INCLUDING COMMUNITY AND PARENT ENGAGEMENT IN ESTIMATING THE NATIONAL COSTS OF AN INTEGRATED PK-3RD PROGRAM

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INTRODUCTION

This report is a follow up to earlier work conducted by Lawrence O. Picus and Associates for the Foundation for Child Development to estimate the state-by-state costs of an integrated PK-3rd program. In this report, we expand on our earlier work (Picus, Odden and Goetz, 2008), focusing specifically on the additional costs of parental engagement. Our specific focus was to learn more about the potential benefits of parent engagement programs at the PreK-3rd level in terms of improved student achievement, both in the PreK and primary levels, as well as in higher grades.

This work took on two components. The first was a literature review of parent engagement programs at the Prek-3rd level, with a focus on how well these programs could be tied to improved academic achievement. Following the literature review, we identified programs with greater promise of academic success and, using the cost model developed in our earlier work, estimated the costs of adding parent engagement components to our model of Prek-3rd costs.

This report has five sections. The first describes our approach to this work. This is followed by a summary of our earlier costing work using the Evidence-Based approach developed by our firm to estimate the costs of an adequate education program as applied to PreK-3rd education. The third section of this document summarizes our literature review on the impact of parent engagement programs in PreK-3rd on student achievement. In the fourth section, we discuss the implications of adding parent engagement programs to our estimated costs of PreK-3rd programs, while the fifth provides our conclusions. Two appendices are included as well. The first is the literature review on the effect of parent engagement programs in PreK-3rd programs on student achievement that we commissioned as part of this study, and the second contains more detailed descriptions of the case study research we did to more fully understand the resource needs of parent engagement programs in integrated PreK-3rd education programs.

In the literature review, we recognize that parent engagement, especially in pre-kindergarten and elementary schools, is widely considered an important component in the success of schools in helping students learn. However, even though there is substantial agreement about the importance of parents to students' academic and developmental success, the literature on this topic is considerable and often unclear (Nye, Turner, & Schwartz, 2006; Pérez Carreón, Drake, & Calabrese Barton, 2005). Moreover, standards for "parent involvement" and "engagement" are vague and varied; programs work toward different outcomes; and, as detailed in our literature review, research reviews appear to find conflicting results (Henderson & Mapp, 2002; Mattingly, Prislin, McKenzie, Rodriguez, & Kayzar, 2002; Nye, et al., 2006; SEDL, 2008).

Because of these complexities, we developed a conceptual framework based upon the intermediate goals of parent engagement projects, specifically: the development of families'

human, social-cultural, and political capital. Our review of the literature uses this conceptual framework to assess previous research and to categorize the programs currently operating in the PreK-3rd environment.

As our findings show, developing cost estimates of parent engagement programs at the PreK-3rd level that lead to improved academic achievement are hard to develop and difficult to aggregate to a state or national level. This is due in part to the diversity of programs in operation, and to the various staffing arrangements and varying implementation approaches to individual programs that we found in the programs we visited. As a result of these complexities, rather than attempting to provide a "national" cost estimate as we did in our earlier work, we have added the capacity to our previously developed model to estimate the costs of additional certified and para-professional staff to PreK-3rd programs, and made the model available through our website (www.lpicus.com).

STUDY METHODS

This work is a follow-