PreK Class Size | 15 | 20 | 15 | 20 | 15 | 20 |
| 50% participation | 28.4 | 27.4 | 38.2 | 36.1 | 64.1 | 58.6 |
| 65% participation | 31.0 | 29.8 | 44.0 | 41.2 | 78.7 | 71.5 |
| 100% participation | 37.3 | 35.3 | 58.8 | 54.1 | 112.7 | 101.7 |

**Table 8: Estimated Per-Child *Additional* Costs of Providing PreK-3rd Programs Using the Evidence Based Model in States with Spending Currently Below Evidence-Based Adequacy Estimates (Dollars): Estimated Class Size of 15 and 20[19]**

| | Number of 3 and 4 year Olds | | | | | |
|---|---|---|---|---|---|---|
| | 100% of poverty level | | 200% of poverty level | | All | |
| Average PreK Class Size | 15 | 20 | 15 | 20 | 15 | 20 |
| 50% participation | 2,169 | 2,095 | 2,692 | 2,545 | 3,471 | 3,179 |
| 65% participation | 2,332 | 2,237 | 2,763 | 2,790 | 3,975 | 3,626 |
| 100% participation | 2,623 | 2,500 | 3,281 | 3,099 | 4,981 | 4,494 |

[18] These data assume no funds are recaptured from states spending above an adequate level given the Evidence-Based approach.

[19] These data are based on the weighted average per pupil resource needs for states requiring additional resources to meet estimated adequacy levels.

It is important to recall that not all of these costs are for providing the PreK component of the Evidence-Based program. In many states additional funding is required to provide all of the resources in the Evidence-Based model for children in grades K-3 as well.

Regardless of the assumption of PreK class size of 15 or 20, if PreK enrollment is limited to 3-and 4-year-olds at 100% of the poverty level with a 50% participation rate, we estimate that 12 states currently have adequate resources to fully fund our PreK-3rd model while the remaining 39 do not have adequate funding levels today (See Tables C1 and C10 in Appendix C). The same 12 states have adequate funding if the participation rate is increased to 65% regardless of PreK class size (Tables C2 and C11), while nine of them have adequate funding if we assume all 3-and 4-year-olds at 100% of the poverty rate participate in PreK programs in class sizes of 15 (Table C3) and ten states have adequate funding under those assumptions and class size of 20 (Table C12). This compares with the NIEER estimate that 19 of the 38 states with state funded PreK programs have adequate funding to meet the NIEER quality standards (NIEER, p.19).

Table C1 shows that on a per child basis, with eligibility established at 100% of the poverty level, a 50% participation rate, Arizona would need $4,531 more per child to fully fund the PreK-3rd program described in Table 1 with class size of 15, and an additional $4,453 per student with class size of 20. At the other extreme, Vermont would have an estimated $3,039 more per child than the model requires with class sizes of 15, and $3,098 with class sizes of 20 in PreK. At a participation rate of 65% with eligibility still at 100% of the poverty level, Arizona would need an additional $4,654 per child with PreK class size at 15 and an additional $4,555 with classes at 20. Vermont has $2,841 more than the model estimates with a class size of 15, and $2,918 more with class size of 20 under the same eligibility and participation assumptions.

At PreK class sizes of 15, if eligibility is changed so that PreK programs are available to children in families at 200% of the poverty level, ten states have adequate PreK-3rd funding levels if half the eligible children participate (Table C4); five states have adequate PreK-3rd funding levels if 65% of the eligible children participate; and three states have adequate PreK-3rd funding if all eligible children participate. If PreK class size is 20, then with eligibility at 200% of poverty, 10 states have adequate funding at 50% participation, and 9 states have adequate funding at 65% participation.

At PreK class sizes of 15, if PreK programs are made universally available for all 3 and 4 years olds, only two states, Vermont and Maine, would have adequate funding at an estimated 50% participation rate, and none of the states currently have adequate PreK-3 funding at participation rates of 65% or 100%. If PreK class size increases to 20, Wyoming joins Vermont and Maine at 50% participation rate, and even at a 65% participation rate, Maine continues to have adequate funding.

Using universal eligibility and 65% participation rate, we estimate at the extremes, that California would require an additional $6,071 per child and Maine would need an additional $126 per child at PreK class sizes of 15. At PreK class sizes of 20, California would need an additional $5,630 per child while Maine would have adequate funding.

Oklahoma, a state with universal access to PreK programs for 4 year olds would need $3,249 per child (class size of 15) despite a current PreK participation rate of 68% for those 4 year olds. The reason for this apparent discrepancy appears to be inclusion of 3 year olds in our model, as well as the likelihood that current K-3 expenditures in that state are not adequate to meet the resource requirements embedded in the Evidence Based model.

In summary, states are currently not spending enough money to provide quality PreK-3rd programs using the Evidence-Based school funding adequacy model. The additional costs of providing a program like this vary depending on assumptions of eligibility and participation rates of 3 and 4 year old children, and are substantially impacted by the level of current expenditures for children in grades K-3.

## CONCLUSIONS

The public and policy makers in the United States are realizing that if most (if not all) children are to meet their states' performance standards, an important part of helping them do so is the provision of high quality PreK-3rd education programs. High quality PreK programs have demonstrated their effectiveness in helping children come to school prepared to learn, and when combined with integrated K-3 programs, PreK-3rd programs have tremendous promise for helping all students get an early start toward meeting high expectations for learning.

Although our understanding of the resources needed to dramatically improve student learning is in its early stages, a great deal can be learned from current research about the best ways to deploy educational resources and strategies to improve performance. One method for estimating those resources is the Evidence-Based approach (Odden & Picus, 2008). In this document, we have used the Evidence-Based approach to estimate the resource needs of both PreK programs and K-3 programs for children in each of the 50 states plus the District of Columbia.

The resources identified are based on an approach that includes small classes focused intensely on core subjects (English, Math, Science, Social Studies and World Languages), as well as specialist teachers to provide a rich liberal arts program that includes music, arts and PE. The model includes resources to identify and help students who are struggling so that they return to the regular program at grade level as quickly as possible, and provides additional resources for children who are at risk of falling behind. Substantial resources are also provided for professional development for teachers and other school officials along with funds for special education, school site leadership, district administration and for the maintenance, operations and utility costs of running a school.

We have built a cost model that, on a state-by-state basis, estimates the costs of PreK-3rd education using the Evidence-Based model. It relies on development of prototype K-3 and PreK education programs and then resources those programs based on the model's specifications. In addition, the model provides flexibility to allow variation in the eligibility for PreK programs (all 3-and 4-year-olds, or 3-and 4-year-olds at 100% or 200% of the poverty level) as well as variation in the percentage of 3-and 4-year-old children that would participate in PreK programs. Many other variables can be adjusted as well so it is possible to estimate the total – and additional – costs of PreK-3rd programs under a variety of assumptions.

As we discovered when variations of our model were run, in some instances, some states actually spend more at the present time for PreK schools than our model suggests. This tends to happen in states that currently have high K-3 expenditures or that serve a large proportion of PreK children in relatively expensive programs. As the eligibility requirements and participation rates increase, fewer and fewer states have adequate funding. In the cases where states have more resources than the model recommends, our

total cost estimates do not assume reductions in spending in those states, but rather sum the additional funding requirements of the other states.

Under that logic, if we assume that 65% of 3-and 4-year-old children will participate in PreK programs and the system provides for PreK class sizes of 20 with a teacher and an aide, the additional cost of providing the resources for Prek-3rd ranges from $29.8 billion if eligibility is limited to 3-and 4-year-olds at 100% of the poverty level to $71.5 billion if PreK is universally available to 3-and 4-year-olds. It is important to remember that these cost figures in many instances also assume increased spending for K-3 programs as well.

One of the keys to a strong PreK-3rd program is integration across all levels, something that has been hard to achieve in the past. Following a total of six site visits to schools and districts with highly regarded PreK programs, we have concluded that the resources identified in the model will provide schools and districts with adequate personnel to coordinate and integrate Prek-3rd programs.

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## APPENDIX A
## PREK-3RD PROGRAM CASE STUDIES

An important part of our study was to visit six programs identified by the staff at the Foundation for child Development to develop a better understanding of resources they used to coordinate Prek-3rd programs and to ascertain whether or not the resources identified in the Evidence Based model are adequate to coordinate PreK programs with K-3 programs.

We visited the following six locations:

- The New School at Columbia Park in Seattle Washington
- The Bremerton Washington School District
- The Montgomery County Public Schools and the Vier Mills Elementary School PK-5 Program
- The Lorraine Hansberry CPC and K-8 School in Chicago
- The North Kenwood/Oakland Charter School in Chicago
- The Miami Dade County School District

Individual Case Study Findings are reported below. In each, we describe the program, then provide an estimate of the resources identified for the program and conclude with an assessment of whether or not the resources available are adequate for integration of an Evidence Based PreK-3rd program.

### The New School at Columbia Park
### Seattle, Washington

The interviews took place at the New School and at the Offices of the New School Foundation on February 4, 2008. We met with the school principal, the New School Foundation program officer, and the fiscal officer of the New School Foundation. The interview included a tour of the school facility as well as an additional follow-up meeting at the offices of the New School Foundation.

*Program Description*

The New School is a public school in the Seattle School District that receives, in addition to its public funding through the State and district, approximately $1.5 million in funding each year from the New School Foundation. This funding supports the school's PreK program as well as providing substantial integrated curriculum and staff support for the higher grades.

The school opened in the fall of 2002 with 102 PreK and kindergarten students. Each year the school adds a cohort of 51 PreK students (4 year olds only) and intends to grow this way until the fall of 2010 when the school will provide educational programs from PreK through the 8th grade. For 2008-09 the school will launch a middle school program in the 6th grade.

The school is located in the working class community of Rainier Beach in Southeast Seattle. The district is in the process of building a new facility for the school so for 2007-08 and 2008-09 the school is located in the Columbia City neighborhood, immediately north of Rainier Beach.

In 2007-08 the school served 359 preK-5$^{th}$ grade students as shown in Table A1:

**Table A1**
**Enrollment and Pupil/Teacher Ratios for the New School At Columbia Park: 2007-08**

| Grade | Students/Classrooms | Pupil/Teacher Ratios |
|---|---|---|
| PreK | 55 students in 3 classrooms | 19:1, 18:1, 18:1 |
| Kindergarten | 53 students in 3 classrooms | 17:1, 18:1, 18:1 |
| Grade 1 | 53 students in 3 classrooms | 17:1, 18:1, 18:1 |
| Grade 2 | 52 Students in 3 classrooms | 17:1, 17:1, 18:1 |
| Grade 3 | 58 students in 3 classrooms | 20:1, 20:1, 18:1 |
| Grade 4 | 54 students in 3 classrooms | 18:1, 18:1, 18:1 |
| Grade 5 | 36 students in 2 classrooms | 18:1, 18:1 |

Source: The New School at Columbia Park

The school has a diverse student population. Student demographics for the 2007-08 school year are shown in Table A2:

**Table A2**
**New School at Columbia Park Student Demographics: 2007-08**

| Students | Percent (%) |
|---|---|
| African American | 47 |
| Asian/Pacific Island | 30 |
| Caucasian | 16 |
| Latino | 7 |
| American Indian | 1 |
| | |
| English Language Learners | 13 |
| Free/Reduced Price Lunch | 42 |

Source: The New School at Columbia Park

Moreover, the school pays careful attention to issues of mobility and student continuity of enrollment. Table A3 displays data the principal provided showing the percent of current students in each grade who participated in the PreK program and remain continuously enrolled in the school since completion of the PreK program.

**Table A3**
**Current Students Who Participated in the New School's PreK Program and Have Remained Continuously Enrolled**

| Grade Level | Percent of PreK Students Who Remain Continuously Enrolled | | |
|---|---|---|---|
| | 2005-06 | 2006-07 | 2007-08 |
| K | 78.8 | 81.1 | 81.5 |
| 1 | 62.7 | 60.8 | 66.0 |
| 2 | ** | 59.6 | 49.0 |
| 3 | 69.2* | 64.8* | 46.7 |
| 4 | NA | 60.0* | 61.5* |
| 5 | NA | NA | 57.1* |

*For students in the highest two grade levels data represent students enrolled beginning in Kindergarten
**This data point is unknown
Source: The New Community School at Columbia Park

The curriculum at the school includes:

- High Scope curriculum for PreK and K
- Integrated PreK program, children enter school at age 4 and do not need to "re-enroll for kindergarten
- Reading Block programs for all children for balanced literacy
- Writers Workshop
- Everyday Math
- Science Kits
- Weekly instruction blocks for art, music, PE and literacy skills
- Project based learning, problem solving and critical thinking
- Health, drama and character education instruction every six weeks
- Friday spirit gatherings
- Monthly cultural evening with the parent Teacher Association
- Active parent participation is encouraged
- Home visits from teachers to connect students and families with the school, both before school opens each fall and during the school year

In addition, there is a student wellness program to support academic, progress, social and emotional development and physical health. This program has weekly meetings led by a full-time counselor to track student progress. Interventions for students who need additional support are designed in partnership with families, and if needed the school helps children and their families seek other community resources and services.

Across the school, collaborative planning time allows teachers in the same grade level time to plan common lessons and assessments and to discuss student progress across the

curriculum. PreK teachers receive 2 hours of collaborative planning time every Friday, while K-5 te4achers receive 40 minutes of collaborative planning time Monday through Thursday as well as an additional 2 hours on Fridays, once every six weeks. This provides time for the PreK and other grade teachers to articulate curriculum across the Prek-3rd program. Finally, every teacher has seven substitute days available to sue for additional collaborative planning time.

This has resulted in relatively high student outcomes as measured by the Washington Assessment of Student Learning (WASL) and shown in Table A4:

**Table A4**
**Washington Assessment of Student Learning (WASL)**
**Results for The New School at Columbia Park**

| Grade/Test | Percent at or Above Standard (%) |
|---|---|
| Spring 2007 Developmental Reading Assessment | |
| 1st grade | 95 |
| 2nd grade | 98 |
| | |
| Spring 2007 WASL | |
| 3rd grade reading | 73 |
| 3rd grade math | 81 |
| 4th grade reading | 82 |
| 4th grade math | 54 |
| 4th grade writing | 64 |

*Resources*

Data provided by the New School Foundation estimates that the Seattle school district budgeted $11,707 per student (district wide) in 2007-08. In addition to this, the New School Foundation provided additional funding of $3,543 per K-5 student at the New School – or just over $1 million, plus approximately $350,000 more for the PreK program, for a total of $1.35 million.

The school staff are shown in Table A5.

**Table A5**
**School Staffing at the New School at Columbia Park**

| Position | Number of Staff |
|---|---|
| Certificated classroom teachers | 21 |
| Special Education certified teachers | 1 |
| English Language Learner certified teacher | 1 |
| Physical Education teacher | 1 |
| Multi Arts teacher | 1 |
| Instructional aides | 11 |
| Academic support specialists (coaches) | 2 |
| Counselors | 1 |
| Librarian | 1 |
| Office Assistants | 2 |
| Principal | 1 |
| Assistant Principal | 1 |
| | |
| Part Time staff | |
| Speech therapist | |
| Family support worker | |
| School psychologist | |
| Nurse | |

The Pre-K classrooms each have one full-time aide; other classes share the remaining 8 aides.

*Prek-3rd Integration*

The staffing configuration and funding at The New School appear adequate to meet the staffing recommendations for a PreK-3rd program, and the use of the administrative staff, and academic support specialists offer sufficient resources (along with substantial commitments to collaborative planning time) to coordinate and integrate programs between the PreK and K-3 at the school. This collaborative planning and curriculum integration is actively supported both by the principal and by the New Foundation program officer who takes a substantial role in participating in the operation of the school.

The program offerings at the New School represent substantially more resources than are currently available to the average school in the State of Washington at the present time. The additional cost of providing this support for a Prek-3rd program along with adequate staff for integration between PreK and the balance of the school program is approximately $1.35 million which is provided by the New School Foundation.

**Bremerton School District**
**Bremerton, Washington**

The interview took place in the Superintendent's conference room on February 5, 2008 In attendance were the district's superintendent, the district's special programs Director, the principal of Naval Prek-3rd Early Learning Center and two teachers on special assignment who devote much of their time to curriculum coordination and articulation with at least a part time focus on integration between PreK programs (which are not supported by state funds) and the balance of the district's curriculum.

The Bremerton School District is located across the Puget Sound from Seattle and its boundaries include a large Navy Base as well as substantial industry related to fishing and shipping in and out of the Sound.

*Program Description*

Washington State's K-12 school funding system is heavily state driven and does not include a mechanism to provide school districts with funding for PreK programs. Moreover, the relatively low levels of funding for general school operations make availability of resources for programs outside of the K-12 program hard to come by. However, the superintendent of the Bremerton School District is deeply committed to early learning. Recently as a member of a state task force studying K-12 school finance (to which the authors of this report were consultants) the superintendent was instrumental in forging ties between the K-12 task force and a parallel task force considering early childhood education issues.

In her own district, the Bremerton Superintendent has established the Early Childhood Care and Education Group (ECCE) to coordinate PreK programs with the rest of the district. Although the funding and statutory limitations prevent the district from directly providing education programs to PreK children, it does purchase research based curriculum materials for many of the PreK programs in the district. In addition the ECCE staff participates in monthly professional development meetings that include Prek-3rd grade teachers and staff to help coordinate learning for all children. Further, the district has an assessment loop where incoming kindergarten children are assessed and the information is fed back to community preschools either celebrate their success and/or to adjust their instruction.

The two major goals of the ECCE program are:

1. Increase the number of children entering kindergarten with the necessary foundation skills in Math and Reading
2. Establish a goal of all PreK-3rd children having a solid foundation in Math and Reading at the end of 3rd grade

In 2007-08 the district re-opened a closed school (Naval Ave. Elementary School) as a Prek-3rd Early Learning Center (previously it had been a K-5 school with a Preschool

added on). This program description begins with a depiction of the Naval Early Learning Center and its program, then describes other PreK initiatives in the district.

Naval has a total of 256 K-3 students along with another 48 children enrolled in four different PreK programs at the school. The four PreK programs operating at the site are:

- Special education with 8 students, 2 co-teachers (one special education and one community preschool teacher), a program assistant, and additional aides as required by student IEPs.
- A Montessori pre-school with one teacher and approximately 10 children in each session
- A Head Start Program with 18 students and one teacher and teaching assistant
- A kindergarten Spanish Emersion program with one teacher and 12 students

The school day at Naval is 6.5 hours long from 9:10 AM to 3:45 PM, with before and after school care available. There are 178 school days in the year. The district operates a full day kindergarten program at Naval and at all of its schools.

The curriculum in the PreK programs varies depending on the program (Head Start, Montessori, Spanish Emersion, or special education). In addition, the school and the district has an active parent involvement program to attract and inform PreK parents (in all programs across the district) using:

- Head Start parent councils
- Washington State Early Learning benchmarks for Parents
- The University of Washington "Language is the Key" DVD, which is available in a number of languages
- Parenting Matters – a publication paid for by the district that is sent to preschool parents through cooperating community PreK providers.
- A Thrive by Five Grant to help families with success in Reading from birth to age five.

District-wide, there is a coordinated professional development plan through community partnerships; Bremerton ECCE staff across the district and in the community preschools share resources, planning etc. based on the needs of the children and families. The ECCE coordinators meet monthly to plan and coordinate efforts. Resources including curriculum materials are shared across programs.

The community preschool staff participates in monthly professional development programs run by the District where topics include Literacy, Numeracy, Social/Emotional Development, Classroom Management, and Open Court Curriculum training.

At Naval Ave. Professional Development is planned on a PreK-3$^{rd}$ basis and considers the needs of children, families and teachers. Building and District coaches work with all the staff from PreK through 3$^{rd}$ grade.

The district also has a prevention plan whereby every year they do a "round up" to identify additional preschools in the community that wish to join the ECCE group. When they join, they receive a research-based curriculum, monthly training and commit to working on the ECCE's two identified goals (see above). The district has a Preschool and Kindergarten District Registration Fair to connect families with the preschools that work with the district and have shown successful outcomes. At these fairs, families fill out registration forms that identify what preschools they have participated in (if any). Principals visit and recruit students from preschools that are "feeding into" their schools to further coordinate PreK-3rd programs across the district.

According to District figures, in 2007-08 the district enrolled 463 kindergarten children. 37% of them enrolled through ECCE partnership preschools, 22% attended other preschools (some out of district or even out of state one might assume), and 41% were not enrolled in preschool prior to entering kindergarten.

The Bremerton School District has taken a number of steps to coordinate Prek_3rd program across the district. In addition to offering 48 children a variety of PreK programs at one of its own elementary schools, it has developed the ECCE partnership to coordinate preschool efforts across the district. Through this partnership, the district provides research based curriculum materials, offers professional development activities to preschool teachers, and encourages parental involvement in their children's learning. It is seeking to grow this program approach, and looking for more innovative ways to partner with PreK providers.

*Resources*

The Staff at the Naval school is identified in Table A6.

At Naval specifically, the principal spends about half a day a week directly with the PreK program staff. Teacher evaluation of the PreK staff is done by the district's special programs director with input from the principal. Because the PreK program is considered an integral part of the Naval educational program, all activities including development of the mission statement and goals, grade level assessments and goal setting, planning and participation in family nights and planning for the Comprehensive School Improvement Plan Team are coordinated across all ages including the PreK program.

**Table A6**
**Staff at Naval School**

| Position | Number of Staff |
|---|---|
| Certificated classroom teachers (K-3) | 11.0 |
| Community Preschool teachers | 2.0 |
| Preschool special education teacher | 1.0 |
| Librarian | 0.7 |
| Music teacher | 0.6 |
| PE teacher | 0.6 |
| Inclusion special education teacher | 1.0 |
| Title I | 2.0 |
| Resource Room teacher | 0.5 |
| Central Office Administrator | 0.5/0.2* |
| Principal | 1.0 |
| Assistant Principal | 0.5 |
| Counselor | 0.6 |
| School Psychologist | 0.2 |
| Speech Pathologist | 0.4 |
| Nursing | As needed |
| Clerical | 2.0 |
| Custodian | 2.0 |
| Food Services | As needed |
| After school programs | As needed |

*District funds 0.5 central office staff to coordinate Prek-3rd programs
The position devotes 0.2 FTE of time to Naval
Source: Bremerton School District

*PreK-3rd Integration*

The Bremerton District devotes substantial resources to PreK-3rd coordination. Moreover, the district's superintendent is familiar with the Evidence-Based model having been a member of the K-12 advisory committee to Washington Learns, a comprehensive PreK through University study conducted at the Legislature's direction in 2006. The authors of this study were consultants to that advisory committee and worked closely with the superintendent at that time. Although Washington does not currently provide funding adequate to fully integrate PreK-3rd programs, in discussions with the superintendent during our site visit, she indicated that if programs for PreK and for K-3 were resourced at the levels proposed in the Evidence-Based model she was certain that there would be adequate resources to ensure strong PreK-3rd coordination.

**Montgomery County Public Schools**
**Vier Mills Elementary School PK-5 Program**

Montgomery County Public Schools (MCPS), located in Suburban Washington DC, serves approximately 140,000 students in PreK through 12th grade. Interviews took place on June 22 and 24, 2008, the first in the offices of the director of the early childhood education program and the second in a teacher resource room of the Vier Mills school.

*Program Description*

Since the arrival of the current superintendent, the district has focused heavily on improvement programs for all students, with a particularly heavy emphasis on lower income students. As part of the school improvement process, the district has added PreK and Head Start programs to its curriculum. The district provided PreK program only serves 4 year olds, and is a half day program. The district is in the process of establishing full-day programs for both Head Start and PreK. Head Start is administered through the same division as the PreK program, and is treated the same way as the district's PreK program.

In addition to the PreK programs, the district has day care programs at Title I elementary schools, and most of the children enrolled for half-day PreK or Head Start programs also are enrolled in the day care programs. This means that virtually all the PreK and Head Start students have – or soon will have – a full day at school. Head Start is only offered to families at or below the poverty level of about $20,000 for a family of four; the district's PreK program enrolls students from families up to 200 percent of the poverty level.

In addition to the core teachers and aides in the PreK and Head Start classes, MCPS provides:

a. Transportation to PreK programs. State law does not require transportation of PreK children.

b. Family service workers. These are full-time paraprofessionals, each of whom carries a load of 4-6 PreK or Head Start classes – whether they are full- or half-day classes. This amounts to one for every 80-120 PreK students. The family service workers are staffed through the early childhood division, and their job responsibilities include:

    a. Conducting home visits to parents and families with the teachers.
    b. Holding parent meetings.
    c. Providing a link to other social services for children and their families.
    d. Supporting families and their children on such issues as domestic violence, provision of appropriate clothing, inoculations, signing up children, and when eligible, parents, for health care insurance or Medicaid, and others as identified.

e. Addressing the vision and dental needs of the children.

c. Parent education is provided at different clusters of schools, such as literacy night when parents are given free books for the at home library. Family service workers model how to read books, accompany parents to visits to museums and concerts at places like Wolftrapp, and take children and families to see plays. There are approximately two central office staff who administer these programs, along with assistance provided by the family service workers. They handle all the organization of parent education nights at the central office.

MCPS also created a district wide PreK curriculum, with formative, benchmark and summative early childhood appropriate assessments. PreK teachers are trained in the same data based decision making and analysis skills as all other teachers. They also meet both during the regular school day as well as after school at least once a week in many schools for common planning and collaborative data based analysis.

There are also central office Instructional Specialists (instructional coaches), for both PreK and K programs. The Instructional specialists:

- Visit schools and help teachers with curriculum, instructional materials, state mandated assessments,
- Help interpret student data,
- Conduct demonstration lessons,
- Provide help on guided reading; and
- In their prime role work to insure fidelity of curriculum implementation by providing assistance to PreK and K teachers.

There are two "Judy" PreK Centers in Montgomery Public Schools. These are comprehensive preschool centers that provide services from birth through PreK. Each Judy Center in Montgomery County serves about 300 families. All Judy Centers, including the two in MCPS, are in Title I schools. The substantive focus of Judy Centers is "school readiness," to provide services from birth to age 4 to help children become ready for Kindergarten. The centers also provide parent outreach and family support, and integrate any young children with special education needs. At the end of the program, all children are assessed by the Maryland Model for School Readiness, and all kindergartners are given an observational assessment at the beginning of the school. All teachers in Judy Centers meet state standards and need a license to work in the program. In addition, all Judy Centers need to be early childhood accredited.

The results of all these initiatives have been stellar for the Montgomery County Public Schools overall. In 1999, only 39 percent of Kindergarten students met the district's outcome proficiency standards. That rose to 56 and 71 percent over the next several years, and then increased to 93 percent for 2007. The percent of African American or Hispanic kindergartners meeting standards was 90 percent.

*Resources*

PreK and Head Start classes are staffed with one licensed teacher and a preschool aide, with classes no larger than 20 students. PreK and Head Start teachers receive planning and preparation time like other teachers, have access to all the professional development at the school, and are part of the primary team in each school, which includes the PreK, K, and grade 1 and 2 teachers.

Family Service Workers are provided at a ratio of one to every 80-120 students. Each serves four to six schools and they provide services to both full-day and half-day programs.

The district has approximately six Instructional Specialists. A seventh is actually a Social Worker whose duties include support for the Family Service Workers. An eighth central office Instructional Specialist provides consultation for special education issues and works with a psychologist on consultation and referrals.

In addition, there are state funds for the two Judy Centers that fund the following positions:

- Program manager, whose role is similar to an Instructional Specialist and is paid at the rate of a 12 month teacher.
- Secretary.
- Service coordinator, who is required to have a Bachelors Degree, works 12 months, and is paid according to the teacher salary schedule. The service coordinator is the intake person and monitors programs to insure that all students and parents receive the services they need and to which they are entitled. The Service Coordinators are the point of contact with outside agencies.
- Half time parent outreach coordinator. This is a paraprofessional position with an average full-time salary about $25,000. This person is the link with infants and toddlers, provides their on site screenings, and determines whether infants and toddlers are meeting developmental benchmarks. These individuals also broker services for children aged Birth to age 2, and provide adult literacy for parents.

*PreK-3rd Integration*

MCPS is a large urban district with a high proportion of low income families. A combination of local and state funding provides comprehensive PreK programs for a large percentage of the PreK population, and the resources available at each school offer adequate personnel to ensure integration across Prek-3rd.

**Vier Mills Elementary School/PreK Program**

Vier Mills School is a Title I school located in a part of MCPS with the highest concentrations of low income families. The school has about 500 students, 67 percent of whom are Title I eligible.

The goal of the school is to educate all students to the grade level proficiency standards in Maryland, regardless of poverty or ELL status or entry performance level. To date, the school has had considerable success. Overall 90-95 percent of all the students score at or above proficiency on the state standards, as do all major subgroups – Title I eligible students, ELL students and Hispanic students. The core reason for the good results are consistency in terms of curriculum and instruction, all of which is held together by a collaborative professional school culture that evolved from the series of collaborative teams the school has created.

The school is organized into several teams: 1) eight Grade Level Teams including a PreK team and an ELL team, 2) a team comprised of grade level team leaders, and 3) a Core Team including the principal, assistant principal, the Reading Specialist, the Math Content Teacher and the Staff Development Teacher. Teams run the school, which is focused on developing the schools as a series of horizontal and vertical Professional Learning Communities (PLCs).

The teacher work day is 90 minutes longer than the student day; teachers arrive at 8:15 and leave at 3:45; the student day is from 9:00 to 3:00. Teachers receive 4 hours and 15 minutes of planning and preparation time a week during the 9-3 time period. The schedule is constructed so most grade level teams meet at least once a week for a 90-120 minute block of collaborative planning. This is accomplished by joining the regular planning and preparation time to lunch, students' going to special classes (art, music or physical education), and/or the 45 minutes before and after the student instructional day. All teachers in a team also have common planning periods at least one other time during the day during which considerable, additional informal collaboration also occurs.

The grade level teams, via Professional Learning Communities (PLCs), are the "engine" for the school. These teams review student data, talk about individual students, set goals together, analyze formative and summative assessments, create content "maps" from which they develop commonly used curriculum units that combine over the course of the year to cover the Maryland curriculum standards for the grade, and work together to increase curriculum and instructional expertise for all the teachers at their grade level. The teams create common curriculum units that each teacher in the team teaches. Further, the teachers use common assessments for these units. This allows them to review the performance of all students at a grade level on the common assessments for the units to identify what worked and what did not, to add ideas from the teachers who were particularly effective, and to help a colleague who struggled.

Over the years, teachers at all grade levels have created the school's own formative assessments; they used the district benchmark assessments as a foundation but the

formative assessments are more school or classroom based. All assessments created by the school are linked to the Maryland Learning Outcomes, so the teachers work with a set of common formative assessments, common curriculum unit assessments, and common benchmark quarterly assessments, all of which are linked to the state's summative assessments. By developing their own formative assessments over the years, the teachers have been better able to understand what the Maryland outcome assessments actually meant and required from students, and what teachers needed to do to produce students' performing successfully on those assessments.

The Staff Development Teacher also helped each grade level Team develop these batteries of assessments, which not only were aligned with the state tests but also were articulated and aligned across each grade levels. This helped make instruction much more consistent both across classes within grades and across grades within the school. As a result, all teachers at each grade level teach the same units at the same time and then use common unit assessments to determine how well students learned. Since the school has been moving from assessment data to instructional strategies in a collaborative manner for several years, they have developed considerable expertise in how to assess a battery of 80 formative assessments for all the students in a grade and translate that into teaching strategies that are effective.

The result of this is that teachers in this school do not "do their own thing in the classroom." They use and implement the commonly developed curriculum units and end-of-unit common assessments. They view teaching as a collaborative effort and teachers within a grade level as inter-dependent. And this includes PreK and K teachers as well. Moreover, individual grade teachers view all students at a grade level as "their own" student. Grade Level Teams review performance data from all students in the grad. Sometimes students are grouped across sections within a grade, and teachers who are especially good with some student problems take the students with those problems. The team works collaboratively to get all the students at that grade level up to grade level proficiency.

The prime impact of the school is the high quality, common core instruction in all key curriculum areas. But the school also provides multiple extra helps for struggling students that include:

a. Para-educators who provide extra help in regular classroom to small groups of student; these positions are funded by federal Title I money. These para-educators receive considerable professional development on how to provide this extra instruction. The work with small groups providing extra instruction on issues with which the group is struggling; these are regular small groups within the regular classroom. The paras help the student take the maximum advantage from the multiple learning centers that are in the classrooms and which can be used for specific problems.

b. In upper grades, teachers pull struggling students out and place them in small groups to provide them a second session of reading instruction. All classes

organize the 90 minutes of language arts into three periods: whole group instruction for about 30 minutes, guided reading for about 30 minutes and extra help for another 30 minutes; this special extra instruction for the small group is provided in this latter 30 minute period.

c. Academic intervention teachers, who are teachers that work with the regular teachers during the regular reading and math periods, but with specific students and in very small groups. The school has 3 "academic intervention" positions, one for grades K-1, one for grades 2-3, and one for grades 4-5 intervention teachers. They are specialized licensed teachers. They respond to formative assessments and tend to work with 3-5 students at a time during the third part of reading or math block. They have been funded by a combination of Title I and local monies, but with budget cuts, might be scaled back next year.

d. Extended day program, staffed by volunteers and teaching staff who are paid small stipends. This programs provides academic tutoring before and after school

e. Summer school, which is a 4 week program for a half day, but provides the same amount of instructional minutes in reading and math on these days as is provided during the regular school year. Students from all grade levels can attend the summer program

f. There is a reading specialist in every school, as well as a math content specialist, which gives the school specialized, full time expertise in the two most important content areas. At some times during the day and week, these individuals, who are paid on the teacher salary schedule, also provide tutoring and specialist help to small groups of students.

g. The district and school has decided to use some Title I funds to reduce class size in grades 3-5 from 25 to 20 or less, and in grades K-2 to 15-17 students.

h. The school also has 5 ELL teachers who provide additional assistance the its many students coming from families where English is not the dominant language. The number of ELL teachers depends on the number of ELL students.

In sum, the school provides multiple extra help strategies, in addition to the core curriculum, from tutoring, to focused assistance in small groups during the regular small group time in the regular classrooms, to extended day academic tutoring, summer school, and small class sizes.

But according to those interviewed, the real impact is not because of all the extra help strategies, although they are important. The invisible piece for this school is the culture of the school and its human capital, including staff in the PreK program and team. They hire the right kind of people, teachers who want to make sure all students in the school learn, treat those teachers with respect, give them the curriculum and instructional tools to get the job done, make it a positive environment, invite parents in, and make it a happy

and learning place for kids. The impact comes from the mind set and dedication of the staff, and the alignment of all curriculum activities to get all students up to and beyond the proficiency bar, a goal all teachers relentlessly pursue. They have a cohesive staff that knows how this school works and what they need to do to get the job done, even if budget cuts might mean they can't be paid for some of their extra efforts. The school has a satisfied, hard working, focused and relentless faculty; teachers come early and leave late.

*Resources*

The school has 28 classroom sections, and thus 28 grade level teachers. Since about 3 of these are for the PreK program the school has about 25 K-5 teachers. These are augmented by 3 academic intervention teachers (see discussion below). In addition, the school has specialist teachers including 1.1 art, 1.1 music, 1.1 PE teachers. All the 0.1 teachers come on the same day so the grade teams, that include 3-5 teachers, can have common planning times. Specialist class sizes are the same size as regular class sizes. In addition, the school has one Principal, one Assistant Principal, one Guidance Counselor, 0.4 Nurse, a part time social worker from the Head Start Program, plus for professional development a full time 1.0 Reading Specialist, a 1.0 Math Content Coach who is Title I funded, and a 1.0 Staff Development Teacher, who primarily works with the grade level teams and the Team of Team Leaders, but also provides some professional development to teachers.

Vier Mills has two half-day PreK classes, and 1 full-day Head Start class. There are 20 students in each class for a total of 60 PreK students. One teacher provides instruction for each of the half day PreK classes and a second teacher provides instruction for the full day Head Start Program. Each of these teachers also has an instructional aide. The school also has 3 sections of PreK special education classes, with approximately 8 students in each class, which together are staffed by 2 teachers and 2 aides. Thus total PreK teacher resources amount to 4 teachers and 4 aides.

Because the school's Staff Development Teacher is not trained in preschool strategies, most professional development for the PreK team is provided by Specialist Teachers from the Early Childhood Division. This professional development focuses on the PreK formative and benchmark assessments, the district's PreK curriculum that is used for all of these PreK classes, including the Head Start classes, and the pacing chart for the PreK curriculum. The PreK training includes summer institutes, trainings during the course of the school year, the organizations of PreK cohorts across schools who work collaboratively on various PreK instructional issues, etc. Though planning and preparation time is not consistently provided to PreK teachers, as many teach both a morning and afternoon PreK class, the goal is to have all classes become full day, provide the planning and preparation time, and schedule it like that for other teachers in the school so the PreK team can have extended collaborative planning time as well. There is some collaborative planning among the PreK team, but because of the student schedule it simply is more complicated to schedule.

When the school has professional development on issues that cut across grades, such as race, cultural awareness, or teaming skills, the PreK teachers are included. The school also has a series of PreK to K transition meetings. Funds are provided to pay the PreK teachers to meet at the end of the year with the kindergarten teachers to discuss student performance and needs, and to provide advice on grouping students for kindergarten class sections.

Finally, the parent outreach program is similar to that described in the district section above, with the family service workers implemented the core of this program element.

*PreK-3rd Integration*

The PreK and K programs are fully integrated into the ongoing operation of the school, and that integration will be further enhanced when the district is able to have all PreK and Head start classes operate on a full day basis. When that happens, all PreK teachers will have the full planning and preparation times as other teachers, and the extended 90-120 minute blocks of time for extended common planning and collaboration over curriculum and instructional issues.

**Lorraine Hansberry CPC and K-8 School**

The Lorraine Hansberry CPC and K-8 School is part of the Chicago Public Schools (CPS). The school has 26 classrooms and serves approximately 526 students in grades PreK through 8. There are 66 children in the CPC program for 3 and 4 year olds and approximately 460 in the K-8 program. Class size in grades K-3 averages about 20-22; and increases to about 28 in grades 4-6 and 31 in grades 7-8. The school is located in the North Lawndale Community in Chicago and enrolls virtually 100 % African American students. The school staff (administrators, teachers and other staff) matches the ethnicity of the students and are primarily African American.

Our interview regarding the Lorraine Hansberry CPC program and K-8 school took place in early December 2007, and included three people, a central office administrator who is responsible for early childhood education and has served in the past as both a CPC head teacher and as a Parent Resource Teacher; the Head Teacher at the Hansberry CPC and the school principal, who previously served as the assistant principal at the school.

*Program*

The CPC program at Lorraine Hansberry began in 1967 as a PreK-3rd program, but today serves children in PreK through the second grade. In the beginning there was also a 10 week summer program, but that no longer exists.

The funding for the CPC program is all from Title1 and is part of a district set aside of the overall CPS Title 1 grant. Over time funding has been reduced. Today, the program has class sizes of about 20-22 with a teacher and aide, and just a head teacher, clerk and a half-time custodian for support. There is no Parent resource teacher; that role has been

incorporated into that of the head teacher. There currently is no community liaison, no nurse or social worker in the CPC program.

Originally the program was half-day; so with class sizes of 20 it could have 160 students in four classrooms of 20 students each half day. When the Clinton welfare reforms were passed many mothers had to go to work, So many parents looked elsewhere for full-day programs for their children while they were at work, often needing care from 7:00 AM until 5:00 PM.

In part as a result, Hansberry partnered with Head Start; so today it has 66 children in three classrooms of 22 each. All three are full day; two collaborative with Head Start which funds the second half of the day; and for the other full day program, the main school's principal found extra money to make it a full-day program.

The instructional program for children runs from 9:00 to 11:30 in the morning, and then 12:15 to 2:45 in the afternoon for a total of two 2.5 hour shifts each day. Teachers for CPC and main school arrive by 8:30.

There is an ambitious CPC parent program. The goals and activities of that program include:

- Working with parents so they can help their children
- Training in assertive discipline for children
- Personal development for the parents themselves
- GED programs for some parents
- Give parents experience taking trips so they learn how to take their children on trips to the Chicago children's museum and other locations
- Helping parents enforce regular bed time for children
- Speakers on a range of topics important to the community
- Teaching life skills

Parents sign a contract when their child enrolls pledging that they, or a relative or sibling over 18, will help in the classroom once a week.

The CPC curriculum includes significant hands on experiences and relies on learning centers in what appears to be an activity based literacy and math curriculum. For reading the school uses an electronic reading assessment battery from Creative Curriculum, called CC.net. It is online so the results are available immediately. These data are used to determine professional development needs and to drive discussions among teachers and between teachers and the head teacher regarding what and how to teach. In kindergarten the school uses an automated version of DIEBELS, with a Handheld Palm device. Teachers are able to download the results into a computer which provides a printout showing how the child performed. Both systems have guidelines for activities to use with children in the areas where weaknesses are identified.

Professional development and coordination**.** Some of the structured time blocks include:

1. The 4 preparations for each teacher
2. Meeting for 30 minutes (sometimes 60 minutes when teachers voluntarily get to school at 8 rather than 8:30) before the instructional day starts.
3. There are also 7 pupil free days during the year for professional development.

There is a considerable and multi-faceted professional development at the school and CPS, and a great deal of cross collaboration between the main school and the CPC center. Pupil-free time periods are used for the following activities:

- Once a week, CPC teachers meet with primary teachers (K-3) to discuss the curriculum program – both math and reading; as the state proficiency tests are in grade 3, they focus on scaffolding the topics in the curriculum for all kids, aged 3, 4, 5, 5 and 7 so that all grades of the curriculum provide the foundation needed to do well on the 3rd grade exams.
- Meetings between PK teachers and K teachers when the 4s transition into kindergarten; they talk about the kids and try to place them on compatible classrooms. This done both during before school meetings and some PD days.
- Workshops during the year for the Head Teachers, who then bring all the information back to the CPC teachers in more informal PD sessions, both before school and during preparations.
- The head teacher spends about 1/3 of her time in CPC teacher classrooms, coaching on new strategies, doing model lessons. Head teachers and CPC teachers also tend to attend a summer conference each summer.
- The head teacher also attends a number of conferences annually.
- The principal of the main school Principal also provides a great deal of professional development for the CPC program staff
- All grade level teachers have common preparation time so they can work collaboratively together.
- Main school teachers all use at least 1 preparation period a week to plan lessons together; all grade level teachers teach the same lessons each day and week, so all teachers are on the same page. They also do some collaboration reflections on how they worked.
- The main school has 2 FTE reading coaches who meet individually with all teachers to discuss the DIEBELS results and plan lessons.
- There are weekly meetings by grade level groupings including K-3 and PreK.
- There is considerable informal cross collaboration among the CPC Head Teacher, principal, main school reading and math coaches, and among CPC and main school primary teachers.

*Resources*

Core resources at the CPS include**:**

- A head teacher, paid on a teacher salary schedule
- A parent resource teacher, paid on teacher salary schedule; this position has been eliminated and rolled into the responsibilities of the head teacher
- A Community liaison who was a full time para-professional; this position has been eliminated and rolled into the responsibilities of the head teacher
- 1 Teacher and 1 Aide for classes of 17 children, which very quickly rose to about 22 children in a class
- A Nurse speech therapists, and a social worker; these positions are no longer funded for the PreK program.
- A school Clerk
- About a half time custodian
- Plus:
    - Approximately $30/pupil for textual and instructional materials
    - Approximately $30/kid for non instructional materials
    - Modest funding for trip transportation and admission fees, and another small pot of money for CDs and other computer materials.
    - A stipend for Parent Room supplies, books, etc.
    - Funds for trainers or attending conferences. Here, most of training of teachers is provided by Head Teacher, school Principal, or math and reading coaches. And they get trained by central office staff.

CPC teachers are employed by the district under the same contract as the teachers at the rest of the school, with salaries in the same salary schedule and the same working day and year. Teachers get four preparation periods a week. The CPC also has access to a portion of time from a nurse, a social worker and a psychologist. Every elementary school in the Chicago Public Schools has a Case Manager position.

*PreK-3rd Integration*

Although considerable integration appears to take place, the staffing levels for such integration are relatively low and it is not clear the extent to which PreK programs benefit from the planning and coordination that goes on in grades K-8.

**North Kenwood/Oakland Charter School**

The North Kenwood/Oakland Charter School was developed by the University of Chicago Center for Urban School Improvement. The school enrollment is nearly 100% African American with 75% of the children living in poverty. We met the school's principal and PreK teacher. There are 335 students in PreK-5 and the schools partners with a North Kenwood/Oakland Middle School of 135 students two blocks away. The visit was conducted on December 18, 2007.

*Program*

The school is organized into clusters:

> Early childhood cluster: 1 PreK, 1K, 1 Grade 1 and 2 multi-age K/Grade 1
> Primary Cluster: 2 Grade 2 and 2 Grade 3
> Intermediate Cluster: 2 Grade 4 and 2 Grade 5
> Each Cluster has a teacher designated as a coordinator

The school day is 8:20 to 3:00 for children, with a 45 minute lunch period. Teachers stay later for an extra hour on every Monday from 3:30 to 4:30 and stay an extra hour and a half from 3:30 – 5:00 largely for professional development on Wednesdays. This is a longer day than CPS teachers but the school's teaches are paid at about the same rate as a CPS teacher. There is no extra pay for these extended day hours per the terms of the contract at this charter school. The program used to have a 12 week summer school but because of funding, that has been cut.

The school year is about 178 days for children, a bit longer than CPS, with an additional 5 days before and 5 days after school for teachers -- 6-7 of which are used for professional development.

The PreK teacher is treated like all other teachers in terms of teaching load and preparations. All teachers get one 45 minute preparation period per day each week, or five per week. PreK children go to specials classes during that time period. A second aide covers the PreK class so the PreK teacher and main aide can meet during the teacher's preparation period.

The school is organized as a Professional Development School for the University of Chicago, so there is considerable collaborative work, within clusters, within grade levels, during common preparation time, observing other teachers classrooms and having literacy coaches do lesson plans and Professional Development.

The Professional Development structure fosters collaboration through:

- Clusters that are used for collaborative planning of curriculum and instruction and alignment across the Cluster grade levels: PK-1, 2-3, and 4-5. Cluster teachers

meet on Mondays for an hour after school for this collaborative planning. 1 Monday a month is used for Cluster professional development.
- Meetings of the entire faculty on Wednesday afternoons for professional development. These meetings last for 1.5 hours
- Collaborative preparation by grade level teachers during the preparation periods
- Both Clusters and Preparation groups meet informally during the 45 minute lunch period on a regular basis
- Observation of other teachers' classrooms

Professional development is almost entirely led by school staff, mainly the literacy coaches and the principal. The school has a very rich balanced reading program, with a focus on phonics for the younger children. The school uses Every Day Math and the school scores higher on math than on reading, which is unusual. In Clusters and preparation periods, teachers analyze data together, view video tapes of good classroom instruction, etc.

PreK is fully integrated into the overall school, and part of the PreK-Grade 1 cluster. Resources needed for professional development and collaboration:

a. Normal preparation time of one period per day per week
b. Pupil free days before school year begins and after it ends; the school has 6-7
c. Additional time after school for which teachers are not paid extra; total of 2.5 hours a week
d. One FTE coach position
e. Some money for the experts in the school to get trained
f. A collaborative culture as nearly all of professional development is based on collaboration: clusters, grade levels, classroom observation, coaches doing demonstration lessons, etc.

We asked what the school did for struggling students. The response was that they used differentiated instruction and differentiated learning supports. Differentiated instruction in the classroom includes various student groups, sometimes homogeneous small groups of 5-6 where teacher can focus on specific skills, as well as for example in math problem solving having the kids solve the problems many different ways with multi base blocks, with a graph, with Cuisenaire rods, or using the algorithm. But then beyond the classroom, there would be Reaching Recovery teacher tutors, then Inner City intern tutors who tutor six kids a day each for 30 minutes, then the UC student tutors in academic help in an extended day program which includes tutoring twice a week, and in the old days summer school (didn't get this far, but then I'd guess more focused special education ). So our EB extra help strategies fit like a glove and can be described as differentiated learning supports. Principal said the school focuses first on what can be done with differentiated instruction within the classroom (which does not include a teacher doing something different for each of the 25 kids they have but some differentiation in groups and sometimes with multiple types on instructional strategies), and then differentiated instructional supports which gets into "the design of the entire school." -- tutoring, extended day help, and summer school, and then special education. Before getting to the

tutoring, the struggling kid also is identified by the teacher and a multi faceted school team meets – teacher, lead teacher, literacy coach and maybe the P – to determine what the problem is and how it can be best addressed.

Finally, there is an important Human Capital and Talent story to tell for this school; the Principal was smart and dynamic and could provide a citation or reference for every strategy and structure she described. The school recruited their high quality teachers initially by identifying outstanding teachers in other CPS schools. So this school has talent, a rigorous math and reading program, and a school structure that helps them get the job done collaboratively.

Major additional resource beyond the Evidence Based model are the 2.5 hours of after regular school day for Cluster planning (1.0) hour on Monday, and for professional development (1.5 hours) on Wednesday.

*Resources*

PreK classes have a maximum of 20 children with 1 teacher and 1.5 aides in each class. The 12 other classes in the school each have about 25-26 students.

Staff at the school includes:

- One principal
- 13 teachers
- Specialists as follows:
    - 0.5 FTE Dance
    - 0.5 FTE Art
    - 0.75 FTE PE
    - FTE Spanish, for a total of 7.75 specialists
- 2 half-time literacy coordinators, master teachers, and instructional facilitators
- 1.0 FTE Instructional Coach.
- 0.3 FTE Reading Recovery tutor
- 7.0 FTE Inner City tutors, who are trained and supervised
- Several University of Chicago undergraduate trained and supervised tutors for an after school program
- 3 half time Kindergarten and first grade aides, with one in each class
- 1.5 Aides in the PreK classes
- 1 Social worker
- Nurse, half a day once a week
- Office clerk
- office manager
- 1 operations clerk

The school receives the same core dollars per pupil as a CPS elementary school plus:

- Title 1 funds
- Resources through writing grants
- University of Chicago funding that provides about 15% of the school's budget
- A half-day PreK program that receives $3,900 per child in state funds through a 4 year old program.
- A private donor provided enough funds to enable the school to extend the PreK program to a full day program for five years

*PreK-3rd Integration*

The PreK program is fully integrated into the overall operation of the school by including the PreK teachers in the Early Childhood Cluster, by providing PreK teachers with the planning and preparation time provided to all other teachers, and by including the PreK teachers in all the ongoing professional development activities of the school.

**Miami Dade County School District**

Site Visit April 14 and 15, 2008 Meetings were held with the districts PreK administrator.

*Program*

The Miami Dade County School District has invested considerable resources in early childhood education since 1988. The program is targeted to needy students, and only serves 4 year olds. The program operates through a number of integrated programs with various funding sources – and the district's goal is to provide universal PreK for all 4 year olds.

The district operated PreK program currently operates in 28 Dade County Schools. The district's program serves approximately 4,300 4 year old children in Voluntary PreK (VPK) programs as well as another 1,200 children in PreK special education programs (ESE). The district has attempted to "blend" programs with ESE and PreK, but as the budget has been reduced, this has become less common, and there is really no more integration of the programs on an official level (see notes on visit to school).

The district administrator estimates that the district run program serves 20-25% of 4 year olds in the district based on a Kindergarten enrollment of about 25,000 this year. This varies somewhat from state estimates of the number of 4 year olds in the county as described below.

The district respondent indicated that the key elements of the district's PreK program were:

- To improve the quality of early learning systems and to coordinate programs for PreK-3rd to improve early learning at all schools
- To connect programs and parent support between PreK and the schools
- To align curriculum and provide combined Professional Development for teachers across PreK-3rd grades

Professional Development for PreK teachers is offered at all of the district operated schools. This year due to funding decreases, professional development support has declined from eleven days a year to 4 days a year.

Despite the projected funding cuts, this year the district made great efforts to combine PreK professional development programs with the K-3 professional development so that the curriculum would be more "seamless" across the PreK-3rd span.

Much of the PD for PreK programs is provided by the United Way Center for Excellence, and funded by the Children's Trust which is making efforts to coordinate early childhood PreK throughout Dade County.

This program provides funding for professional development through the district, and works to strengthen the capacity and relationships with parents, but one result has been some competition for support to provide educational services for children. There has also been an effort to develop family support programs, ad the district administrator said that those programs do "get kids to school" and the district needs to help "sustain that energy." The district has not had much success funding family support programs in the past. There are a few "boutique" programs in the district, mostly privately funded. She indicated that they needed to maximize the essential components of those programs and did not do so. As a result where parent education and support programs exist today they are operated individually by schools with no real financial support from the district.

*Resources*

VPK is a Florida state program designed to support PreK programs for 4 year olds across the state. Prior to VPK the state provided $3,200 per PK student to all providers to offer a half day PreK program. At that time, Dade County used its own revenues to supplement this funding to provide full-day programs for the children it serves, and continues to do so today.

The State VPK program also provides funds to non-school district providers and state data (http://www.fldoe.org/earlylearning/legislative.asp) show that in 2006-07 there were an estimated 34,759 4 year olds in Dade County of which just over half or 18,465 were estimated to be receiving VPK services. This suggests that in addition to the 3,000 students served by the Dade County school district, another 15,000 4 year olds are served by the Early Learning Coalition with State VPK funds. These funds amounted to $2,720 per child in Dade County for the 2006-07 school year. The district respondent indicated that district officials attempt to work with the providers to coordinate services and help with professional development, but she had relatively little data on participation rates or the effectiveness of the efforts of the other providers.

VPK programs in the district itself are half day. Students who receive full day programs – and the goal is to provide that for all of the students in the program – funding is either provided through the School Readiness program (HHS funded), Head Start, or paid for by the parents.

Of the 4,300 students in VPK, 1,200 are non-title I and the remaining 3,000 are Title I students.

The district also relies on the following sources of funding for PK programs:

- HHS School Readiness funds (note that these funds do not go directly through the district, but are provided to other providers and there is substantial time and cost involved in coordination with those providers)

- Title I
- Head Start

State funding for PreK has declined, and the district is concerned about its ability to fully fund its full day PreK program in the future. While the district has subsidized much of the VPK costs in the past, it may no longer be possible due to the budget reductions the district and state are experiencing.

All district funded programs are operated by the district at its schools and it does not have contracts with private providers to provide PreK programs. Private providers are funded outside of the district whether privately, through Federal or state funds.

Parent pay programs are not coordinated or integrated with the VPK program in the district. One of the problems the district has found is that in cases where the district was able to supplement parent payments in the past, between VPK and Title I programs, parents now want a free full day program so there is less willingness or ability to pay for part of the program cost on the part of Title I eligible families.

Under the district's current VPK model, the program provides 1 FTE certified teacher and 1 FTE paraprofessional for each 20 students in a full day program. (Note that in the last year this has decreased to 18 students per teacher and paraprofessional).

The district also operates a PreK program paid for by parents. This program employs certified teachers and a 5 hour aide for a 6 hour day program. To fund this, the district has had to scale down funding for materials and supplies and reduce professional development expenditures, limiting the effectiveness of any curriculum integration. This program continues as long as parents continue to pay for it. Cost is $120/week. (NOTE: $120 x 20 students x40 weeks would be $96,000 which probably covers teacher and aide, but not much in the way of costs of classroom, etc.).

The program's total budget is about $22 million of which $4.9 million is fee supported, the balance funded by the district. At the district level this funds two administrators (on of them with Title I funds), and some curriculum support through the district's curriculum office.

The demand for PreK programs in the district exceeds capacity and there is a lottery for children to get into the district supported programs. The district administrator would also like to provide PreK programs in the summer as well, both to help children learn and to provide day care for working parents with limited income. Currently summer programs are only available in the district's year round schools.

Expansion has been limited by class size restrictions imposed by state programs which have reduced PreK class sizes from 20 to 18 measured at the classroom level rather than on the average class size at a school. Consequently many schools don't have space for more PreK classes. The result has been an inability to expand the program in existing schools although as new schools are build plan for PreK programs are included in the

design. The problem is even if the classroom space is available, there are no dollars to support staff and instructional supplies for the programs.

*Prek-3rd Integration*

In summary, the district appears to be highly committed to providing PreK programs to children and is making efforts to coordinate PreK programs with the K-3 programs at the schools. However, most of the PreK children in the Dade County area who attend PreK receive services from non-district providers. While efforts to coordinate programs between the district and other providers (many of whom receive state funding) are made, funding limitations seem to have restricted the ability of the district to facilitate such coordination.

## Appendix B
## Estimated Number of 3 and 4 year olds at Poverty Levels (2005)

| | Total | 100% Poverty | 200% Poverty |
|---|---|---|---|
| Alabama | 119,916 | 34,534 | 60,799 |
| Alaska | 16,955 | 1,598 | 6,350 |
| Arizona | 186,779 | 43,429 | 91,972 |
| Arkansas | 79,670 | 21,648 | 42,169 |
| California | 1,072,939 | 215,324 | 489,444 |
| Colorado | 134,159 | 24,025 | 53,484 |
| Connecticut | 83,879 | 10,180 | 22,382 |
| Delaware | 23,706 | 3,741 | 8,745 |
| District of Columbia | 12,746 | 5,231 | 8,552 |
| Florida | 443,302 | 91,786 | 205,590 |
| Georgia | 276,819 | 63,636 | 126,147 |
| Hawaii | 36,354 | 5,253 | 14,128 |
| Idaho | 44,136 | 8,491 | 24,469 |
| Illinois | 360,778 | 64,308 | 133,411 |
| Indiana | 175,755 | 35,563 | 77,050 |
| Iowa | 77,495 | 12,170 | 29,411 |
| Kansas | 77,279 | 15,179 | 35,527 |
| Kentucky | 103,969 | 29,015 | 59,234 |
| Louisiana | 122,479 | 38,952 | 64,825 |
| Maine | 28,475 | 4,821 | 8,527 |
| Maryland | 146,997 | 17,679 | 42,699 |
| Massachusetts | 150,434 | 20,248 | 42,627 |
| Michigan | 268,010 | 53,967 | 102,465 |
| Minnesota | 137,810 | 18,108 | 38,133 |
| Mississippi | 78,262 | 32,936 | 55,345 |
| Missouri | 155,171 | 33,726 | 71,447 |
| Montana | 22,208 | 3,079 | 10,153 |
| Nebraska | 49,833 | 7,975 | 19,691 |
| Nevada | 73,378 | 10,866 | 26,776 |
| New Hampshire | 27,029 | 1,874 | 5,512 |
| New Jersey | 228,462 | 36,757 | 73,361 |
| New Mexico | 59,244 | 15,182 | 32,231 |
| New York | 494,699 | 109,419 | 201,136 |
| North Carolina | 243,439 | 56,609 | 114,348 |
| North Dakota | 13,121 | 2,070 | 4,943 |
| Ohio | 296,804 | 68,802 | 136,223 |
| Oklahoma | 95,103 | 23,906 | 52,992 |
| Oregon | 90,196 | 17,748 | 41,506 |
| Pennsylvania | 288,740 | 54,684 | 110,200 |
| Rhode Island | 24,739 | 5,511 | 9,915 |
| South Carolina | 112,210 | 27,866 | 54,112 |
| South Dakota | 24,266 | 5,593 | 11,118 |
| Tennessee | 154,894 | 36,999 | 80,323 |
| Texas | 786,158 | 210,945 | 396,061 |
| Utah | 95,386 | 9,177 | 38,156 |
| Vermont | 14,772 | 2,440 | 5,966 |
| Virginia | 206,468 | 29,871 | 64,654 |
| Washington | 159,652 | 26,421 | 62,823 |
| West Virginia | 41,531 | 9,745 | 18,321 |
| Wisconsin | 140,047 | 23,460 | 52,694 |
| Wyoming | 12,977 | 2,234 | 6,014 |
| Total | 8,169,630 | 1,704,781 | 3,544,161 |

## Appendix C
## Tables with compensation data[20]
### Table C1: National Average Compensation for School and District Staff (Excluding Teachers)

| Position | Salary | Model Benefits | Total Compensation |
|---|---|---|---|
| **School Building** | | | |
| Principal | $80,411 | $20,986 | $101,397 |
| Asst. principal | $67,836 | $18,956 | $86,792 |
| Media Tech | $37,562 | $14,066 | $51,629 |
| Other Prof Staff | $54,071 | $16,732 | $70,803 |
| School Secretary | $24,887 | $12,019 | $36,906 |
| School Clerical | $19,910 | $11,215 | $31,125 |
| Supervisory Aide | $15,915 | $10,570 | $26,485 |
| Custodian | $18,176 | $10,935 | $29,112 |
| **Central Office** | | | |
| Superintendent | $116,244 | $26,773 | $143,017 |
| Asst. Superintendent | $99,771 | $24,113 | $123,884 |
| Business Manager | $78,154 | $20,622 | $98,776 |
| Instructional Services | $83,279 | $21,450 | $104,729 |
| Staff-personnel Services | $80,568 | $21,012 | $101,580 |
| Technology | $66,832 | $18,793 | $85,625 |
| Other Areas | $68,229 | $19,019 | $87,248 |
| Secretary | $33,077 | $13,342 | $46,419 |
| Accounting/payroll clerks | $34,829 | $13,625 | $48,454 |
| Typists/data-entry clerks | $26,156 | $12,224 | $38,380 |
| **Substitutes** | $100 | $8 | $108/day |

[20] Note, staff not on the teacher salary scheduled are adjusted by the CWI for each state. The teacher salaries by state are utilized in the model for teacher, librarian, nurse, and counselor FTEs.

## Table C2
## Average Teacher Salaries by State

| State | Avg. NEA Salary (05-06) | Model Benefits | Additional 5 Days PD | Total Compensation |
|---|---|---|---|---|
| Alabama | $40,347 | $14,516 | $1,267 | $56,130 |
| Alaska | $53,553 | $16,649 | $1,681 | $71,883 |
| Arizona | $44,672 | $15,215 | $1,402 | $61,289 |
| Arkansas | $42,768 | $14,907 | $1,343 | $59,018 |
| California | $59,825 | $17,662 | $1,878 | $79,365 |
| Colorado | $44,439 | $15,177 | $1,395 | $61,011 |
| Connecticut | $59,304 | $17,578 | $1,862 | $78,743 |
| Delaware | $54,264 | $16,764 | $1,703 | $72,731 |
| District of Columbia | $59,000 | $17,529 | $1,852 | $78,381 |
| Florida | $43,302 | $14,993 | $1,359 | $59,655 |
| Georgia | $48,300 | $15,800 | $1,516 | $65,617 |
| Hawaii | $49,292 | $15,961 | $1,547 | $66,800 |
| Idaho | $41,150 | $14,646 | $1,292 | $57,088 |
| Illinois | $58,686 | $17,478 | $1,842 | $78,006 |
| Indiana | $47,255 | $15,632 | $1,483 | $64,370 |
| Iowa | $41,083 | $14,635 | $1,290 | $57,008 |
| Kansas | $41,467 | $14,697 | $1,302 | $57,466 |
| Kentucky | $42,592 | $14,879 | $1,337 | $58,808 |
| Louisiana | $40,029 | $14,465 | $1,257 | $55,750 |
| Maine | $40,737 | $14,579 | $1,279 | $56,595 |
| Maryland | $54,333 | $16,775 | $1,706 | $72,813 |
| Massachusetts | $56,369 | $17,104 | $1,770 | $75,242 |
| Michigan | $54,739 | $16,840 | $1,718 | $73,298 |
| Minnesota | $48,489 | $15,831 | $1,522 | $65,842 |
| Mississippi | $40,576 | $14,553 | $1,274 | $56,403 |
| Missouri | $40,462 | $14,535 | $1,270 | $56,267 |
| Montana | $39,832 | $14,433 | $1,250 | $55,515 |
| Nebraska | $40,382 | $14,522 | $1,268 | $56,171 |
| Nevada | $44,426 | $15,175 | $1,395 | $60,995 |
| New Hampshire | $45,263 | $15,310 | $1,421 | $61,994 |
| New Jersey | $58,156 | $17,392 | $1,826 | $77,374 |
| New Mexico | $41,637 | $14,724 | $1,307 | $57,668 |
| New York | $57,354 | $17,263 | $1,800 | $76,417 |
| North Carolina | $43,922 | $15,093 | $1,379 | $60,394 |
| North Dakota | $37,764 | $14,099 | $1,185 | $53,048 |
| Ohio | $50,314 | $16,126 | $1,579 | $68,019 |
| Oklahoma | $38,772 | $14,262 | $1,217 | $54,251 |
| Oregon | $50,044 | $16,082 | $1,571 | $67,697 |
| Pennsylvania | $54,027 | $16,725 | $1,696 | $72,448 |
| Rhode Island | $54,730 | $16,839 | $1,718 | $73,287 |
| South Carolina | $43,011 | $14,946 | $1,350 | $59,307 |
| South Dakota | $34,709 | $13,606 | $1,090 | $49,404 |
| Tennessee | $42,537 | $14,870 | $1,335 | $58,742 |
| Texas | $41,744 | $14,742 | $1,310 | $57,796 |
| Utah | $40,007 | $14,461 | $1,256 | $55,724 |
| Vermont | $46,622 | $15,529 | $1,464 | $63,615 |
| Virginia | $43,823 | $15,077 | $1,376 | $60,276 |
| Washington | $46,326 | $15,482 | $1,454 | $63,262 |
| West Virginia | $38,284 | $14,183 | $1,202 | $53,669 |
| Wisconsin | $46,390 | $15,492 | $1,456 | $63,338 |
| Wyoming | $43,255 | $14,986 | $1,358 | $59,599 |

# Appendix D

## Cost Estimate Output Tables

## Table D1: State By State Cost Estimates: PreK Eligibility 100% of Poverty, 50% Participation Rate, PreK Class size 15

| State | PreK-3rd Cost Cost Estimate | PreK-3rd Cost Estimate Per Pupil | Estimate of PreK-3rd Current Expenditures | PreK-3rd Expenditures Per Pupil | Difference | Difference Per-Pupil |
|---|---|---|---|---|---|---|
| Alabama | $2,451,497,643 | $9,811 | $1,923,963,356 | $7,700 | $527,534,287 | $2,111 |
| Alaska | $472,578,963 | $11,866 | $415,453,133 | $10,432 | $57,125,830 | $1,434 |
| Arizona | $3,567,879,568 | $10,208 | $1,984,386,840 | $5,678 | $1,583,492,729 | $4,531 |
| Arkansas | $1,567,638,802 | $9,957 | $1,388,076,923 | $8,816 | $179,561,879 | $1,140 |
| California | $25,018,019,555 | $12,634 | $17,336,706,375 | $8,755 | $7,681,313,180 | $3,879 |
| Colorado | $2,453,781,175 | $9,902 | $2,236,083,814 | $9,023 | $217,697,361 | $878 |
| Connecticut | $2,167,393,550 | $12,475 | $2,283,009,822 | $13,140 | ($115,616,272) | ($665) |
| Delaware | $463,640,061 | $12,203 | $474,002,928 | $12,476 | ($10,362,867) | ($273) |
| District of Columbia | $348,041,139 | $14,829 | $390,419,340 | $16,634 | ($42,378,201) | ($1,806) |
| Florida | $8,774,233,315 | $10,157 | $7,045,975,633 | $8,156 | $1,728,257,682 | $2,001 |
| Georgia | $5,754,980,621 | $10,883 | $4,699,172,493 | $8,887 | $1,055,808,128 | $1,997 |
| Hawaii | $626,159,813 | $10,672 | $584,416,554 | $9,961 | $41,743,259 | $711 |
| Idaho | $782,503,899 | $9,282 | $600,439,457 | $7,122 | $182,064,442 | $2,160 |
| Illinois | $7,930,703,190 | $12,341 | $6,280,879,594 | $9,773 | $1,649,823,596 | $2,567 |
| Indiana | $3,563,713,639 | $10,799 | $2,924,860,476 | $8,863 | $638,853,163 | $1,936 |
| Iowa | $1,363,296,980 | $9,311 | $1,188,524,774 | $8,117 | $174,772,206 | $1,194 |
| Kansas | $1,402,790,323 | $9,753 | $1,252,259,938 | $8,707 | $150,530,385 | $1,047 |
| Kentucky | $2,165,929,869 | $10,099 | $1,845,776,125 | $8,607 | $320,153,744 | $1,493 |
| Louisiana | $2,261,653,430 | $10,104 | $2,012,595,113 | $8,991 | $249,058,317 | $1,113 |
| Maine | $564,048,784 | $9,763 | $682,037,695 | $11,805 | ($117,988,911) | ($2,042) |
| Maryland | $2,858,174,996 | $11,630 | $2,591,716,107 | $10,546 | $266,458,889 | $1,084 |
| Massachusetts | $3,533,289,030 | $12,081 | $3,816,456,990 | $13,050 | ($283,167,960) | ($968) |
| Michigan | $6,182,052,302 | $11,764 | $5,369,134,655 | $10,217 | $812,917,646 | $1,547 |
| Minnesota | $2,605,675,506 | $10,616 | $2,476,249,701 | $10,089 | $129,425,805 | $527 |
| Mississippi | $1,719,290,447 | $10,014 | $1,295,295,380 | $7,545 | $423,995,066 | $2,470 |
| Missouri | $2,768,038,438 | $9,683 | $2,281,809,614 | $7,982 | $486,228,824 | $1,701 |
| Montana | $398,299,501 | $9,278 | $371,477,465 | $8,653 | $26,822,035 | $625 |
| Nebraska | $819,202,269 | $9,362 | $720,038,193 | $8,228 | $99,164,076 | $1,133 |
| Nevada | $1,335,225,572 | $10,018 | $913,591,211 | $6,855 | $421,634,361 | $3,164 |
| New Hampshire | $549,276,511 | $9,780 | $577,258,766 | $10,278 | ($27,982,255) | ($498) |
| New Jersey | $5,379,327,770 | $13,101 | $6,095,448,780 | $14,845 | ($716,121,010) | ($1,744) |
| New Mexico | $1,095,639,488 | $10,254 | $941,646,903 | $8,813 | $153,992,586 | $1,441 |
| New York | $10,941,436,906 | $13,073 | $11,917,953,306 | $14,240 | ($976,516,400) | ($1,167) |
| North Carolina | $4,757,657,164 | $9,959 | $3,649,499,666 | $7,639 | $1,108,157,498 | $2,320 |
| North Dakota | $251,108,575 | $8,856 | $236,147,544 | $8,329 | $14,961,031 | $528 |
| Ohio | $6,269,819,902 | $10,981 | $5,649,112,737 | $9,894 | $620,707,165 | $1,087 |
| Oklahoma | $1,955,710,365 | $9,588 | $1,641,937,569 | $8,050 | $313,772,796 | $1,538 |
| Oregon | $1,885,860,836 | $10,840 | $1,570,678,854 | $9,028 | $315,181,983 | $1,812 |
| Pennsylvania | $6,313,111,230 | $11,673 | $6,000,052,342 | $11,094 | $313,058,888 | $579 |
| Rhode Island | $528,521,452 | $11,778 | $503,647,876 | $11,223 | $24,873,576 | $554 |
| South Carolina | $2,253,458,978 | $10,083 | $1,902,521,954 | $8,513 | $350,937,024 | $1,570 |
| South Dakota | $329,524,821 | $8,490 | $312,228,390 | $8,044 | $17,296,432 | $446 |
| Tennessee | $3,088,128,752 | $9,873 | $2,207,878,476 | $7,059 | $880,250,276 | $2,814 |
| Texas | $15,239,375,245 | $10,159 | $11,611,114,194 | $7,740 | $3,628,261,052 | $2,419 |
| Utah | $1,517,250,450 | $8,917 | $940,924,225 | $5,530 | $576,326,225 | $3,387 |
| Vermont | $271,366,379 | $10,185 | $352,334,956 | $13,223 | ($80,968,577) | ($3,039) |
| Virginia | $3,843,522,401 | $10,305 | $3,553,507,372 | $9,527 | $290,015,030 | $778 |
| Washington | $3,220,858,186 | $10,337 | $2,566,186,640 | $8,236 | $654,671,546 | $2,101 |
| West Virginia | $879,511,801 | $10,099 | $932,663,076 | $10,710 | ($53,151,275) | ($610) |
| Wisconsin | $2,597,013,926 | $10,415 | $2,671,830,955 | $10,715 | ($74,817,029) | ($300) |
| Wyoming | $259,618,540 | $9,987 | $314,823,162 | $12,110 | ($55,204,622) | ($2,124) |
| Totals* | $169,346,832,058 | $11,029 | $143,534,207,436 | $9,348 | $28,366,899,999 | $1,681 |

## Table D2: State By State Cost Estimates: PreK Eligibility 100% of Poverty, 65% Participation Rate, PreK Class size 15

| State | PreK-3rd Cost Cost Estimate | PreK-3rd Cost Estimate Per Pupil | Estimate of PreK-3rd Current Expenditures | PreK-3rd Expenditures Per Pupil | Difference | Difference Per-Pupil |
|---|---|---|---|---|---|---|
| Alabama | $2,508,902,873 | $9,837 | $1,923,963,356 | $7,543 | $584,939,517 | $2,293 |
| Alaska | $475,853,644 | $11,877 | $415,453,133 | $10,370 | $60,400,511 | $1,508 |
| Arizona | $3,641,399,374 | $10,228 | $1,984,386,840 | $5,574 | $1,657,012,534 | $4,654 |
| Arkansas | $1,602,488,151 | $9,973 | $1,388,076,923 | $8,638 | $214,411,228 | $1,334 |
| California | $25,464,561,776 | $12,654 | $17,336,706,375 | $8,615 | $8,127,855,400 | $4,039 |
| Colorado | $2,494,603,097 | $9,922 | $2,236,083,814 | $8,894 | $258,519,283 | $1,028 |
| Connecticut | $2,189,220,298 | $12,491 | $2,283,009,822 | $13,026 | ($93,789,525) | ($535) |
| Delaware | $471,280,191 | $12,224 | $474,002,928 | $12,295 | ($2,722,737) | ($71) |
| District of Columbia | $360,353,479 | $14,857 | $390,419,340 | $16,096 | ($30,065,861) | ($1,240) |
| Florida | $8,928,967,158 | $10,174 | $7,045,975,633 | $8,028 | $1,882,991,525 | $2,145 |
| Georgia | $5,868,976,967 | $10,902 | $4,699,172,493 | $8,729 | $1,169,804,474 | $2,173 |
| Hawaii | $635,431,097 | $10,687 | $584,416,554 | $9,829 | $51,014,543 | $858 |
| Idaho | $795,723,229 | $9,298 | $600,439,457 | $7,016 | $195,283,772 | $2,282 |
| Illinois | $8,063,550,461 | $12,362 | $6,280,879,594 | $9,629 | $1,782,670,867 | $2,733 |
| Indiana | $3,627,946,535 | $10,819 | $2,924,860,476 | $8,722 | $703,086,060 | $2,097 |
| Iowa | $1,382,760,249 | $9,327 | $1,188,524,774 | $8,017 | $194,235,475 | $1,310 |
| Kansas | $1,427,568,240 | $9,771 | $1,252,259,938 | $8,571 | $175,308,303 | $1,200 |
| Kentucky | $2,213,613,275 | $10,116 | $1,845,776,125 | $8,435 | $367,837,150 | $1,681 |
| Louisiana | $2,324,832,320 | $10,122 | $2,012,595,113 | $8,763 | $312,237,207 | $1,359 |
| Maine | $572,112,927 | $9,780 | $682,037,695 | $11,659 | ($109,924,767) | ($1,879) |
| Maryland | $2,893,120,431 | $11,646 | $2,591,716,107 | $10,433 | $301,404,324 | $1,213 |
| Massachusetts | $3,575,627,742 | $12,100 | $3,816,456,990 | $12,915 | ($240,829,247) | ($815) |
| Michigan | $6,288,698,572 | $11,786 | $5,369,134,655 | $10,062 | $919,563,916 | $1,723 |
| Minnesota | $2,638,914,709 | $10,634 | $2,476,249,701 | $9,978 | $162,665,008 | $655 |
| Mississippi | $1,770,538,817 | $10,024 | $1,295,295,380 | $7,334 | $475,243,436 | $2,691 |
| Missouri | $2,823,290,636 | $9,704 | $2,281,809,614 | $7,843 | $541,481,022 | $1,861 |
| Montana | $403,259,926 | $9,293 | $371,477,465 | $8,561 | $31,782,461 | $732 |
| Nebraska | $832,023,385 | $9,380 | $720,038,193 | $8,117 | $111,985,193 | $1,262 |
| Nevada | $1,353,678,546 | $10,034 | $913,591,211 | $6,772 | $440,087,335 | $3,262 |
| New Hampshire | $552,622,684 | $9,790 | $577,258,766 | $10,227 | ($24,636,082) | ($436) |
| New Jersey | $5,460,767,613 | $13,123 | $6,095,448,780 | $14,648 | ($634,681,167) | ($1,525) |
| New Mexico | $1,121,054,515 | $10,273 | $941,646,903 | $8,629 | $179,407,612 | $1,644 |
| New York | $11,177,058,005 | $13,098 | $11,917,953,306 | $13,966 | ($740,895,301) | ($868) |
| North Carolina | $4,852,928,878 | $9,981 | $3,649,499,666 | $7,506 | $1,203,429,212 | $2,475 |
| North Dakota | $254,247,232 | $8,870 | $236,147,544 | $8,238 | $18,099,689 | $631 |
| Ohio | $6,398,195,198 | $11,007 | $5,649,112,737 | $9,718 | $749,082,461 | $1,289 |
| Oklahoma | $1,993,152,152 | $9,603 | $1,641,937,569 | $7,911 | $351,214,583 | $1,692 |
| Oregon | $1,917,900,839 | $10,858 | $1,570,678,854 | $8,892 | $347,221,986 | $1,966 |
| Pennsylvania | $6,420,801,289 | $11,694 | $6,000,052,342 | $10,928 | $420,748,947 | $766 |
| Rhode Island | $539,315,082 | $11,801 | $503,647,876 | $11,020 | $35,667,206 | $780 |
| South Carolina | $2,299,465,144 | $10,100 | $1,902,521,954 | $8,356 | $396,943,190 | $1,743 |
| South Dakota | $337,510,259 | $8,512 | $312,228,390 | $7,874 | $25,281,869 | $638 |
| Tennessee | $3,149,030,630 | $9,892 | $2,207,878,476 | $6,936 | $941,152,154 | $2,956 |
| Texas | $15,596,652,867 | $10,182 | $11,611,114,194 | $7,580 | $3,985,538,673 | $2,602 |
| Utah | $1,531,859,507 | $8,931 | $940,924,225 | $5,486 | $590,935,283 | $3,445 |
| Vermont | $275,596,198 | $10,203 | $352,334,956 | $13,044 | ($76,738,758) | ($2,841) |
| Virginia | $3,897,554,002 | $10,326 | $3,553,507,372 | $9,414 | $344,046,630 | $911 |
| Washington | $3,267,898,430 | $10,356 | $2,566,186,640 | $8,132 | $701,711,790 | $2,224 |
| West Virginia | $895,889,207 | $10,118 | $932,663,076 | $10,533 | ($36,773,869) | ($415) |
| Wisconsin | $2,638,898,580 | $10,436 | $2,671,830,955 | $10,566 | ($32,932,375) | ($130) |
| Wyoming | $263,368,333 | $10,002 | $314,823,162 | $11,956 | ($51,454,829) | ($1,954) |
| Totals* | $172,471,064,745 | $11,048 | $143,534,207,436 | $9,194 | $31,012,301,826 | $1,854 |

## Table D3: State By State Cost Estimates: PreK Eligibility 100% of Poverty, 100% Participation Rate, PreK Class size 15

| State | PreK-3rd Cost Cost Estimate | PreK-3rd Cost Estimate Per Pupil | Estimate of PreK-3rd Current Expenditures | PreK-3rd Expenditures Per Pupil | Difference | Difference Per-Pupil |
|---|---|---|---|---|---|---|
| Alabama | $2,642,848,410 | $9,893 | $1,923,963,356 | $7,202 | $718,885,054 | $2,691 |
| Alaska | $483,494,567 | $11,902 | $415,453,133 | $10,227 | $68,041,434 | $1,675 |
| Arizona | $3,812,945,586 | $10,271 | $1,984,386,840 | $5,346 | $1,828,558,746 | $4,926 |
| Arkansas | $1,683,803,298 | $10,007 | $1,388,076,923 | $8,249 | $295,726,375 | $1,757 |
| California | $26,506,493,623 | $12,696 | $17,336,706,375 | $8,304 | $9,169,787,248 | $4,392 |
| Colorado | $2,589,854,247 | $9,968 | $2,236,083,814 | $8,606 | $353,770,434 | $1,362 |
| Connecticut | $2,240,149,374 | $12,527 | $2,283,009,822 | $12,766 | ($42,860,448) | ($240) |
| Delaware | $489,107,161 | $12,270 | $474,002,928 | $11,891 | $15,104,233 | $379 |
| District of Columbia | $389,082,272 | $14,915 | $390,419,340 | $14,967 | ($1,337,068) | ($51) |
| Florida | $9,290,012,791 | $10,211 | $7,045,975,633 | $7,745 | $2,244,037,158 | $2,467 |
| Georgia | $6,134,968,439 | $10,943 | $4,699,172,493 | $8,382 | $1,435,795,946 | $2,561 |
| Hawaii | $657,064,093 | $10,719 | $584,416,554 | $9,534 | $72,647,539 | $1,185 |
| Idaho | $826,568,333 | $9,334 | $600,439,457 | $6,781 | $226,128,876 | $2,554 |
| Illinois | $8,373,527,425 | $12,409 | $6,280,879,594 | $9,308 | $2,092,647,831 | $3,101 |
| Indiana | $3,777,823,294 | $10,863 | $2,924,860,476 | $8,410 | $852,962,818 | $2,453 |
| Iowa | $1,428,174,542 | $9,365 | $1,188,524,774 | $7,793 | $239,649,768 | $1,571 |
| Kansas | $1,485,383,382 | $9,810 | $1,252,259,938 | $8,270 | $233,123,444 | $1,540 |
| Kentucky | $2,324,874,557 | $10,154 | $1,845,776,125 | $8,061 | $479,098,432 | $2,092 |
| Louisiana | $2,472,249,729 | $10,161 | $2,012,595,113 | $8,272 | $459,654,617 | $1,889 |
| Maine | $590,929,262 | $9,819 | $682,037,695 | $11,333 | ($91,108,432) | ($1,514) |
| Maryland | $2,974,659,778 | $11,683 | $2,591,716,107 | $10,179 | $382,943,671 | $1,504 |
| Massachusetts | $3,674,418,072 | $12,144 | $3,816,456,990 | $12,613 | ($142,038,918) | ($469) |
| Michigan | $6,537,539,868 | $11,833 | $5,369,134,655 | $9,718 | $1,168,405,213 | $2,115 |
| Minnesota | $2,716,472,849 | $10,674 | $2,476,249,701 | $9,730 | $240,223,147 | $944 |
| Mississippi | $1,890,118,347 | $10,046 | $1,295,295,380 | $6,884 | $594,822,966 | $3,161 |
| Missouri | $2,952,212,431 | $9,752 | $2,281,809,614 | $7,537 | $670,402,817 | $2,215 |
| Montana | $414,834,252 | $9,328 | $371,477,465 | $8,353 | $43,356,786 | $975 |
| Nebraska | $861,939,324 | $9,421 | $720,038,193 | $7,870 | $141,901,131 | $1,551 |
| Nevada | $1,396,735,484 | $10,069 | $913,591,211 | $6,586 | $483,144,273 | $3,483 |
| New Hampshire | $560,430,420 | $9,814 | $577,258,766 | $10,109 | ($16,828,346) | ($295) |
| New Jersey | $5,650,793,913 | $13,172 | $6,095,448,780 | $14,209 | ($444,654,866) | ($1,037) |
| New Mexico | $1,180,356,243 | $10,314 | $941,646,903 | $8,228 | $238,709,340 | $2,086 |
| New York | $11,726,840,569 | $13,152 | $11,917,953,306 | $13,366 | ($191,112,737) | ($214) |
| North Carolina | $5,075,229,544 | $10,029 | $3,649,499,666 | $7,212 | $1,425,729,878 | $2,817 |
| North Dakota | $261,570,767 | $8,900 | $236,147,544 | $8,035 | $25,423,223 | $865 |
| Ohio | $6,697,737,555 | $11,064 | $5,649,112,737 | $9,332 | $1,048,624,818 | $1,732 |
| Oklahoma | $2,080,516,323 | $9,635 | $1,641,937,569 | $7,604 | $438,578,754 | $2,031 |
| Oregon | $1,992,660,846 | $10,898 | $1,570,678,854 | $8,590 | $421,981,992 | $2,308 |
| Pennsylvania | $6,672,078,093 | $11,743 | $6,000,052,342 | $10,560 | $672,025,751 | $1,183 |
| Rhode Island | $564,500,220 | $11,852 | $503,647,876 | $10,574 | $60,852,344 | $1,278 |
| South Carolina | $2,406,812,863 | $10,137 | $1,902,521,954 | $8,013 | $504,290,909 | $2,124 |
| South Dakota | $356,142,947 | $8,559 | $312,228,390 | $7,504 | $43,914,557 | $1,055 |
| Tennessee | $3,291,135,011 | $9,934 | $2,207,878,476 | $6,664 | $1,083,256,535 | $3,270 |
| Texas | $16,430,300,649 | $10,233 | $11,611,114,194 | $7,232 | $4,819,186,455 | $3,002 |
| Utah | $1,565,947,308 | $8,962 | $940,924,225 | $5,385 | $625,023,083 | $3,577 |
| Vermont | $285,465,774 | $10,245 | $352,334,956 | $12,644 | ($66,869,182) | ($2,400) |
| Virginia | $4,023,627,736 | $10,372 | $3,553,507,372 | $9,160 | $470,120,364 | $1,212 |
| Washington | $3,377,658,999 | $10,399 | $2,566,186,640 | $7,901 | $811,472,359 | $2,498 |
| West Virginia | $934,103,155 | $10,158 | $932,663,076 | $10,142 | $1,440,079 | $16 |
| Wisconsin | $2,736,629,439 | $10,482 | $2,671,830,955 | $10,234 | $64,798,484 | $248 |
| Wyoming | $272,117,851 | $10,036 | $314,823,162 | $11,612 | ($42,705,311) | ($1,575) |
| Totals* | $179,760,941,016 | $11,091 | $143,534,207,436 | $8,856 | $37,266,248,887 | $2,235 |

## Table D4: State By State Cost Estimates: PreK Eligibility 200% of Poverty, 50% Participation Rate, PreK Class size 15

| State | PreK-3rd Cost Cost Estimate | PreK-3rd Cost Estimate Per Pupil | Estimate of PreK-3rd Current Expenditures | PreK-3rd Expenditures Per Pupil | Difference | Difference Per-Pupil |
|---|---|---|---|---|---|---|
| Alabama | $2,585,097,129 | $9,829 | $1,923,963,356 | $7,315 | $661,133,773 | $2,514 |
| Alaska | $503,609,629 | $11,934 | $415,453,133 | $9,845 | $88,156,496 | $2,089 |
| Arizona | $3,843,251,192 | $10,282 | $1,984,386,840 | $5,309 | $1,858,864,352 | $4,973 |
| Arkansas | $1,679,248,239 | $10,013 | $1,388,076,923 | $8,277 | $291,171,316 | $1,736 |
| California | $26,913,207,666 | $12,712 | $17,336,706,375 | $8,189 | $9,576,501,291 | $4,523 |
| Colorado | $2,621,295,039 | $9,984 | $2,236,083,814 | $8,517 | $385,211,225 | $1,467 |
| Connecticut | $2,255,416,536 | $12,541 | $2,283,009,822 | $12,695 | ($27,593,286) | ($153) |
| Delaware | $497,323,935 | $12,281 | $474,002,928 | $11,705 | $23,321,008 | $576 |
| District of Columbia | $373,756,521 | $14,872 | $390,419,340 | $15,535 | ($16,662,819) | ($663) |
| Florida | $9,417,787,571 | $10,228 | $7,045,975,633 | $7,652 | $2,371,811,938 | $2,576 |
| Georgia | $6,131,086,357 | $10,947 | $4,699,172,493 | $8,391 | $1,431,913,864 | $2,557 |
| Hawaii | $678,457,647 | $10,751 | $584,416,554 | $9,260 | $94,041,093 | $1,490 |
| Idaho | $864,070,137 | $9,362 | $600,439,457 | $6,506 | $263,630,680 | $2,856 |
| Illinois | $8,406,548,171 | $12,414 | $6,280,879,594 | $9,275 | $2,125,668,577 | $3,139 |
| Indiana | $3,814,298,635 | $10,875 | $2,924,860,476 | $8,339 | $889,438,160 | $2,536 |
| Iowa | $1,454,950,698 | $9,384 | $1,188,524,774 | $7,666 | $266,425,924 | $1,718 |
| Kansas | $1,513,201,153 | $9,826 | $1,252,259,938 | $8,131 | $260,941,215 | $1,694 |
| Kentucky | $2,330,032,498 | $10,150 | $1,845,776,125 | $8,040 | $484,256,373 | $2,109 |
| Louisiana | $2,401,437,984 | $10,142 | $2,012,595,113 | $8,500 | $388,842,872 | $1,642 |
| Maine | $584,972,572 | $9,811 | $682,037,695 | $11,438 | ($97,065,123) | ($1,628) |
| Maryland | $3,024,837,011 | $11,712 | $2,591,716,107 | $10,035 | $433,120,904 | $1,677 |
| Massachusetts | $3,688,409,866 | $12,147 | $3,816,456,990 | $12,569 | ($128,047,124) | ($422) |
| Michigan | $6,503,007,095 | $11,829 | $5,369,134,655 | $9,767 | $1,133,872,440 | $2,063 |
| Minnesota | $2,729,491,420 | $10,685 | $2,476,249,701 | $9,693 | $253,241,719 | $991 |
| Mississippi | $1,836,083,604 | $10,039 | $1,295,295,380 | $7,082 | $540,788,224 | $2,957 |
| Missouri | $2,975,219,427 | $9,763 | $2,281,809,614 | $7,488 | $693,409,813 | $2,275 |
| Montana | $434,529,512 | $9,351 | $371,477,465 | $7,994 | $63,052,047 | $1,357 |
| Nebraska | $881,829,276 | $9,445 | $720,038,193 | $7,712 | $161,791,084 | $1,733 |
| Nevada | $1,427,148,410 | $10,105 | $913,591,211 | $6,469 | $513,557,199 | $3,636 |
| New Hampshire | $570,162,370 | $9,833 | $577,258,766 | $9,955 | ($7,096,396) | ($122) |
| New Jersey | $5,652,024,692 | $13,177 | $6,095,448,780 | $14,211 | ($443,424,087) | ($1,034) |
| New Mexico | $1,189,642,079 | $10,311 | $941,646,903 | $8,162 | $247,995,177 | $2,149 |
| New York | $11,603,083,191 | $13,143 | $11,917,953,306 | $13,500 | ($314,870,115) | ($357) |
| North Carolina | $5,082,155,386 | $10,032 | $3,649,499,666 | $7,204 | $1,432,655,720 | $2,828 |
| North Dakota | $265,770,566 | $8,921 | $236,147,544 | $7,927 | $29,623,022 | $994 |
| Ohio | $6,687,120,265 | $11,059 | $5,649,112,737 | $9,342 | $1,038,007,528 | $1,717 |
| Oklahoma | $2,105,196,689 | $9,634 | $1,641,937,569 | $7,514 | $463,259,120 | $2,120 |
| Oregon | $2,027,732,321 | $10,910 | $1,570,678,854 | $8,451 | $457,053,467 | $2,459 |
| Pennsylvania | $6,680,172,753 | $11,748 | $6,000,052,342 | $10,552 | $680,120,411 | $1,196 |
| Rhode Island | $557,841,969 | $11,850 | $503,647,876 | $10,698 | $54,194,093 | $1,151 |
| South Carolina | $2,398,218,944 | $10,135 | $1,902,521,954 | $8,041 | $495,696,990 | $2,095 |
| South Dakota | $356,269,864 | $8,569 | $312,228,390 | $7,510 | $44,041,474 | $1,059 |
| Tennessee | $3,323,812,755 | $9,938 | $2,207,878,476 | $6,601 | $1,115,934,279 | $3,337 |
| Texas | $16,296,021,109 | $10,232 | $11,611,114,194 | $7,290 | $4,684,906,916 | $2,942 |
| Utah | $1,667,595,480 | $9,032 | $940,924,225 | $5,096 | $726,671,255 | $3,936 |
| Vermont | $291,713,668 | $10,269 | $352,334,956 | $12,403 | ($60,621,288) | ($2,134) |
| Virginia | $4,054,863,119 | $10,387 | $3,553,507,372 | $9,103 | $501,355,747 | $1,284 |
| Washington | $3,436,990,715 | $10,421 | $2,566,186,640 | $7,781 | $870,804,075 | $2,640 |
| West Virginia | $927,399,880 | $10,149 | $932,663,076 | $10,207 | ($5,263,196) | ($58) |
| Wisconsin | $2,771,696,839 | $10,500 | $2,671,830,955 | $10,122 | $99,865,884 | $378 |
| Wyoming | $280,690,115 | $10,066 | $314,823,162 | $11,290 | ($34,133,047) | ($1,224) |
| Totals* | $180,595,779,700 | $11,097 | $143,534,207,436 | $8,819 | $38,196,348,744 | $2,277 |

## Table D5: State By State Cost Estimates: PreK Eligibility 200% of Poverty, 65% Participation Rate, PreK Class size 15

| State | PreK-3rd Cost Cost Estimate | PreK-3rd Cost Estimate Per Pupil | Estimate of PreK-3rd Current Expenditures | PreK-3rd Expenditures Per Pupil | Difference | Difference Per-Pupil |
|---|---|---|---|---|---|---|
| Alabama | $2,682,582,205 | $9,858 | $1,923,963,356 | $7,070 | $758,618,849 | $2,788 |
| Alaska | $516,193,510 | $11,962 | $415,453,133 | $9,627 | $100,740,377 | $2,334 |
| Arizona | $3,999,382,484 | $10,319 | $1,984,386,840 | $5,120 | $2,014,995,644 | $5,199 |
| Arkansas | $1,747,580,419 | $10,042 | $1,388,076,923 | $7,976 | $359,503,496 | $2,066 |
| California | $27,928,306,320 | $12,749 | $17,336,706,375 | $7,914 | $10,591,599,944 | $4,835 |
| Colorado | $2,712,371,120 | $10,025 | $2,236,083,814 | $8,265 | $476,287,306 | $1,760 |
| Connecticut | $2,303,650,179 | $12,575 | $2,283,009,822 | $12,462 | $20,640,357 | $113 |
| Delaware | $515,069,228 | $12,320 | $474,002,928 | $11,338 | $41,066,300 | $982 |
| District of Columbia | $393,783,475 | $14,908 | $390,419,340 | $14,781 | $3,364,135 | $127 |
| Florida | $9,765,587,690 | $10,262 | $7,045,975,633 | $7,404 | $2,719,612,058 | $2,858 |
| Georgia | $6,357,914,423 | $10,981 | $4,699,172,493 | $8,116 | $1,658,741,930 | $2,865 |
| Hawaii | $703,418,282 | $10,784 | $584,416,554 | $8,960 | $119,001,728 | $1,824 |
| Idaho | $901,759,339 | $9,397 | $600,439,457 | $6,257 | $301,319,881 | $3,140 |
| Illinois | $8,682,148,935 | $12,453 | $6,280,879,594 | $9,008 | $2,401,269,341 | $3,444 |
| Indiana | $3,953,707,031 | $10,913 | $2,924,860,476 | $8,073 | $1,028,846,556 | $2,840 |
| Iowa | $1,501,910,082 | $9,419 | $1,188,524,774 | $7,454 | $313,385,308 | $1,965 |
| Kansas | $1,571,102,320 | $9,861 | $1,252,259,938 | $7,860 | $318,842,382 | $2,001 |
| Kentucky | $2,426,946,694 | $10,178 | $1,845,776,125 | $7,741 | $581,170,569 | $2,437 |
| Louisiana | $2,506,552,240 | $10,169 | $2,012,595,113 | $8,165 | $493,957,128 | $2,004 |
| Maine | $599,313,852 | $9,840 | $682,037,695 | $11,198 | ($82,723,843) | ($1,358) |
| Maryland | $3,109,781,051 | $11,749 | $2,591,716,107 | $9,792 | $518,064,944 | $1,957 |
| Massachusetts | $3,777,284,829 | $12,183 | $3,816,456,990 | $12,310 | ($39,172,160) | ($126) |
| Michigan | $6,705,939,803 | $11,867 | $5,369,134,655 | $9,501 | $1,336,805,148 | $2,366 |
| Minnesota | $2,799,875,397 | $10,720 | $2,476,249,701 | $9,481 | $323,625,696 | $1,239 |
| Mississippi | $1,922,369,922 | $10,055 | $1,295,295,380 | $6,775 | $627,074,541 | $3,280 |
| Missouri | $3,092,625,921 | $9,804 | $2,281,809,614 | $7,234 | $810,816,308 | $2,570 |
| Montana | $450,358,941 | $9,384 | $371,477,465 | $7,740 | $78,881,476 | $1,644 |
| Nebraska | $913,438,495 | $9,484 | $720,038,193 | $7,476 | $193,400,302 | $2,008 |
| Nevada | $1,473,178,235 | $10,142 | $913,591,211 | $6,290 | $559,587,024 | $3,853 |
| New Hampshire | $579,774,301 | $9,858 | $577,258,766 | $9,815 | $2,515,535 | $43 |
| New Jersey | $5,815,273,612 | $13,219 | $6,095,448,780 | $13,856 | ($280,175,167) | ($637) |
| New Mexico | $1,243,257,883 | $10,342 | $941,646,903 | $7,833 | $301,610,981 | $2,509 |
| New York | $12,037,198,175 | $13,184 | $11,917,953,306 | $13,054 | $119,244,870 | $131 |
| North Carolina | $5,274,776,567 | $10,071 | $3,649,499,666 | $6,968 | $1,625,276,901 | $3,103 |
| North Dakota | $273,307,821 | $8,952 | $236,147,544 | $7,734 | $37,160,277 | $1,217 |
| Ohio | $6,940,685,670 | $11,103 | $5,649,112,737 | $9,037 | $1,291,572,933 | $2,066 |
| Oklahoma | $2,187,484,374 | $9,659 | $1,641,937,569 | $7,250 | $545,546,805 | $2,409 |
| Oregon | $2,102,333,769 | $10,945 | $1,570,678,854 | $8,177 | $531,654,915 | $2,768 |
| Pennsylvania | $6,897,981,269 | $11,789 | $6,000,052,342 | $10,254 | $897,928,927 | $1,535 |
| Rhode Island | $577,431,754 | $11,890 | $503,647,876 | $10,371 | $73,783,878 | $1,519 |
| South Carolina | $2,487,653,099 | $10,165 | $1,902,521,954 | $7,774 | $585,131,145 | $2,391 |
| South Dakota | $372,278,814 | $8,609 | $312,228,390 | $7,220 | $60,050,424 | $1,389 |
| Tennessee | $3,455,419,834 | $9,972 | $2,207,878,476 | $6,372 | $1,247,541,358 | $3,600 |
| Texas | $16,970,292,490 | $10,272 | $11,611,114,194 | $7,028 | $5,359,178,296 | $3,244 |
| Utah | $1,727,308,046 | $9,074 | $940,924,225 | $4,943 | $786,383,821 | $4,131 |
| Vermont | $302,047,673 | $10,308 | $352,334,956 | $12,024 | ($50,287,283) | ($1,716) |
| Virginia | $4,172,296,935 | $10,429 | $3,553,507,372 | $8,882 | $618,789,563 | $1,547 |
| Washington | $3,548,870,717 | $10,462 | $2,566,186,640 | $7,565 | $982,684,078 | $2,897 |
| West Virginia | $958,143,710 | $10,180 | $932,663,076 | $9,909 | $25,480,634 | $271 |
| Wisconsin | $2,865,986,367 | $10,542 | $2,671,830,955 | $9,828 | $194,155,412 | $714 |
| Wyoming | $290,761,381 | $10,100 | $314,823,162 | $10,936 | ($24,061,781) | ($836) |
| Totals* | $187,094,696,680 | $11,132 | $143,534,207,436 | $8,540 | $44,036,909,479 | $2,592 |

## Table D6: State By State Cost Estimates: PreK Eligibility 200% of Poverty, 100% Participation Rate, PreK Class size 15

| State | PreK-3rd Cost Cost Estimate | PreK-3rd Cost Estimate Per Pupil | Estimate of PreK-3rd Current Expenditures | PreK-3rd Expenditures Per Pupil | Difference | Difference Per-Pupil |
|---|---|---|---|---|---|---|
| Alabama | $2,910,047,382 | $9,918 | $1,923,963,356 | $6,557 | $986,084,027 | $3,361 |
| Alaska | $545,555,899 | $12,023 | $415,453,133 | $9,156 | $130,102,766 | $2,867 |
| Arizona | $4,363,688,832 | $10,395 | $1,984,386,840 | $4,727 | $2,379,301,993 | $5,668 |
| Arkansas | $1,907,022,172 | $10,101 | $1,388,076,923 | $7,353 | $518,945,249 | $2,749 |
| California | $30,296,869,845 | $12,827 | $17,336,706,375 | $7,340 | $12,960,163,470 | $5,487 |
| Colorado | $2,924,881,975 | $10,111 | $2,236,083,814 | $7,730 | $688,798,162 | $2,381 |
| Connecticut | $2,416,195,346 | $12,648 | $2,283,009,822 | $11,951 | $133,185,524 | $697 |
| Delaware | $556,474,909 | $12,403 | $474,002,928 | $10,565 | $82,471,982 | $1,838 |
| District of Columbia | $440,513,034 | $14,980 | $390,419,340 | $13,276 | $50,093,694 | $1,703 |
| Florida | $10,577,121,303 | $10,333 | $7,045,975,633 | $6,884 | $3,531,145,670 | $3,450 |
| Georgia | $6,887,179,910 | $11,053 | $4,699,172,493 | $7,541 | $2,188,007,417 | $3,511 |
| Hawaii | $761,659,762 | $10,854 | $584,416,554 | $8,328 | $177,243,208 | $2,526 |
| Idaho | $989,700,809 | $9,468 | $600,439,457 | $5,744 | $389,261,352 | $3,724 |
| Illinois | $9,325,217,386 | $12,535 | $6,280,879,594 | $8,443 | $3,044,337,792 | $4,092 |
| Indiana | $4,278,993,288 | $10,992 | $2,924,860,476 | $7,514 | $1,354,132,812 | $3,479 |
| Iowa | $1,611,481,977 | $9,493 | $1,188,524,774 | $7,002 | $422,957,203 | $2,492 |
| Kansas | $1,706,205,042 | $9,933 | $1,252,259,938 | $7,291 | $453,945,104 | $2,643 |
| Kentucky | $2,653,079,816 | $10,236 | $1,845,776,125 | $7,121 | $807,303,691 | $3,115 |
| Louisiana | $2,751,818,837 | $10,223 | $2,012,595,113 | $7,477 | $739,223,725 | $2,746 |
| Maine | $632,776,838 | $9,904 | $682,037,695 | $10,675 | ($49,260,856) | ($771) |
| Maryland | $3,307,983,809 | $11,830 | $2,591,716,107 | $9,269 | $716,267,703 | $2,562 |
| Massachusetts | $3,984,659,744 | $12,262 | $3,816,456,990 | $11,744 | $168,202,754 | $518 |
| Michigan | $7,179,449,455 | $11,946 | $5,369,134,655 | $8,934 | $1,810,314,800 | $3,012 |
| Minnesota | $2,964,104,677 | $10,797 | $2,476,249,701 | $9,020 | $487,854,975 | $1,777 |
| Mississippi | $2,123,704,662 | $10,086 | $1,295,295,380 | $6,152 | $828,409,282 | $3,934 |
| Missouri | $3,366,574,408 | $9,888 | $2,281,809,614 | $6,702 | $1,084,764,794 | $3,186 |
| Montana | $487,294,275 | $9,454 | $371,477,465 | $7,207 | $115,816,809 | $2,247 |
| Nebraska | $987,193,338 | $9,565 | $720,038,193 | $6,976 | $267,155,146 | $2,588 |
| Nevada | $1,580,581,160 | $10,222 | $913,591,211 | $5,909 | $666,989,949 | $4,314 |
| New Hampshire | $602,202,139 | $9,914 | $577,258,766 | $9,504 | $24,943,373 | $411 |
| New Jersey | $6,196,187,758 | $13,308 | $6,095,448,780 | $13,092 | $100,738,979 | $216 |
| New Mexico | $1,368,361,425 | $10,406 | $941,646,903 | $7,161 | $426,714,523 | $3,245 |
| New York | $13,050,133,139 | $13,271 | $11,917,953,306 | $12,119 | $1,132,179,833 | $1,151 |
| North Carolina | $5,724,225,989 | $10,153 | $3,649,499,666 | $6,473 | $2,074,726,323 | $3,680 |
| North Dakota | $290,894,749 | $9,017 | $236,147,544 | $7,320 | $54,747,206 | $1,697 |
| Ohio | $7,532,338,281 | $11,196 | $5,649,112,737 | $8,397 | $1,883,225,544 | $2,799 |
| Oklahoma | $2,379,488,972 | $9,712 | $1,641,937,569 | $6,701 | $737,551,403 | $3,010 |
| Oregon | $2,276,403,815 | $11,018 | $1,570,678,854 | $7,602 | $705,724,961 | $3,416 |
| Pennsylvania | $7,406,201,140 | $11,874 | $6,000,052,342 | $9,620 | $1,406,148,798 | $2,254 |
| Rhode Island | $623,141,254 | $11,976 | $503,647,876 | $9,679 | $119,493,378 | $2,296 |
| South Carolina | $2,696,332,794 | $10,226 | $1,902,521,954 | $7,215 | $793,810,840 | $3,011 |
| South Dakota | $409,633,031 | $8,691 | $312,228,390 | $6,624 | $97,404,641 | $2,067 |
| Tennessee | $3,762,503,017 | $10,044 | $2,207,878,476 | $5,894 | $1,554,624,541 | $4,150 |
| Texas | $18,543,592,377 | $10,356 | $11,611,114,194 | $6,484 | $6,932,478,184 | $3,871 |
| Utah | $1,866,637,367 | $9,163 | $940,924,225 | $4,619 | $925,713,142 | $4,544 |
| Vermont | $326,160,351 | $10,390 | $352,334,956 | $11,224 | ($26,174,604) | ($834) |
| Virginia | $4,446,309,171 | $10,519 | $3,553,507,372 | $8,407 | $892,801,800 | $2,112 |
| Washington | $3,809,924,056 | $10,548 | $2,566,186,640 | $7,104 | $1,243,737,417 | $3,443 |
| West Virginia | $1,029,879,314 | $10,244 | $932,663,076 | $9,277 | $97,216,238 | $967 |
| Wisconsin | $3,085,995,265 | $10,630 | $2,671,830,955 | $9,203 | $414,164,310 | $1,427 |
| Wyoming | $314,261,001 | $10,173 | $314,823,162 | $10,191 | ($562,161) | ($18) |
| Totals* | $202,258,836,300 | $11,207 | $143,534,207,436 | $7,953 | $58,800,626,485 | $3,254 |

## Table D7: State By State Cost Estimates: PreK Eligibility All 3 and 4 Year Old Children, 50% Participation Rate, PreK Class size 15

| State | PreK-3rd Cost Cost Estimate | PreK-3rd Cost Estimate Per Pupil | Estimate of PreK-3rd Current Expenditures | PreK-3rd Expenditures Per Pupil | Difference | Difference Per-Pupil |
|---|---|---|---|---|---|---|
| Alabama | $2,881,788,194 | $9,863 | $1,923,963,356 | $6,585 | $957,824,838 | $3,278 |
| Alaska | $576,820,034 | $12,020 | $415,453,133 | $8,658 | $161,366,901 | $3,363 |
| Arizona | $4,316,139,698 | $10,328 | $1,984,386,840 | $4,748 | $2,331,752,858 | $5,580 |
| Arkansas | $1,832,960,042 | $10,025 | $1,388,076,923 | $7,592 | $444,883,119 | $2,433 |
| California | $30,804,623,965 | $12,754 | $17,336,706,375 | $7,178 | $13,467,917,590 | $5,576 |
| Colorado | $3,064,827,826 | $10,088 | $2,236,083,814 | $7,360 | $828,744,013 | $2,728 |
| Connecticut | $2,708,690,510 | $12,702 | $2,283,009,822 | $10,706 | $425,680,688 | $1,996 |
| Delaware | $593,536,818 | $12,384 | $474,002,928 | $9,890 | $119,533,891 | $2,494 |
| District of Columbia | $421,912,309 | $14,894 | $390,419,340 | $13,782 | $31,492,969 | $1,112 |
| Florida | $10,699,467,953 | $10,282 | $7,045,975,633 | $6,771 | $3,653,492,320 | $3,511 |
| Georgia | $6,943,471,509 | $10,988 | $4,699,172,493 | $7,436 | $2,244,299,016 | $3,551 |
| Hawaii | $826,603,963 | $10,839 | $584,416,554 | $7,663 | $242,187,409 | $3,176 |
| Idaho | $974,843,519 | $9,413 | $600,439,457 | $5,798 | $374,404,062 | $3,615 |
| Illinois | $9,808,959,202 | $12,490 | $6,280,879,594 | $7,998 | $3,528,079,608 | $4,492 |
| Indiana | $4,385,004,198 | $10,943 | $2,924,860,476 | $7,299 | $1,460,143,723 | $3,644 |
| Iowa | $1,681,549,515 | $9,468 | $1,188,524,774 | $6,692 | $493,024,741 | $2,776 |
| Kansas | $1,726,979,983 | $9,885 | $1,252,259,938 | $7,168 | $474,720,045 | $2,717 |
| Kentucky | $2,606,142,079 | $10,179 | $1,845,776,125 | $7,209 | $760,365,954 | $2,970 |
| Louisiana | $2,736,416,262 | $10,155 | $2,012,595,113 | $7,469 | $723,821,149 | $2,686 |
| Maine | $655,336,428 | $9,876 | $682,037,695 | $10,278 | ($26,701,266) | ($402) |
| Maryland | $3,697,610,905 | $11,864 | $2,591,716,107 | $8,316 | $1,105,894,798 | $3,548 |
| Massachusetts | $4,470,397,551 | $12,307 | $3,816,456,990 | $10,507 | $653,940,562 | $1,800 |
| Michigan | $7,510,595,238 | $11,906 | $5,369,134,655 | $8,511 | $2,141,460,583 | $3,395 |
| Minnesota | $3,265,455,556 | $10,811 | $2,476,249,701 | $8,198 | $789,205,855 | $2,613 |
| Mississippi | $2,029,121,279 | $10,029 | $1,295,295,380 | $6,402 | $733,825,899 | $3,627 |
| Missouri | $3,409,791,997 | $9,836 | $2,281,809,614 | $6,582 | $1,127,982,383 | $3,254 |
| Montana | $489,783,494 | $9,400 | $371,477,465 | $7,130 | $118,306,029 | $2,271 |
| Nebraska | $1,017,029,511 | $9,521 | $720,038,193 | $6,740 | $296,991,319 | $2,780 |
| Nevada | $1,634,015,311 | $10,184 | $913,591,211 | $5,694 | $720,424,100 | $4,490 |
| New Hampshire | $688,612,284 | $10,014 | $577,258,766 | $8,394 | $111,353,518 | $1,619 |
| New Jersey | $6,800,444,468 | $13,339 | $6,095,448,780 | $11,956 | $704,995,689 | $1,383 |
| New Mexico | $1,286,959,884 | $10,326 | $941,646,903 | $7,555 | $345,312,982 | $2,771 |
| New York | $13,597,807,090 | $13,211 | $11,917,953,306 | $11,579 | $1,679,853,785 | $1,632 |
| North Carolina | $5,774,729,197 | $10,095 | $3,649,499,666 | $6,380 | $2,125,229,531 | $3,715 |
| North Dakota | $303,992,024 | $9,005 | $236,147,544 | $6,995 | $67,844,481 | $2,010 |
| Ohio | $7,696,391,462 | $11,144 | $5,649,112,737 | $8,180 | $2,047,278,725 | $2,964 |
| Oklahoma | $2,323,624,247 | $9,653 | $1,641,937,569 | $6,821 | $681,686,678 | $2,832 |
| Oregon | $2,291,721,417 | $10,957 | $1,570,678,854 | $7,510 | $721,042,563 | $3,447 |
| Pennsylvania | $7,750,337,538 | $11,837 | $6,000,052,342 | $9,164 | $1,750,285,196 | $2,673 |
| Rhode Island | $648,842,338 | $11,939 | $503,647,876 | $9,267 | $145,194,462 | $2,672 |
| South Carolina | $2,703,755,586 | $10,169 | $1,902,521,954 | $7,155 | $801,233,632 | $3,013 |
| South Dakota | $399,914,163 | $8,629 | $312,228,390 | $6,737 | $87,685,774 | $1,892 |
| Tennessee | $3,735,909,222 | $9,983 | $2,207,878,476 | $5,900 | $1,528,030,746 | $4,083 |
| Texas | $18,139,040,964 | $10,281 | $11,611,114,194 | $6,581 | $6,527,926,770 | $3,700 |
| Utah | $1,943,465,991 | $9,134 | $940,924,225 | $4,422 | $1,002,541,766 | $4,712 |
| Vermont | $340,527,056 | $10,362 | $352,334,956 | $10,721 | ($11,807,900) | ($359) |
| Virginia | $4,854,898,541 | $10,546 | $3,553,507,372 | $7,719 | $1,301,391,169 | $2,827 |
| Washington | $3,966,505,654 | $10,523 | $2,566,186,640 | $6,808 | $1,400,319,015 | $3,715 |
| West Virginia | $1,016,710,590 | $10,180 | $932,663,076 | $9,339 | $84,047,514 | $842 |
| Wisconsin | $3,241,507,249 | $10,609 | $2,671,830,955 | $8,745 | $569,676,294 | $1,864 |
| Wyoming | $317,491,631 | $10,131 | $314,823,162 | $10,045 | $2,668,469 | $85 |
| Totals* | $207,593,063,446 | $11,181 | $143,534,207,436 | $7,731 | $64,097,365,176 | $3,450 |

## Table D8: State By State Cost Estimates: PreK Eligibility All 3 and 4 Year Old Children, 65% Participation Rate, PreK Class size 15

| State | PreK-3rd Cost Cost Estimate | PreK-3rd Cost Estimate Per Pupil | Estimate of PreK-3rd Current Expenditures | PreK-3rd Expenditures Per Pupil | Difference | Difference Per-Pupil |
|---|---|---|---|---|---|---|
| Alabama | $3,068,280,589 | $9,896 | $1,923,963,356 | $6,205 | $1,144,317,234 | $3,691 |
| Alaska | $611,367,037 | $12,064 | $415,453,133 | $8,198 | $195,913,904 | $3,866 |
| Arizona | $4,614,137,542 | $10,370 | $1,984,386,840 | $4,460 | $2,629,750,702 | $5,910 |
| Arkansas | $1,947,405,763 | $10,054 | $1,388,076,923 | $7,166 | $559,328,840 | $2,888 |
| California | $32,987,147,509 | $12,796 | $17,336,706,375 | $6,725 | $15,650,441,133 | $6,071 |
| Colorado | $3,288,963,743 | $10,144 | $2,236,083,814 | $6,897 | $1,052,879,930 | $3,247 |
| Connecticut | $2,892,906,345 | $12,765 | $2,283,009,822 | $10,074 | $609,896,523 | $2,691 |
| Delaware | $640,145,975 | $12,437 | $474,002,928 | $9,209 | $166,143,048 | $3,228 |
| District of Columbia | $456,386,000 | $14,929 | $390,419,340 | $12,771 | $65,966,660 | $2,158 |
| Florida | $11,431,772,187 | $10,323 | $7,045,975,633 | $6,362 | $4,385,796,554 | $3,960 |
| Georgia | $7,414,015,120 | $11,026 | $4,699,172,493 | $6,988 | $2,714,842,627 | $4,037 |
| Hawaii | $896,008,493 | $10,884 | $584,416,554 | $7,099 | $311,591,939 | $3,785 |
| Idaho | $1,045,764,735 | $9,454 | $600,439,457 | $5,428 | $445,325,278 | $4,026 |
| Illinois | $10,505,283,276 | $12,539 | $6,280,879,594 | $7,497 | $4,224,403,682 | $5,042 |
| Indiana | $4,695,624,263 | $10,990 | $2,924,860,476 | $6,846 | $1,770,763,787 | $4,145 |
| Iowa | $1,796,488,544 | $9,516 | $1,188,524,774 | $6,295 | $607,963,770 | $3,220 |
| Kansas | $1,849,014,798 | $9,927 | $1,252,259,938 | $6,723 | $596,754,860 | $3,204 |
| Kentucky | $2,785,889,148 | $10,210 | $1,845,776,125 | $6,765 | $940,113,023 | $3,446 |
| Louisiana | $2,942,024,001 | $10,180 | $2,012,595,113 | $6,964 | $929,428,888 | $3,216 |
| Maine | $690,786,865 | $9,917 | $682,037,695 | $9,792 | $8,749,170 | $126 |
| Maryland | $3,984,387,113 | $11,926 | $2,591,716,107 | $7,757 | $1,392,671,006 | $4,168 |
| Massachusetts | $4,793,868,820 | $12,371 | $3,816,456,990 | $9,849 | $977,411,831 | $2,522 |
| Michigan | $8,015,804,389 | $11,954 | $5,369,134,655 | $8,007 | $2,646,669,734 | $3,947 |
| Minnesota | $3,496,628,774 | $10,868 | $2,476,249,701 | $7,697 | $1,020,379,072 | $3,172 |
| Mississippi | $2,173,318,899 | $10,041 | $1,295,295,380 | $5,984 | $878,023,518 | $4,056 |
| Missouri | $3,657,570,262 | $9,887 | $2,281,809,614 | $6,168 | $1,375,760,648 | $3,719 |
| Montana | $522,189,117 | $9,440 | $371,477,465 | $6,716 | $150,711,652 | $2,725 |
| Nebraska | $1,089,198,800 | $9,570 | $720,038,193 | $6,326 | $369,160,608 | $3,244 |
| Nevada | $1,742,105,207 | $10,234 | $913,591,211 | $5,367 | $828,513,996 | $4,867 |
| New Hampshire | $733,759,188 | $10,075 | $577,258,766 | $7,926 | $156,500,422 | $2,149 |
| New Jersey | $7,308,219,321 | $13,407 | $6,095,448,780 | $11,182 | $1,212,770,541 | $2,225 |
| New Mexico | $1,369,771,030 | $10,358 | $941,646,903 | $7,120 | $428,124,127 | $3,237 |
| New York | $14,630,339,244 | $13,259 | $11,917,953,306 | $10,801 | $2,712,385,939 | $2,458 |
| North Carolina | $6,175,122,521 | $10,142 | $3,649,499,666 | $5,994 | $2,525,622,855 | $4,148 |
| North Dakota | $322,995,717 | $9,050 | $236,147,544 | $6,616 | $86,848,173 | $2,433 |
| Ohio | $8,252,738,225 | $11,200 | $5,649,112,737 | $7,667 | $2,603,625,488 | $3,533 |
| Oklahoma | $2,471,440,199 | $9,680 | $1,641,937,569 | $6,431 | $829,502,630 | $3,249 |
| Oregon | $2,445,519,593 | $10,998 | $1,570,678,854 | $7,063 | $874,840,740 | $3,934 |
| Pennsylvania | $8,289,195,489 | $11,891 | $6,000,052,342 | $8,607 | $2,289,143,147 | $3,284 |
| Rhode Island | $695,732,234 | $11,992 | $503,647,876 | $8,681 | $192,084,358 | $3,311 |
| South Carolina | $2,884,850,734 | $10,201 | $1,902,521,954 | $6,728 | $982,328,780 | $3,474 |
| South Dakota | $429,016,404 | $8,677 | $312,228,390 | $6,315 | $116,788,014 | $2,362 |
| Tennessee | $3,991,145,240 | $10,023 | $2,207,878,476 | $5,545 | $1,783,266,764 | $4,478 |
| Texas | $19,366,218,300 | $10,327 | $11,611,114,194 | $6,191 | $7,755,104,107 | $4,135 |
| Utah | $2,085,939,711 | $9,192 | $940,924,225 | $4,146 | $1,145,015,486 | $5,046 |
| Vermont | $365,505,077 | $10,415 | $352,334,956 | $10,040 | $13,170,122 | $375 |
| Virginia | $5,212,342,983 | $10,615 | $3,553,507,372 | $7,236 | $1,658,835,611 | $3,378 |
| Washington | $4,237,240,139 | $10,580 | $2,566,186,640 | $6,407 | $1,671,053,499 | $4,172 |
| West Virginia | $1,074,247,633 | $10,214 | $932,663,076 | $8,868 | $141,584,557 | $1,346 |
| Wisconsin | $3,476,739,900 | $10,667 | $2,671,830,955 | $8,198 | $804,908,945 | $2,470 |
| Wyoming | $338,603,352 | $10,175 | $314,823,162 | $9,460 | $23,780,190 | $715 |
| Totals* | $222,191,165,549 | $11,230 | $143,534,207,436 | $7,254 | $78,656,958,113 | $3,975 |

## Table D9: State By State Cost Estimates: PreK Eligibility All 3 and 4 Year Old Children, 100% Participation Rate, PreK Class size 15

| State | PreK-3rd Cost Cost Estimate | PreK-3rd Cost Estimate Per Pupil | Estimate of PreK-3rd Current Expenditures | PreK-3rd Expenditures Per Pupil | Difference | Difference Per-Pupil |
|---|---|---|---|---|---|---|
| Alabama | $3,503,429,512 | $9,960 | $1,923,963,356 | $5,470 | $1,579,466,157 | $4,490 |
| Alaska | $691,976,710 | $12,151 | $415,453,133 | $7,295 | $276,523,577 | $4,856 |
| Arizona | $5,309,465,844 | $10,451 | $1,984,386,840 | $3,906 | $3,325,079,005 | $6,545 |
| Arkansas | $2,214,445,778 | $10,110 | $1,388,076,923 | $6,337 | $826,368,855 | $3,773 |
| California | $38,079,702,443 | $12,874 | $17,336,706,375 | $5,861 | $20,742,996,068 | $7,013 |
| Colorado | $3,811,947,550 | $10,252 | $2,236,083,814 | $6,014 | $1,575,863,736 | $4,238 |
| Connecticut | $3,322,743,293 | $12,886 | $2,283,009,822 | $8,854 | $1,039,733,471 | $4,032 |
| Delaware | $748,900,675 | $12,537 | $474,002,928 | $7,935 | $274,897,748 | $4,602 |
| District of Columbia | $536,824,611 | $14,995 | $390,419,340 | $10,905 | $146,405,271 | $4,089 |
| Florida | $13,140,482,066 | $10,402 | $7,045,975,633 | $5,577 | $6,094,506,433 | $4,824 |
| Georgia | $8,511,950,213 | $11,099 | $4,699,172,493 | $6,128 | $3,812,777,720 | $4,972 |
| Hawaii | $1,057,952,394 | $10,966 | $584,416,554 | $6,058 | $473,535,840 | $4,908 |
| Idaho | $1,211,247,573 | $9,532 | $600,439,457 | $4,725 | $610,808,116 | $4,807 |
| Illinois | $12,130,039,448 | $12,633 | $6,280,879,594 | $6,542 | $5,849,159,854 | $6,092 |
| Indiana | $5,420,404,414 | $11,080 | $2,924,860,476 | $5,979 | $2,495,543,938 | $5,101 |
| Iowa | $2,064,679,612 | $9,608 | $1,188,524,774 | $5,531 | $876,154,837 | $4,077 |
| Kansas | $2,133,762,701 | $10,009 | $1,252,259,938 | $5,874 | $881,502,763 | $4,135 |
| Kentucky | $3,205,298,977 | $10,270 | $1,845,776,125 | $5,914 | $1,359,522,852 | $4,356 |
| Louisiana | $3,421,775,393 | $10,227 | $2,012,595,113 | $6,015 | $1,409,180,280 | $4,212 |
| Maine | $773,504,551 | $10,000 | $682,037,695 | $8,818 | $91,466,857 | $1,183 |
| Maryland | $4,653,531,597 | $12,043 | $2,591,716,107 | $6,707 | $2,061,815,490 | $5,336 |
| Massachusetts | $5,548,635,114 | $12,494 | $3,816,456,990 | $8,593 | $1,732,178,125 | $3,900 |
| Michigan | $9,194,625,742 | $12,047 | $5,369,134,655 | $7,035 | $3,825,491,087 | $5,012 |
| Minnesota | $4,036,032,948 | $10,977 | $2,476,249,701 | $6,735 | $1,559,783,247 | $4,242 |
| Mississippi | $2,509,780,012 | $10,062 | $1,295,295,380 | $5,193 | $1,214,484,631 | $4,869 |
| Missouri | $4,235,719,548 | $9,983 | $2,281,809,614 | $5,378 | $1,953,909,934 | $4,605 |
| Montana | $597,802,238 | $9,517 | $371,477,465 | $5,914 | $226,324,773 | $3,603 |
| Nebraska | $1,257,593,808 | $9,664 | $720,038,193 | $5,533 | $537,555,616 | $4,131 |
| Nevada | $1,994,314,964 | $10,331 | $913,591,211 | $4,733 | $1,080,723,753 | $5,599 |
| New Hampshire | $839,101,966 | $10,195 | $577,258,766 | $7,014 | $261,843,200 | $3,181 |
| New Jersey | $8,493,027,310 | $13,537 | $6,095,448,780 | $9,715 | $2,397,578,531 | $3,821 |
| New Mexico | $1,562,997,035 | $10,419 | $941,646,903 | $6,277 | $621,350,132 | $4,142 |
| New York | $17,039,580,937 | $13,350 | $11,917,953,306 | $9,337 | $5,121,627,632 | $4,013 |
| North Carolina | $7,109,373,610 | $10,234 | $3,649,499,666 | $5,253 | $3,459,873,944 | $4,980 |
| North Dakota | $367,337,667 | $9,138 | $236,147,544 | $5,874 | $131,190,123 | $3,264 |
| Ohio | $9,550,880,674 | $11,307 | $5,649,112,737 | $6,688 | $3,901,767,937 | $4,619 |
| Oklahoma | $2,816,344,088 | $9,732 | $1,641,937,569 | $5,674 | $1,174,406,519 | $4,058 |
| Oregon | $2,804,382,006 | $11,075 | $1,570,678,854 | $6,203 | $1,233,703,153 | $4,872 |
| Pennsylvania | $9,546,530,709 | $11,994 | $6,000,052,342 | $7,538 | $3,546,478,367 | $4,456 |
| Rhode Island | $805,141,992 | $12,094 | $503,647,876 | $7,565 | $301,494,116 | $4,529 |
| South Carolina | $3,307,406,079 | $10,264 | $1,902,521,954 | $5,904 | $1,404,884,125 | $4,360 |
| South Dakota | $496,921,631 | $8,769 | $312,228,390 | $5,510 | $184,693,241 | $3,259 |
| Tennessee | $4,586,695,950 | $10,100 | $2,207,878,476 | $4,862 | $2,378,817,474 | $5,238 |
| Texas | $22,229,632,086 | $10,416 | $11,611,114,194 | $5,440 | $10,618,517,892 | $4,975 |
| Utah | $2,418,378,389 | $9,303 | $940,924,225 | $3,619 | $1,477,454,165 | $5,683 |
| Vermont | $423,787,128 | $10,516 | $352,334,956 | $8,743 | $71,452,172 | $1,773 |
| Virginia | $6,046,380,014 | $10,746 | $3,553,507,372 | $6,315 | $2,492,872,643 | $4,430 |
| Washington | $4,868,953,935 | $10,689 | $2,566,186,640 | $5,634 | $2,302,767,296 | $5,055 |
| West Virginia | $1,208,500,734 | $10,282 | $932,663,076 | $7,936 | $275,837,658 | $2,347 |
| Wisconsin | $4,025,616,085 | $10,779 | $2,671,830,955 | $7,154 | $1,353,785,130 | $3,625 |
| Wyoming | $387,864,034 | $10,261 | $314,823,162 | $8,328 | $73,040,872 | $1,932 |
| Totals* | $256,253,403,791 | $11,323 | $143,534,207,436 | $6,343 | $112,719,196,355 | $4,981 |

## Table D10: State By State Cost Estimates: PreK Eligibility 100% of Poverty, 50% Participation Rate, PreK Class size 20

| State | PreK-3rd Cost Cost Estimate | PreK-3rd Cost Estimate Per Pupil | Estimate of PreK-3rd Current Expenditures | PreK-3rd Expenditures Per Pupil | Difference | Difference Per-Pupil |
|---|---|---|---|---|---|---|
| Alabama | $2,431,788,114 | $9,732 | $1,923,963,356 | $7,700 | $507,824,758 | $2,032 |
| Alaska | $471,413,944 | $11,837 | $415,453,133 | $10,432 | $55,960,811 | $1,405 |
| Arizona | $3,540,834,132 | $10,131 | $1,984,386,840 | $5,678 | $1,556,447,292 | $4,453 |
| Arkansas | $1,554,670,848 | $9,874 | $1,388,076,923 | $8,816 | $166,593,925 | $1,058 |
| California | $24,844,586,636 | $12,547 | $17,336,706,375 | $8,755 | $7,507,880,261 | $3,792 |
| Colorado | $2,438,875,223 | $9,842 | $2,236,083,814 | $9,023 | $202,791,409 | $818 |
| Connecticut | $2,159,256,955 | $12,428 | $2,283,009,822 | $13,140 | ($123,752,867) | ($712) |
| Delaware | $460,878,231 | $12,131 | $474,002,928 | $12,476 | ($13,124,696) | ($345) |
| District of Columbia | $343,871,866 | $14,651 | $390,419,340 | $16,634 | ($46,547,474) | ($1,983) |
| Florida | $8,718,563,863 | $10,092 | $7,045,975,633 | $8,156 | $1,672,588,230 | $1,936 |
| Georgia | $5,712,552,154 | $10,803 | $4,699,172,493 | $8,887 | $1,013,379,661 | $1,916 |
| Hawaii | $622,597,241 | $10,612 | $584,416,554 | $9,961 | $38,180,687 | $651 |
| Idaho | $777,583,000 | $9,223 | $600,439,457 | $7,122 | $177,143,543 | $2,101 |
| Illinois | $7,879,824,450 | $12,261 | $6,280,879,594 | $9,773 | $1,598,944,856 | $2,488 |
| Indiana | $3,540,481,662 | $10,729 | $2,924,860,476 | $8,863 | $615,621,186 | $1,866 |
| Iowa | $1,356,249,444 | $9,262 | $1,188,524,774 | $8,117 | $167,724,670 | $1,145 |
| Kansas | $1,393,929,351 | $9,692 | $1,252,259,938 | $8,707 | $141,669,413 | $985 |
| Kentucky | $2,148,590,908 | $10,019 | $1,845,776,125 | $8,607 | $302,814,783 | $1,412 |
| Louisiana | $2,239,573,997 | $10,005 | $2,012,595,113 | $8,991 | $226,978,884 | $1,014 |
| Maine | $561,277,016 | $9,715 | $682,037,695 | $11,805 | ($120,760,678) | ($2,090) |
| Maryland | $2,845,096,518 | $11,577 | $2,591,716,107 | $10,546 | $253,380,411 | $1,031 |
| Massachusetts | $3,517,816,803 | $12,028 | $3,816,456,990 | $13,050 | ($298,640,187) | ($1,021) |
| Michigan | $6,141,928,506 | $11,688 | $5,369,134,655 | $10,217 | $772,793,851 | $1,471 |
| Minnesota | $2,593,564,399 | $10,567 | $2,476,249,701 | $10,089 | $117,314,698 | $478 |
| Mississippi | $1,700,419,116 | $9,904 | $1,295,295,380 | $7,545 | $405,123,736 | $2,360 |
| Missouri | $2,748,733,486 | $9,615 | $2,281,809,614 | $7,982 | $466,923,873 | $1,633 |
| Montana | $396,565,664 | $9,237 | $371,477,465 | $8,653 | $25,088,199 | $584 |
| Nebraska | $814,649,988 | $9,310 | $720,038,193 | $8,228 | $94,611,796 | $1,081 |
| Nevada | $1,328,481,429 | $9,968 | $913,591,211 | $6,855 | $414,890,218 | $3,113 |
| New Hampshire | $548,095,970 | $9,759 | $577,258,766 | $10,278 | ($29,162,796) | ($519) |
| New Jersey | $5,350,440,479 | $13,030 | $6,095,448,780 | $14,845 | ($745,008,301) | ($1,814) |
| New Mexico | $1,086,740,925 | $10,171 | $941,646,903 | $8,813 | $145,094,022 | $1,358 |
| New York | $10,856,504,280 | $12,971 | $11,917,953,306 | $14,240 | ($1,061,449,025) | ($1,268) |
| North Carolina | $4,722,893,377 | $9,886 | $3,649,499,666 | $7,639 | $1,073,393,711 | $2,247 |
| North Dakota | $249,992,607 | $8,817 | $236,147,544 | $8,329 | $13,845,063 | $488 |
| Ohio | $6,222,311,975 | $10,898 | $5,649,112,737 | $9,894 | $573,199,238 | $1,004 |
| Oklahoma | $1,942,524,778 | $9,523 | $1,641,937,569 | $8,050 | $300,587,209 | $1,474 |
| Oregon | $1,873,671,366 | $10,770 | $1,570,678,854 | $9,028 | $302,992,513 | $1,742 |
| Pennsylvania | $6,272,932,536 | $11,598 | $6,000,052,342 | $11,094 | $272,880,194 | $505 |
| Rhode Island | $524,422,662 | $11,686 | $503,647,876 | $11,223 | $20,774,786 | $463 |
| South Carolina | $2,236,661,956 | $10,008 | $1,902,521,954 | $8,513 | $334,140,002 | $1,495 |
| South Dakota | $326,715,857 | $8,418 | $312,228,390 | $8,044 | $14,487,467 | $373 |
| Tennessee | $3,066,028,673 | $9,802 | $2,207,878,476 | $7,059 | $858,150,197 | $2,744 |
| Texas | $15,115,210,542 | $10,076 | $11,611,114,194 | $7,740 | $3,504,096,348 | $2,336 |
| Utah | $1,512,046,145 | $8,886 | $940,924,225 | $5,530 | $571,121,921 | $3,357 |
| Vermont | $269,791,956 | $10,125 | $352,334,956 | $13,223 | ($82,543,000) | ($3,098) |
| Virginia | $3,825,169,223 | $10,255 | $3,553,507,372 | $9,527 | $271,661,852 | $728 |
| Washington | $3,203,848,383 | $10,282 | $2,566,186,640 | $8,236 | $637,661,744 | $2,046 |
| West Virginia | $874,192,966 | $10,038 | $932,663,076 | $10,710 | ($58,470,110) | ($671) |
| Wisconsin | $2,581,915,083 | $10,355 | $2,671,830,955 | $10,715 | ($89,915,872) | ($361) |
| Wyoming | $258,267,638 | $9,935 | $314,823,162 | $12,110 | ($56,555,524) | ($2,176) |
| Totals* | $168,205,034,322 | $10,954 | $143,534,207,436 | $9,348 | $27,396,757,416 | $1,607 |

## Table D11: State By State Cost Estimates: PreK Eligibility 100% of Poverty, 65% Participation Rate, PreK Class size 20

| State | PreK-3rd Cost Cost Estimate | PreK-3rd Cost Estimate Per Pupil | Estimate of PreK-3rd Current Expenditures | PreK-3rd Expenditures Per Pupil | Difference | Difference Per-Pupil |
|---|---|---|---|---|---|---|
| Alabama | $2,483,280,485 | $9,736 | $1,923,963,356 | $7,543 | $559,317,130 | $2,193 |
| Alaska | $474,339,120 | $11,839 | $415,453,133 | $10,370 | $58,885,987 | $1,470 |
| Arizona | $3,606,240,306 | $10,129 | $1,984,386,840 | $5,574 | $1,621,853,466 | $4,555 |
| Arkansas | $1,585,629,811 | $9,868 | $1,388,076,923 | $8,638 | $197,552,888 | $1,229 |
| California | $25,239,098,981 | $12,542 | $17,336,706,375 | $8,615 | $7,902,392,605 | $3,927 |
| Colorado | $2,475,225,359 | $9,845 | $2,236,083,814 | $8,894 | $239,141,545 | $951 |
| Connecticut | $2,178,642,724 | $12,430 | $2,283,009,822 | $13,026 | ($104,367,098) | ($595) |
| Delaware | $467,689,812 | $12,131 | $474,002,928 | $12,295 | ($6,313,115) | ($164) |
| District of Columbia | $354,933,424 | $14,633 | $390,419,340 | $16,096 | ($35,485,916) | ($1,463) |
| Florida | $8,856,596,870 | $10,091 | $7,045,975,633 | $8,028 | $1,810,621,237 | $2,063 |
| Georgia | $5,813,819,958 | $10,799 | $4,699,172,493 | $8,729 | $1,114,647,465 | $2,071 |
| Hawaii | $630,799,754 | $10,609 | $584,416,554 | $9,829 | $46,383,200 | $780 |
| Idaho | $789,326,061 | $9,223 | $600,439,457 | $7,016 | $188,886,604 | $2,207 |
| Illinois | $7,997,408,099 | $12,260 | $6,280,879,594 | $9,629 | $1,716,528,505 | $2,632 |
| Indiana | $3,597,744,965 | $10,729 | $2,924,860,476 | $8,722 | $672,884,489 | $2,007 |
| Iowa | $1,373,598,452 | $9,265 | $1,188,524,774 | $8,017 | $185,073,678 | $1,248 |
| Kansas | $1,416,048,977 | $9,692 | $1,252,259,938 | $8,571 | $163,789,039 | $1,121 |
| Kentucky | $2,191,072,626 | $10,013 | $1,845,776,125 | $8,435 | $345,296,501 | $1,578 |
| Louisiana | $2,296,129,057 | $9,997 | $2,012,595,113 | $8,763 | $283,533,944 | $1,234 |
| Maine | $568,509,630 | $9,719 | $682,037,695 | $11,659 | ($113,528,065) | ($1,941) |
| Maryland | $2,876,118,409 | $11,578 | $2,591,716,107 | $10,433 | $284,402,302 | $1,145 |
| Massachusetts | $3,555,513,847 | $12,032 | $3,816,456,990 | $12,915 | ($260,943,143) | ($883) |
| Michigan | $6,236,537,637 | $11,688 | $5,369,134,655 | $10,062 | $867,402,982 | $1,626 |
| Minnesota | $2,623,170,270 | $10,570 | $2,476,249,701 | $9,978 | $146,920,568 | $592 |
| Mississippi | $1,746,006,087 | $9,885 | $1,295,295,380 | $7,334 | $450,710,707 | $2,552 |
| Missouri | $2,798,194,199 | $9,618 | $2,281,809,614 | $7,843 | $516,384,585 | $1,775 |
| Montana | $401,005,939 | $9,241 | $371,477,465 | $8,561 | $29,528,474 | $680 |
| Nebraska | $826,105,420 | $9,313 | $720,038,193 | $8,117 | $106,067,228 | $1,196 |
| Nevada | $1,344,911,160 | $9,969 | $913,591,211 | $6,772 | $431,319,949 | $3,197 |
| New Hampshire | $551,087,980 | $9,763 | $577,258,766 | $10,227 | ($26,170,786) | ($464) |
| New Jersey | $5,423,214,134 | $13,033 | $6,095,448,780 | $14,648 | ($672,234,645) | ($1,615) |
| New Mexico | $1,109,486,382 | $10,167 | $941,646,903 | $8,629 | $167,839,480 | $1,538 |
| New York | $11,066,645,592 | $12,968 | $11,917,953,306 | $13,966 | ($851,307,714) | ($998) |
| North Carolina | $4,807,735,955 | $9,888 | $3,649,499,666 | $7,506 | $1,158,236,289 | $2,382 |
| North Dakota | $252,796,474 | $8,819 | $236,147,544 | $8,238 | $16,648,930 | $581 |
| Ohio | $6,336,434,892 | $10,901 | $5,649,112,737 | $9,718 | $687,322,155 | $1,182 |
| Oklahoma | $1,976,010,889 | $9,520 | $1,641,937,569 | $7,911 | $334,073,320 | $1,609 |
| Oregon | $1,902,054,528 | $10,768 | $1,570,678,854 | $8,892 | $331,375,674 | $1,876 |
| Pennsylvania | $6,368,568,987 | $11,599 | $6,000,052,342 | $10,928 | $368,516,645 | $671 |
| Rhode Island | $533,986,655 | $11,684 | $503,647,876 | $11,020 | $30,338,779 | $664 |
| South Carolina | $2,277,629,015 | $10,004 | $1,902,521,954 | $8,356 | $375,107,061 | $1,648 |
| South Dakota | $333,858,605 | $8,420 | $312,228,390 | $7,874 | $21,630,215 | $545 |
| Tennessee | $3,120,300,527 | $9,802 | $2,207,878,476 | $6,936 | $912,422,051 | $2,866 |
| Texas | $15,435,238,752 | $10,077 | $11,611,114,194 | $7,580 | $3,824,124,558 | $2,497 |
| Utah | $1,525,093,911 | $8,891 | $940,924,225 | $5,486 | $584,169,686 | $3,406 |
| Vermont | $273,549,447 | $10,127 | $352,334,956 | $13,044 | ($78,785,508) | ($2,917) |
| Virginia | $3,873,694,870 | $10,262 | $3,553,507,372 | $9,414 | $320,187,499 | $848 |
| Washington | $3,245,785,686 | $10,286 | $2,566,186,640 | $8,132 | $679,599,047 | $2,154 |
| West Virginia | $888,974,722 | $10,039 | $932,663,076 | $10,533 | ($43,688,354) | ($493) |
| Wisconsin | $2,619,270,084 | $10,358 | $2,671,830,955 | $10,566 | ($52,560,871) | ($208) |
| Wyoming | $261,612,161 | $9,935 | $314,823,162 | $11,956 | ($53,211,001) | ($2,021) |
| Totals* | $170,986,727,689 | $10,953 | $143,534,207,436 | $9,194 | $29,751,116,469 | $1,759 |

## Table D12: State By State Cost Estimates: PreK Eligibility 100% of Poverty, 100% Participation Rate, PreK Class size 20

| State | PreK-3rd Cost Cost Estimate | PreK-3rd Cost Estimate Per Pupil | Estimate of PreK-3rd Current Expenditures | PreK-3rd Expenditures Per Pupil | Difference | Difference Per-Pupil |
|---|---|---|---|---|---|---|
| Alabama | $2,603,429,352 | $9,745 | $1,923,963,356 | $7,202 | $679,465,997 | $2,543 |
| Alaska | $481,164,530 | $11,844 | $415,453,133 | $10,227 | $65,711,397 | $1,618 |
| Arizona | $3,758,854,712 | $10,126 | $1,984,386,840 | $5,346 | $1,774,467,873 | $4,780 |
| Arkansas | $1,657,867,391 | $9,853 | $1,388,076,923 | $8,249 | $269,790,468 | $1,603 |
| California | $26,159,627,785 | $12,530 | $17,336,706,375 | $8,304 | $8,822,921,410 | $4,226 |
| Colorado | $2,560,042,343 | $9,853 | $2,236,083,814 | $8,606 | $323,958,530 | $1,247 |
| Connecticut | $2,223,876,185 | $12,436 | $2,283,009,822 | $12,766 | ($59,133,637) | ($331) |
| Delaware | $483,583,502 | $12,131 | $474,002,928 | $11,891 | $9,580,574 | $240 |
| District of Columbia | $380,743,725 | $14,596 | $390,419,340 | $14,967 | ($9,675,615) | ($371) |
| Florida | $9,178,673,887 | $10,089 | $7,045,975,633 | $7,745 | $2,132,698,254 | $2,344 |
| Georgia | $6,050,111,503 | $10,792 | $4,699,172,493 | $8,382 | $1,350,939,010 | $2,410 |
| Hawaii | $649,938,950 | $10,603 | $584,416,554 | $9,534 | $65,522,396 | $1,069 |
| Idaho | $816,726,536 | $9,223 | $600,439,457 | $6,781 | $216,287,079 | $2,443 |
| Illinois | $8,271,769,945 | $12,258 | $6,280,879,594 | $9,308 | $1,990,890,351 | $2,950 |
| Indiana | $3,731,359,340 | $10,729 | $2,924,860,476 | $8,410 | $806,498,865 | $2,319 |
| Iowa | $1,414,079,470 | $9,272 | $1,188,524,774 | $7,793 | $225,554,696 | $1,479 |
| Kansas | $1,467,661,438 | $9,693 | $1,252,259,938 | $8,270 | $215,401,500 | $1,423 |
| Kentucky | $2,290,196,635 | $10,002 | $1,845,776,125 | $8,061 | $444,420,510 | $1,941 |
| Louisiana | $2,428,090,863 | $9,979 | $2,012,595,113 | $8,272 | $415,495,750 | $1,708 |
| Maine | $585,385,727 | $9,727 | $682,037,695 | $11,333 | ($96,651,967) | ($1,606) |
| Maryland | $2,948,502,822 | $11,581 | $2,591,716,107 | $10,179 | $356,786,716 | $1,401 |
| Massachusetts | $3,643,473,617 | $12,041 | $3,816,456,990 | $12,613 | ($172,983,373) | ($572) |
| Michigan | $6,457,292,277 | $11,688 | $5,369,134,655 | $9,718 | $1,088,157,622 | $1,970 |
| Minnesota | $2,692,250,635 | $10,578 | $2,476,249,701 | $9,730 | $216,000,933 | $849 |
| Mississippi | $1,852,375,686 | $9,845 | $1,295,295,380 | $6,884 | $557,080,306 | $2,961 |
| Missouri | $2,913,602,527 | $9,624 | $2,281,809,614 | $7,537 | $631,792,913 | $2,087 |
| Montana | $411,366,579 | $9,250 | $371,477,465 | $8,353 | $39,889,114 | $897 |
| Nebraska | $852,834,762 | $9,321 | $720,038,193 | $7,870 | $132,796,570 | $1,451 |
| Nevada | $1,383,247,200 | $9,972 | $913,591,211 | $6,586 | $469,655,989 | $3,386 |
| New Hampshire | $558,069,338 | $9,773 | $577,258,766 | $10,109 | ($19,189,428) | ($336) |
| New Jersey | $5,593,019,330 | $13,038 | $6,095,448,780 | $14,209 | ($502,429,449) | ($1,171) |
| New Mexico | $1,162,559,116 | $10,158 | $941,646,903 | $8,228 | $220,912,214 | $1,930 |
| New York | $11,556,975,318 | $12,961 | $11,917,953,306 | $13,366 | ($360,977,988) | ($405) |
| North Carolina | $5,005,701,970 | $9,892 | $3,649,499,666 | $7,212 | $1,356,202,304 | $2,680 |
| North Dakota | $259,338,831 | $8,824 | $236,147,544 | $8,035 | $23,191,287 | $789 |
| Ohio | $6,602,721,701 | $10,907 | $5,649,112,737 | $9,332 | $953,608,964 | $1,575 |
| Oklahoma | $2,054,145,149 | $9,513 | $1,641,937,569 | $7,604 | $412,207,580 | $1,909 |
| Oregon | $1,968,281,906 | $10,764 | $1,570,678,854 | $8,590 | $397,603,052 | $2,174 |
| Pennsylvania | $6,591,720,706 | $11,601 | $6,000,052,342 | $10,560 | $591,668,364 | $1,041 |
| Rhode Island | $556,302,639 | $11,680 | $503,647,876 | $10,574 | $52,654,763 | $1,105 |
| South Carolina | $2,373,218,819 | $9,996 | $1,902,521,954 | $8,013 | $470,696,865 | $1,982 |
| South Dakota | $350,525,017 | $8,424 | $312,228,390 | $7,504 | $38,296,627 | $920 |
| Tennessee | $3,246,934,853 | $9,801 | $2,207,878,476 | $6,664 | $1,039,056,377 | $3,136 |
| Texas | $16,181,971,242 | $10,079 | $11,611,114,194 | $7,232 | $4,570,857,048 | $2,847 |
| Utah | $1,555,538,698 | $8,902 | $940,924,225 | $5,385 | $614,614,473 | $3,517 |
| Vermont | $282,316,928 | $10,132 | $352,334,956 | $12,644 | ($70,018,028) | ($2,513) |
| Virginia | $3,986,921,380 | $10,278 | $3,553,507,372 | $9,160 | $433,414,008 | $1,117 |
| Washington | $3,343,639,393 | $10,294 | $2,566,186,640 | $7,901 | $777,452,754 | $2,394 |
| West Virginia | $923,465,486 | $10,042 | $932,663,076 | $10,142 | ($9,197,590) | ($100) |
| Wisconsin | $2,706,431,754 | $10,366 | $2,671,830,955 | $10,234 | $34,600,799 | $133 |
| Wyoming | $269,416,048 | $9,937 | $314,823,162 | $11,612 | ($45,407,114) | ($1,675) |
| Totals* | $177,477,345,544 | $10,950 | $143,534,207,436 | $8,856 | $35,288,802,299 | $2,094 |

## Table D13: State By State Cost Estimates: PreK Eligibility 200% of Poverty, 50% Participation Rate, PreK Class size 20

| State | PreK-3rd Cost Cost Estimate | PreK-3rd Cost Estimate Per Pupil | Estimate of PreK-3rd Current Expenditures | PreK-3rd Expenditures Per Pupil | Difference | Difference Per-Pupil |
|---|---|---|---|---|---|---|
| Alabama | $2,550,397,423 | $9,697 | $1,923,963,356 | $7,315 | $626,434,067 | $2,382 |
| Alaska | $498,980,174 | $11,824 | $415,453,133 | $9,845 | $83,527,041 | $1,979 |
| Arizona | $3,785,975,571 | $10,129 | $1,984,386,840 | $5,309 | $1,801,588,732 | $4,820 |
| Arkansas | $1,653,987,445 | $9,863 | $1,388,076,923 | $8,277 | $265,910,522 | $1,586 |
| California | $26,518,984,534 | $12,525 | $17,336,706,375 | $8,189 | $9,182,278,159 | $4,337 |
| Colorado | $2,588,111,691 | $9,858 | $2,236,083,814 | $8,517 | $352,027,877 | $1,341 |
| Connecticut | $2,237,527,217 | $12,442 | $2,283,009,822 | $12,695 | ($45,482,605) | ($253) |
| Delaware | $490,867,854 | $12,122 | $474,002,928 | $11,705 | $16,864,926 | $416 |
| District of Columbia | $366,940,304 | $14,601 | $390,419,340 | $15,535 | ($23,479,036) | ($934) |
| Florida | $9,293,094,451 | $10,093 | $7,045,975,633 | $7,652 | $2,247,118,818 | $2,440 |
| Georgia | $6,046,979,500 | $10,797 | $4,699,172,493 | $8,391 | $1,347,807,007 | $2,407 |
| Hawaii | $668,876,072 | $10,599 | $584,416,554 | $9,260 | $84,459,518 | $1,338 |
| Idaho | $849,889,303 | $9,208 | $600,439,457 | $6,506 | $249,449,846 | $2,703 |
| Illinois | $8,300,997,017 | $12,258 | $6,280,879,594 | $9,275 | $2,020,117,423 | $2,983 |
| Indiana | $3,763,964,754 | $10,731 | $2,924,860,476 | $8,339 | $839,104,278 | $2,392 |
| Iowa | $1,437,919,056 | $9,274 | $1,188,524,774 | $7,666 | $249,394,282 | $1,609 |
| Kansas | $1,492,461,727 | $9,691 | $1,252,259,938 | $8,131 | $240,201,789 | $1,560 |
| Kentucky | $2,294,635,083 | $9,995 | $1,845,776,125 | $8,040 | $448,858,958 | $1,955 |
| Louisiana | $2,364,692,778 | $9,987 | $2,012,595,113 | $8,500 | $352,097,666 | $1,487 |
| Maine | $580,070,091 | $9,728 | $682,037,695 | $11,438 | ($101,967,604) | ($1,710) |
| Maryland | $2,993,249,369 | $11,589 | $2,591,716,107 | $10,035 | $401,533,262 | $1,555 |
| Massachusetts | $3,655,837,037 | $12,040 | $3,816,456,990 | $12,569 | ($160,619,952) | ($529) |
| Michigan | $6,426,825,637 | $11,691 | $5,369,134,655 | $9,767 | $1,057,690,982 | $1,924 |
| Minnesota | $2,703,987,066 | $10,585 | $2,476,249,701 | $9,693 | $227,737,365 | $891 |
| Mississippi | $1,804,372,596 | $9,866 | $1,295,295,380 | $7,082 | $509,077,215 | $2,784 |
| Missouri | $2,934,322,763 | $9,629 | $2,281,809,614 | $7,488 | $652,513,149 | $2,141 |
| Montana | $428,812,189 | $9,228 | $371,477,465 | $7,994 | $57,334,724 | $1,234 |
| Nebraska | $870,589,281 | $9,325 | $720,038,193 | $7,712 | $150,551,088 | $1,613 |
| Nevada | $1,410,529,492 | $9,987 | $913,591,211 | $6,469 | $496,938,281 | $3,519 |
| New Hampshire | $566,690,042 | $9,773 | $577,258,766 | $9,955 | ($10,568,724) | ($182) |
| New Jersey | $5,594,370,352 | $13,043 | $6,095,448,780 | $14,211 | ($501,078,427) | ($1,168) |
| New Mexico | $1,170,750,656 | $10,147 | $941,646,903 | $8,162 | $229,103,753 | $1,986 |
| New York | $11,446,958,491 | $12,966 | $11,917,953,306 | $13,500 | ($470,994,815) | ($534) |
| North Carolina | $5,011,933,876 | $9,893 | $3,649,499,666 | $7,204 | $1,362,434,210 | $2,689 |
| North Dakota | $263,105,721 | $8,832 | $236,147,544 | $7,927 | $26,958,177 | $905 |
| Ohio | $6,593,057,994 | $10,903 | $5,649,112,737 | $9,342 | $943,945,257 | $1,561 |
| Oklahoma | $2,075,968,436 | $9,500 | $1,641,937,569 | $7,514 | $434,030,867 | $1,986 |
| Oregon | $1,999,225,664 | $10,757 | $1,570,678,854 | $8,451 | $428,546,810 | $2,306 |
| Pennsylvania | $6,599,204,060 | $11,606 | $6,000,052,342 | $10,552 | $599,151,718 | $1,054 |
| Rhode Island | $550,467,717 | $11,693 | $503,647,876 | $10,698 | $46,819,841 | $995 |
| South Carolina | $2,365,601,400 | $9,998 | $1,902,521,954 | $8,041 | $463,079,446 | $1,957 |
| South Dakota | $350,686,085 | $8,435 | $312,228,390 | $7,510 | $38,457,696 | $925 |
| Tennessee | $3,275,834,576 | $9,795 | $2,207,878,476 | $6,601 | $1,067,956,100 | $3,193 |
| Texas | $16,062,894,955 | $10,086 | $11,611,114,194 | $7,290 | $4,451,780,761 | $2,795 |
| Utah | $1,645,957,095 | $8,914 | $940,924,225 | $5,096 | $705,032,870 | $3,818 |
| Vermont | $287,864,074 | $10,133 | $352,334,956 | $12,403 | ($64,470,881) | ($2,269) |
| Virginia | $4,015,138,758 | $10,285 | $3,553,507,372 | $9,103 | $461,631,387 | $1,183 |
| Washington | $3,396,545,356 | $10,299 | $2,566,186,640 | $7,781 | $830,358,716 | $2,518 |
| West Virginia | $917,400,253 | $10,040 | $932,663,076 | $10,207 | ($15,262,823) | ($167) |
| Wisconsin | $2,737,783,011 | $10,372 | $2,671,830,955 | $10,122 | $65,952,056 | $250 |
| Wyoming | $277,053,444 | $9,935 | $314,823,162 | $11,290 | ($37,769,718) | ($1,354) |
| Totals* | $178,218,369,491 | $10,951 | $143,534,207,436 | $8,819 | $36,115,856,641 | $2,131 |

## Table D14: State By State Cost Estimates: PreK Eligibility 200% of Poverty, 65% Participation Rate, PreK Class size 20

| State | PreK-3rd Cost Cost Estimate | PreK-3rd Cost Estimate Per Pupil | Estimate of PreK-3rd Current Expenditures | PreK-3rd Expenditures Per Pupil | Difference | Difference Per-Pupil |
|---|---|---|---|---|---|---|
| Alabama | $2,637,472,587 | $9,692 | $1,923,963,356 | $7,070 | $713,509,232 | $2,622 |
| Alaska | $510,175,219 | $11,822 | $415,453,133 | $9,627 | $94,722,086 | $2,195 |
| Arizona | $3,924,924,177 | $10,127 | $1,984,386,840 | $5,120 | $1,940,537,338 | $5,007 |
| Arkansas | $1,714,741,388 | $9,853 | $1,388,076,923 | $7,976 | $326,664,465 | $1,877 |
| California | $27,415,816,249 | $12,515 | $17,336,706,375 | $7,914 | $10,079,109,873 | $4,601 |
| Colorado | $2,669,232,767 | $9,866 | $2,236,083,814 | $8,265 | $433,148,954 | $1,601 |
| Connecticut | $2,280,394,065 | $12,448 | $2,283,009,822 | $12,462 | ($2,615,758) | ($14) |
| Delaware | $506,676,322 | $12,120 | $474,002,928 | $11,338 | $32,673,394 | $782 |
| District of Columbia | $384,922,394 | $14,573 | $390,419,340 | $14,781 | ($5,496,946) | ($208) |
| Florida | $9,603,486,635 | $10,092 | $7,045,975,633 | $7,404 | $2,557,511,002 | $2,688 |
| Georgia | $6,248,575,509 | $10,792 | $4,699,172,493 | $8,116 | $1,549,403,016 | $2,676 |
| Hawaii | $690,962,234 | $10,593 | $584,416,554 | $8,960 | $106,545,680 | $1,633 |
| Idaho | $883,324,254 | $9,205 | $600,439,457 | $6,257 | $282,884,797 | $2,948 |
| Illinois | $8,544,932,436 | $12,256 | $6,280,879,594 | $9,008 | $2,264,052,842 | $3,247 |
| Indiana | $3,888,272,985 | $10,732 | $2,924,860,476 | $8,073 | $963,412,510 | $2,659 |
| Iowa | $1,479,768,948 | $9,280 | $1,188,524,774 | $7,454 | $291,244,174 | $1,826 |
| Kansas | $1,544,141,066 | $9,691 | $1,252,259,938 | $7,860 | $291,881,128 | $1,832 |
| Kentucky | $2,380,930,053 | $9,985 | $1,845,776,125 | $7,741 | $535,153,928 | $2,244 |
| Louisiana | $2,458,783,473 | $9,975 | $2,012,595,113 | $8,165 | $446,188,360 | $1,810 |
| Maine | $592,940,626 | $9,735 | $682,037,695 | $11,198 | ($89,097,068) | ($1,463) |
| Maryland | $3,068,717,116 | $11,594 | $2,591,716,107 | $9,792 | $477,001,009 | $1,802 |
| Massachusetts | $3,734,940,152 | $12,047 | $3,816,456,990 | $12,310 | ($81,516,838) | ($263) |
| Michigan | $6,606,903,908 | $11,691 | $5,369,134,655 | $9,501 | $1,237,769,253 | $2,190 |
| Minnesota | $2,766,719,737 | $10,593 | $2,476,249,701 | $9,481 | $290,470,035 | $1,112 |
| Mississippi | $1,881,145,611 | $9,839 | $1,295,295,380 | $6,775 | $585,850,230 | $3,064 |
| Missouri | $3,039,460,259 | $9,635 | $2,281,809,614 | $7,234 | $757,650,645 | $2,402 |
| Montana | $442,926,420 | $9,229 | $371,477,465 | $7,740 | $71,448,955 | $1,489 |
| Nebraska | $898,826,501 | $9,332 | $720,038,193 | $7,476 | $178,788,308 | $1,856 |
| Nevada | $1,451,573,642 | $9,994 | $913,591,211 | $6,290 | $537,982,431 | $3,704 |
| New Hampshire | $575,260,274 | $9,781 | $577,258,766 | $9,815 | ($1,998,492) | ($34) |
| New Jersey | $5,740,322,970 | $13,049 | $6,095,448,780 | $13,856 | ($355,125,810) | ($807) |
| New Mexico | $1,218,699,032 | $10,138 | $941,646,903 | $7,833 | $277,052,129 | $2,305 |
| New York | $11,834,236,065 | $12,962 | $11,917,953,306 | $13,054 | ($83,717,241) | ($92) |
| North Carolina | $5,183,488,603 | $9,897 | $3,649,499,666 | $6,968 | $1,533,988,937 | $2,929 |
| North Dakota | $269,843,522 | $8,838 | $236,147,544 | $7,734 | $33,695,979 | $1,104 |
| Ohio | $6,818,404,717 | $10,908 | $5,649,112,737 | $9,037 | $1,169,291,980 | $1,871 |
| Oklahoma | $2,149,487,644 | $9,491 | $1,641,937,569 | $7,250 | $507,550,076 | $2,241 |
| Oregon | $2,065,275,115 | $10,752 | $1,570,678,854 | $8,177 | $494,596,261 | $2,575 |
| Pennsylvania | $6,792,721,968 | $11,609 | $6,000,052,342 | $10,254 | $792,669,626 | $1,355 |
| Rhode Island | $567,845,226 | $11,693 | $503,647,876 | $10,371 | $64,197,350 | $1,322 |
| South Carolina | $2,445,250,292 | $9,992 | $1,902,521,954 | $7,774 | $542,728,338 | $2,218 |
| South Dakota | $365,019,902 | $8,441 | $312,228,390 | $7,220 | $52,791,513 | $1,221 |
| Tennessee | $3,393,048,201 | $9,792 | $2,207,878,476 | $6,372 | $1,185,169,725 | $3,420 |
| Texas | $16,667,228,489 | $10,089 | $11,611,114,194 | $7,028 | $5,056,114,295 | $3,061 |
| Utah | $1,699,178,146 | $8,926 | $940,924,225 | $4,943 | $758,253,921 | $3,983 |
| Vermont | $297,043,201 | $10,137 | $352,334,956 | $12,024 | ($55,291,754) | ($1,887) |
| Virginia | $4,120,655,266 | $10,300 | $3,553,507,372 | $8,882 | $567,147,894 | $1,418 |
| Washington | $3,496,291,750 | $10,307 | $2,566,186,640 | $7,565 | $930,105,111 | $2,742 |
| West Virginia | $945,144,194 | $10,042 | $932,663,076 | $9,909 | $12,481,118 | $133 |
| Wisconsin | $2,821,898,390 | $10,380 | $2,671,830,955 | $9,828 | $150,067,436 | $552 |
| Wyoming | $286,033,708 | $9,936 | $314,823,162 | $10,936 | ($28,789,454) | ($1,000) |
| Totals* | $184,004,063,408 | $10,948 | $143,534,207,436 | $8,540 | $41,173,505,333 | $2,408 |

## Table D15: State By State Cost Estimates: PreK Eligibility 200% of Poverty, 100% Participation Rate, PreK Class size 20

| State | PreK-3rd Cost Cost Estimate | PreK-3rd Cost Estimate Per Pupil | Estimate of PreK-3rd Current Expenditures | PreK-3rd Expenditures Per Pupil | Difference | Difference Per-Pupil |
|---|---|---|---|---|---|---|
| Alabama | $2,840,647,970 | $9,681 | $1,923,963,356 | $6,557 | $916,684,615 | $3,124 |
| Alaska | $536,296,990 | $11,819 | $415,453,133 | $9,156 | $120,843,857 | $2,663 |
| Arizona | $4,249,137,591 | $10,123 | $1,984,386,840 | $4,727 | $2,264,750,752 | $5,395 |
| Arkansas | $1,856,500,586 | $9,834 | $1,388,076,923 | $7,353 | $468,423,663 | $2,481 |
| California | $29,508,423,582 | $12,493 | $17,336,706,375 | $7,340 | $12,171,717,206 | $5,153 |
| Colorado | $2,858,515,279 | $9,881 | $2,236,083,814 | $7,730 | $622,431,466 | $2,152 |
| Connecticut | $2,380,416,708 | $12,461 | $2,283,009,822 | $11,951 | $97,406,886 | $510 |
| Delaware | $543,562,747 | $12,115 | $474,002,928 | $10,565 | $69,559,819 | $1,550 |
| District of Columbia | $426,880,602 | $14,516 | $390,419,340 | $13,276 | $36,461,262 | $1,240 |
| Florida | $10,327,735,063 | $10,090 | $7,045,975,633 | $6,884 | $3,281,759,430 | $3,206 |
| Georgia | $6,718,966,197 | $10,783 | $4,699,172,493 | $7,541 | $2,019,793,704 | $3,241 |
| Hawaii | $742,496,612 | $10,581 | $584,416,554 | $8,328 | $158,080,057 | $2,253 |
| Idaho | $961,339,141 | $9,197 | $600,439,457 | $5,744 | $360,899,684 | $3,453 |
| Illinois | $9,114,115,079 | $12,252 | $6,280,879,594 | $8,443 | $2,833,235,485 | $3,809 |
| Indiana | $4,178,325,525 | $10,734 | $2,924,860,476 | $7,514 | $1,253,465,049 | $3,220 |
| Iowa | $1,577,418,694 | $9,293 | $1,188,524,774 | $7,002 | $388,893,920 | $2,291 |
| Kansas | $1,664,726,190 | $9,692 | $1,252,259,938 | $7,291 | $412,466,252 | $2,401 |
| Kentucky | $2,582,284,985 | $9,963 | $1,845,776,125 | $7,121 | $736,508,860 | $2,842 |
| Louisiana | $2,678,328,426 | $9,950 | $2,012,595,113 | $7,477 | $665,733,313 | $2,473 |
| Maine | $622,971,876 | $9,751 | $682,037,695 | $10,675 | ($59,065,819) | ($924) |
| Maryland | $3,244,808,525 | $11,604 | $2,591,716,107 | $9,269 | $653,092,418 | $2,336 |
| Massachusetts | $3,919,514,086 | $12,061 | $3,816,456,990 | $11,744 | $103,057,096 | $317 |
| Michigan | $7,027,086,540 | $11,693 | $5,369,134,655 | $8,934 | $1,657,951,885 | $2,759 |
| Minnesota | $2,913,095,968 | $10,611 | $2,476,249,701 | $9,020 | $436,846,267 | $1,591 |
| Mississippi | $2,060,282,645 | $9,785 | $1,295,295,380 | $6,152 | $764,987,265 | $3,633 |
| Missouri | $3,284,781,081 | $9,648 | $2,281,809,614 | $6,702 | $1,002,971,467 | $2,946 |
| Montana | $475,859,628 | $9,232 | $371,477,465 | $7,207 | $104,382,163 | $2,025 |
| Nebraska | $964,713,348 | $9,347 | $720,038,193 | $6,976 | $244,675,155 | $2,371 |
| Nevada | $1,547,343,325 | $10,007 | $913,591,211 | $5,909 | $633,752,114 | $4,099 |
| New Hampshire | $595,257,482 | $9,800 | $577,258,766 | $9,504 | $17,998,716 | $296 |
| New Jersey | $6,080,879,078 | $13,060 | $6,095,448,780 | $13,092 | ($14,569,702) | ($31) |
| New Mexico | $1,330,578,578 | $10,119 | $941,646,903 | $7,161 | $388,931,675 | $2,958 |
| New York | $12,737,883,738 | $12,953 | $11,917,953,306 | $12,119 | $819,930,433 | $834 |
| North Carolina | $5,583,782,968 | $9,904 | $3,649,499,666 | $6,473 | $1,934,283,302 | $3,431 |
| North Dakota | $285,565,059 | $8,851 | $236,147,544 | $7,320 | $49,417,515 | $1,532 |
| Ohio | $7,344,213,738 | $10,916 | $5,649,112,737 | $8,397 | $1,695,101,001 | $2,520 |
| Oklahoma | $2,321,032,465 | $9,473 | $1,641,937,569 | $6,701 | $679,094,896 | $2,772 |
| Oregon | $2,219,390,501 | $10,742 | $1,570,678,854 | $7,602 | $648,711,647 | $3,140 |
| Pennsylvania | $7,244,263,753 | $11,615 | $6,000,052,342 | $9,620 | $1,244,211,411 | $1,995 |
| Rhode Island | $608,392,749 | $11,692 | $503,647,876 | $9,679 | $104,744,873 | $2,013 |
| South Carolina | $2,631,097,706 | $9,979 | $1,902,521,954 | $7,215 | $728,575,752 | $2,763 |
| South Dakota | $398,465,475 | $8,454 | $312,228,390 | $6,624 | $86,237,085 | $1,830 |
| Tennessee | $3,666,546,659 | $9,788 | $2,207,878,476 | $5,894 | $1,458,668,183 | $3,894 |
| Texas | $18,077,340,068 | $10,095 | $11,611,114,194 | $6,484 | $6,466,225,874 | $3,611 |
| Utah | $1,823,360,597 | $8,950 | $940,924,225 | $4,619 | $882,436,372 | $4,332 |
| Vermont | $318,461,164 | $10,145 | $352,334,956 | $11,224 | ($33,873,791) | ($1,079) |
| Virginia | $4,366,860,450 | $10,331 | $3,553,507,372 | $8,407 | $813,353,078 | $1,924 |
| Washington | $3,729,033,338 | $10,324 | $2,566,186,640 | $7,104 | $1,162,846,698 | $3,219 |
| West Virginia | $1,009,880,059 | $10,045 | $932,663,076 | $9,277 | $77,216,983 | $768 |
| Wisconsin | $3,018,167,609 | $10,396 | $2,671,830,955 | $9,203 | $346,336,654 | $1,193 |
| Wyoming | $306,987,659 | $9,937 | $314,823,162 | $10,191 | ($7,835,503) | ($254) |
| Totals* | $197,504,015,882 | $10,944 | $143,534,207,436 | $7,953 | $54,085,153,261 | $2,991 |

## Table D16: State By State Cost Estimates: PreK Eligibility All 3 and 4 Year Old Children, 50% Participation Rate, PreK Class size 20

| State | PreK-3rd Cost Cost Estimate | PreK-3rd Cost Estimate Per Pupil | Estimate of PreK-3rd Current Expenditures | PreK-3rd Expenditures Per Pupil | Difference | Difference Per-Pupil |
|---|---|---|---|---|---|---|
| Alabama | $2,813,799,052 | $9,631 | $1,923,963,356 | $6,585 | $889,835,696 | $3,046 |
| Alaska | $563,754,036 | $11,748 | $415,453,133 | $8,658 | $148,300,903 | $3,090 |
| Arizona | $4,203,900,107 | $10,059 | $1,984,386,840 | $4,748 | $2,219,513,268 | $5,311 |
| Arkansas | $1,789,574,185 | $9,788 | $1,388,076,923 | $7,592 | $401,497,262 | $2,196 |
| California | $29,930,350,460 | $12,392 | $17,336,706,375 | $7,178 | $12,593,644,084 | $5,214 |
| Colorado | $2,980,427,565 | $9,810 | $2,236,083,814 | $7,360 | $744,343,751 | $2,450 |
| Connecticut | $2,637,395,396 | $12,368 | $2,283,009,822 | $10,706 | $354,385,574 | $1,662 |
| Delaware | $576,105,030 | $12,020 | $474,002,928 | $9,890 | $102,102,103 | $2,130 |
| District of Columbia | $409,999,872 | $14,473 | $390,419,340 | $13,782 | $19,580,532 | $691 |
| Florida | $10,429,385,045 | $10,022 | $7,045,975,633 | $6,771 | $3,383,409,412 | $3,251 |
| Georgia | $6,763,515,225 | $10,703 | $4,699,172,493 | $7,436 | $2,064,342,732 | $3,267 |
| Hawaii | $799,183,757 | $10,480 | $584,416,554 | $7,663 | $214,767,203 | $2,816 |
| Idaho | $947,600,948 | $9,150 | $600,439,457 | $5,798 | $347,161,491 | $3,352 |
| Illinois | $9,532,319,305 | $12,138 | $6,280,879,594 | $7,998 | $3,251,439,711 | $4,140 |
| Indiana | $4,269,389,788 | $10,655 | $2,924,860,476 | $7,299 | $1,344,529,312 | $3,355 |
| Iowa | $1,638,380,028 | $9,224 | $1,188,524,774 | $6,692 | $449,855,254 | $2,533 |
| Kansas | $1,682,058,667 | $9,628 | $1,252,259,938 | $7,168 | $429,798,729 | $2,460 |
| Kentucky | $2,539,126,980 | $9,917 | $1,845,776,125 | $7,209 | $693,350,855 | $2,708 |
| Louisiana | $2,662,603,320 | $9,881 | $2,012,595,113 | $7,469 | $650,008,207 | $2,412 |
| Maine | $642,695,880 | $9,686 | $682,037,695 | $10,278 | ($39,341,814) | ($593) |
| Maryland | $3,587,019,018 | $11,509 | $2,591,716,107 | $8,316 | $995,302,911 | $3,193 |
| Massachusetts | $4,346,771,795 | $11,967 | $3,816,456,990 | $10,507 | $530,314,805 | $1,460 |
| Michigan | $7,313,796,299 | $11,594 | $5,369,134,655 | $8,511 | $1,944,661,644 | $3,083 |
| Minnesota | $3,177,648,692 | $10,521 | $2,476,249,701 | $8,198 | $701,398,991 | $2,322 |
| Mississippi | $1,975,142,376 | $9,762 | $1,295,295,380 | $6,402 | $679,846,995 | $3,360 |
| Missouri | $3,320,896,260 | $9,580 | $2,281,809,614 | $6,582 | $1,039,086,647 | $2,997 |
| Montana | $477,721,535 | $9,169 | $371,477,465 | $7,130 | $106,244,070 | $2,039 |
| Nebraska | $990,424,783 | $9,272 | $720,038,193 | $6,740 | $270,386,591 | $2,531 |
| Nevada | $1,593,553,560 | $9,932 | $913,591,211 | $5,694 | $679,962,349 | $4,238 |
| New Hampshire | $671,556,169 | $9,766 | $577,258,766 | $8,394 | $94,297,403 | $1,371 |
| New Jersey | $6,615,619,873 | $12,976 | $6,095,448,780 | $11,956 | $520,171,094 | $1,020 |
| New Mexico | $1,257,215,167 | $10,087 | $941,646,903 | $7,555 | $315,568,264 | $2,532 |
| New York | $13,214,247,630 | $12,838 | $11,917,953,306 | $11,579 | $1,296,294,325 | $1,259 |
| North Carolina | $5,624,103,726 | $9,831 | $3,649,499,666 | $6,380 | $1,974,604,060 | $3,452 |
| North Dakota | $297,048,224 | $8,799 | $236,147,544 | $6,995 | $60,900,681 | $1,804 |
| Ohio | $7,483,629,803 | $10,836 | $5,649,112,737 | $8,180 | $1,834,517,066 | $2,656 |
| Oklahoma | $2,269,919,979 | $9,430 | $1,641,937,569 | $6,821 | $627,982,410 | $2,609 |
| Oregon | $2,231,210,876 | $10,668 | $1,570,678,854 | $7,510 | $660,532,022 | $3,158 |
| Pennsylvania | $7,542,800,522 | $11,520 | $6,000,052,342 | $9,164 | $1,542,748,180 | $2,356 |
| Rhode Island | $630,653,259 | $11,604 | $503,647,876 | $9,267 | $127,005,383 | $2,337 |
| South Carolina | $2,635,841,752 | $9,913 | $1,902,521,954 | $7,155 | $733,319,798 | $2,758 |
| South Dakota | $389,541,635 | $8,406 | $312,228,390 | $6,737 | $77,313,246 | $1,668 |
| Tennessee | $3,640,436,689 | $9,728 | $2,207,878,476 | $5,900 | $1,432,558,213 | $3,828 |
| Texas | $17,703,701,954 | $10,034 | $11,611,114,194 | $6,581 | $6,092,587,761 | $3,453 |
| Utah | $1,889,930,894 | $8,883 | $940,924,225 | $4,422 | $949,006,669 | $4,460 |
| Vermont | $330,928,882 | $10,070 | $352,334,956 | $10,721 | ($21,406,073) | ($651) |
| Virginia | $4,729,175,185 | $10,273 | $3,553,507,372 | $7,719 | $1,175,667,813 | $2,554 |
| Washington | $3,865,356,526 | $10,254 | $2,566,186,640 | $6,808 | $1,299,169,886 | $3,447 |
| West Virginia | $997,435,068 | $9,987 | $932,663,076 | $9,339 | $64,771,992 | $649 |
| Wisconsin | $3,154,073,624 | $10,323 | $2,671,830,955 | $8,745 | $482,242,669 | $1,578 |
| Wyoming | $309,677,686 | $9,881 | $314,823,162 | $10,045 | ($5,145,476) | ($164) |
| Totals* | $202,078,644,089 | $10,884 | $143,534,207,436 | $7,731 | $58,610,330,016 | $3,153 |

## Table D17: State By State Cost Estimates: PreK Eligibility All 3 and 4 Year Old Children, 65% Participation Rate, PreK Class size 20

| State | PreK-3rd Cost Cost Estimate | PreK-3rd Cost Estimate Per Pupil | Estimate of PreK-3rd Current Expenditures | PreK-3rd Expenditures Per Pupil | Difference | Difference Per-Pupil |
|---|---|---|---|---|---|---|
| Alabama | $2,979,894,704 | $9,611 | $1,923,963,356 | $6,205 | $1,055,931,349 | $3,406 |
| Alaska | $594,381,240 | $11,729 | $415,453,133 | $8,198 | $178,928,107 | $3,531 |
| Arizona | $4,468,226,074 | $10,042 | $1,984,386,840 | $4,460 | $2,483,839,234 | $5,582 |
| Arkansas | $1,891,004,149 | $9,763 | $1,388,076,923 | $7,166 | $502,927,226 | $2,596 |
| California | $31,850,591,952 | $12,355 | $17,336,706,375 | $6,725 | $14,513,885,576 | $5,630 |
| Colorado | $3,179,243,403 | $9,806 | $2,236,083,814 | $6,897 | $943,159,590 | $2,909 |
| Connecticut | $2,800,222,697 | $12,356 | $2,283,009,822 | $10,074 | $517,212,875 | $2,282 |
| Delaware | $617,484,651 | $11,997 | $474,002,928 | $9,209 | $143,481,723 | $2,788 |
| District of Columbia | $440,899,831 | $14,423 | $390,419,340 | $12,771 | $50,480,491 | $1,651 |
| Florida | $11,080,664,407 | $10,006 | $7,045,975,633 | $6,362 | $4,034,688,774 | $3,643 |
| Georgia | $7,180,071,952 | $10,678 | $4,699,172,493 | $6,988 | $2,480,899,459 | $3,690 |
| Hawaii | $860,362,225 | $10,451 | $584,416,554 | $7,099 | $275,945,671 | $3,352 |
| Idaho | $1,010,349,393 | $9,134 | $600,439,457 | $5,428 | $409,909,936 | $3,706 |
| Illinois | $10,145,651,410 | $12,110 | $6,280,879,594 | $7,497 | $3,864,771,816 | $4,613 |
| Indiana | $4,545,325,529 | $10,638 | $2,924,860,476 | $6,846 | $1,620,465,053 | $3,793 |
| Iowa | $1,740,368,211 | $9,218 | $1,188,524,774 | $6,295 | $551,843,437 | $2,923 |
| Kansas | $1,790,617,088 | $9,614 | $1,252,259,938 | $6,723 | $538,357,150 | $2,890 |
| Kentucky | $2,698,769,520 | $9,891 | $1,845,776,125 | $6,765 | $852,993,395 | $3,126 |
| Louisiana | $2,846,067,176 | $9,848 | $2,012,595,113 | $6,964 | $833,472,064 | $2,884 |
| Maine | $674,354,153 | $9,681 | $682,037,695 | $9,792 | ($7,683,542) | ($110) |
| Maryland | $3,840,617,659 | $11,496 | $2,591,716,107 | $7,757 | $1,248,901,552 | $3,738 |
| Massachusetts | $4,633,155,337 | $11,957 | $3,816,456,990 | $9,849 | $816,698,347 | $2,108 |
| Michigan | $7,759,965,769 | $11,572 | $5,369,134,655 | $8,007 | $2,390,831,113 | $3,565 |
| Minnesota | $3,382,479,850 | $10,513 | $2,476,249,701 | $7,697 | $906,230,149 | $2,817 |
| Mississippi | $2,103,146,325 | $9,716 | $1,295,295,380 | $5,984 | $807,850,944 | $3,732 |
| Missouri | $3,542,005,805 | $9,574 | $2,281,809,614 | $6,168 | $1,260,196,191 | $3,406 |
| Montana | $506,508,571 | $9,157 | $371,477,465 | $6,716 | $135,031,106 | $2,441 |
| Nebraska | $1,054,612,654 | $9,266 | $720,038,193 | $6,326 | $334,574,461 | $2,940 |
| Nevada | $1,689,504,931 | $9,925 | $913,591,211 | $5,367 | $775,913,720 | $4,558 |
| New Hampshire | $711,586,239 | $9,771 | $577,258,766 | $7,926 | $134,327,473 | $1,844 |
| New Jersey | $7,067,947,347 | $12,966 | $6,095,448,780 | $11,182 | $972,498,568 | $1,784 |
| New Mexico | $1,331,102,897 | $10,065 | $941,646,903 | $7,120 | $389,455,994 | $2,945 |
| New York | $14,131,711,947 | $12,807 | $11,917,953,306 | $10,801 | $2,213,758,641 | $2,006 |
| North Carolina | $5,979,309,408 | $9,821 | $3,649,499,666 | $5,994 | $2,329,809,742 | $3,827 |
| North Dakota | $313,968,777 | $8,797 | $236,147,544 | $6,616 | $77,821,233 | $2,180 |
| Ohio | $7,976,148,070 | $10,825 | $5,649,112,737 | $7,667 | $2,327,035,333 | $3,158 |
| Oklahoma | $2,401,624,651 | $9,407 | $1,641,937,569 | $6,431 | $759,687,082 | $2,975 |
| Oregon | $2,366,855,891 | $10,644 | $1,570,678,854 | $7,063 | $796,177,037 | $3,580 |
| Pennsylvania | $8,019,397,369 | $11,504 | $6,000,052,342 | $8,607 | $2,019,345,027 | $2,897 |
| Rhode Island | $672,086,432 | $11,585 | $503,647,876 | $8,681 | $168,438,556 | $2,903 |
| South Carolina | $2,796,562,749 | $9,889 | $1,902,521,954 | $6,728 | $894,040,795 | $3,161 |
| South Dakota | $415,532,117 | $8,405 | $312,228,390 | $6,315 | $103,303,727 | $2,089 |
| Tennessee | $3,867,030,948 | $9,712 | $2,207,878,476 | $5,545 | $1,659,152,472 | $4,167 |
| Texas | $18,800,277,588 | $10,025 | $11,611,114,194 | $6,191 | $7,189,163,394 | $3,834 |
| Utah | $2,016,344,085 | $8,886 | $940,924,225 | $4,146 | $1,075,419,860 | $4,739 |
| Vermont | $353,027,452 | $10,060 | $352,334,956 | $10,040 | $692,496 | $20 |
| Virginia | $5,048,902,620 | $10,282 | $3,553,507,372 | $7,236 | $1,495,395,249 | $3,045 |
| Washington | $4,105,746,272 | $10,251 | $2,566,186,640 | $6,407 | $1,539,559,632 | $3,844 |
| West Virginia | $1,049,189,454 | $9,976 | $932,663,076 | $8,868 | $116,526,378 | $1,108 |
| Wisconsin | $3,363,076,187 | $10,319 | $2,671,830,955 | $8,198 | $691,245,232 | $2,121 |
| Wyoming | $328,445,224 | $9,870 | $314,823,162 | $9,460 | $13,622,062 | $409 |
| Totals* | $215,022,420,385 | $10,867 | $143,534,207,436 | $7,254 | $71,495,896,491 | $3,613 |

## Table D18: State By State Cost Estimates: PreK Eligibility All 3 and 4 Year Old Children, 100% Participation Rate, PreK Class size 20

| State | PreK-3rd Cost Cost Estimate | PreK-3rd Cost Estimate Per Pupil | Estimate of PreK-3rd Current Expenditures | PreK-3rd Expenditures Per Pupil | Difference | Difference Per-Pupil |
|---|---|---|---|---|---|---|
| Alabama | $3,367,451,228 | $9,574 | $1,923,963,356 | $5,470 | $1,443,487,872 | $4,104 |
| Alaska | $665,844,714 | $11,692 | $415,453,133 | $7,295 | $250,391,581 | $4,397 |
| Arizona | $5,084,986,663 | $10,009 | $1,984,386,840 | $3,906 | $3,100,599,824 | $6,103 |
| Arkansas | $2,127,674,065 | $9,713 | $1,388,076,923 | $6,337 | $739,597,142 | $3,376 |
| California | $36,331,155,432 | $12,283 | $17,336,706,375 | $5,861 | $18,994,449,057 | $6,422 |
| Colorado | $3,643,147,027 | $9,798 | $2,236,083,814 | $6,014 | $1,407,063,213 | $3,784 |
| Connecticut | $3,180,153,066 | $12,333 | $2,283,009,822 | $8,854 | $897,143,244 | $3,479 |
| Delaware | $714,037,099 | $11,954 | $474,002,928 | $7,935 | $240,034,172 | $4,018 |
| District of Columbia | $512,999,737 | $14,329 | $390,419,340 | $10,905 | $122,580,397 | $3,424 |
| Florida | $12,600,316,251 | $9,974 | $7,045,975,633 | $5,577 | $5,554,340,618 | $4,397 |
| Georgia | $8,152,037,646 | $10,630 | $4,699,172,493 | $6,128 | $3,452,865,153 | $4,502 |
| Hawaii | $1,003,111,982 | $10,398 | $584,416,554 | $6,058 | $418,695,428 | $4,340 |
| Idaho | $1,156,762,432 | $9,104 | $600,439,457 | $4,725 | $556,322,975 | $4,378 |
| Illinois | $11,576,759,655 | $12,057 | $6,280,879,594 | $6,542 | $5,295,880,061 | $5,516 |
| Indiana | $5,189,175,592 | $10,608 | $2,924,860,476 | $5,979 | $2,264,315,117 | $4,629 |
| Iowa | $1,978,340,638 | $9,206 | $1,188,524,774 | $5,531 | $789,815,864 | $3,676 |
| Kansas | $2,043,920,070 | $9,587 | $1,252,259,938 | $5,874 | $791,660,132 | $3,713 |
| Kentucky | $3,071,268,779 | $9,841 | $1,845,776,125 | $5,914 | $1,225,492,654 | $3,927 |
| Louisiana | $3,274,149,509 | $9,786 | $2,012,595,113 | $6,015 | $1,261,554,396 | $3,771 |
| Maine | $748,223,455 | $9,673 | $682,037,695 | $8,818 | $66,185,761 | $856 |
| Maryland | $4,432,347,822 | $11,470 | $2,591,716,107 | $6,707 | $1,840,631,715 | $4,763 |
| Massachusetts | $5,301,383,602 | $11,937 | $3,816,456,990 | $8,593 | $1,484,926,612 | $3,344 |
| Michigan | $8,801,027,864 | $11,532 | $5,369,134,655 | $7,035 | $3,431,893,208 | $4,497 |
| Minnesota | $3,860,419,220 | $10,499 | $2,476,249,701 | $6,735 | $1,384,169,519 | $3,765 |
| Mississippi | $2,401,822,205 | $9,629 | $1,295,295,380 | $5,193 | $1,106,526,825 | $4,436 |
| Missouri | $4,057,928,075 | $9,564 | $2,281,809,614 | $5,378 | $1,776,118,461 | $4,186 |
| Montana | $573,678,321 | $9,133 | $371,477,465 | $5,914 | $202,200,855 | $3,219 |
| Nebraska | $1,204,384,352 | $9,255 | $720,038,193 | $5,533 | $484,346,160 | $3,722 |
| Nevada | $1,913,391,461 | $9,912 | $913,591,211 | $4,733 | $999,800,250 | $5,179 |
| New Hampshire | $804,989,736 | $9,781 | $577,258,766 | $7,014 | $227,730,970 | $2,767 |
| New Jersey | $8,123,378,120 | $12,947 | $6,095,448,780 | $9,715 | $2,027,929,341 | $3,232 |
| New Mexico | $1,503,507,601 | $10,023 | $941,646,903 | $6,277 | $561,860,698 | $3,746 |
| New York | $16,272,462,018 | $12,749 | $11,917,953,306 | $9,337 | $4,354,508,712 | $3,412 |
| North Carolina | $6,808,122,667 | $9,800 | $3,649,499,666 | $5,253 | $3,158,623,001 | $4,547 |
| North Dakota | $353,450,066 | $8,793 | $236,147,544 | $5,874 | $117,302,522 | $2,918 |
| Ohio | $9,125,357,358 | $10,803 | $5,649,112,737 | $6,688 | $3,476,244,621 | $4,115 |
| Oklahoma | $2,708,935,551 | $9,361 | $1,641,937,569 | $5,674 | $1,066,997,982 | $3,687 |
| Oregon | $2,683,360,926 | $10,598 | $1,570,678,854 | $6,203 | $1,112,682,072 | $4,394 |
| Pennsylvania | $9,131,456,678 | $11,472 | $6,000,052,342 | $7,538 | $3,131,404,336 | $3,934 |
| Rhode Island | $768,763,835 | $11,547 | $503,647,876 | $7,565 | $265,115,959 | $3,982 |
| South Carolina | $3,171,578,410 | $9,843 | $1,902,521,954 | $5,904 | $1,269,056,456 | $3,938 |
| South Dakota | $476,176,574 | $8,403 | $312,228,390 | $5,510 | $163,948,185 | $2,893 |
| Tennessee | $4,395,750,885 | $9,680 | $2,207,878,476 | $4,862 | $2,187,872,409 | $4,818 |
| Texas | $21,358,954,067 | $10,008 | $11,611,114,194 | $5,440 | $9,747,839,873 | $4,567 |
| Utah | $2,311,308,196 | $8,891 | $940,924,225 | $3,619 | $1,370,383,971 | $5,271 |
| Vermont | $404,590,780 | $10,039 | $352,334,956 | $8,743 | $52,255,825 | $1,297 |
| Virginia | $5,794,933,303 | $10,299 | $3,553,507,372 | $6,315 | $2,241,425,931 | $3,984 |
| Washington | $4,666,655,678 | $10,245 | $2,566,186,640 | $5,634 | $2,100,469,038 | $4,611 |
| West Virginia | $1,169,949,689 | $9,954 | $932,663,076 | $7,936 | $237,286,613 | $2,019 |
| Wisconsin | $3,850,748,834 | $10,311 | $2,671,830,955 | $7,154 | $1,178,917,879 | $3,157 |
| Wyoming | $372,236,144 | $9,847 | $314,823,162 | $8,328 | $57,412,982 | $1,519 |
| Totals* | $245,224,565,078 | $10,836 | $143,534,207,436 | $6,343 | $101,690,357,641 | $4,494 |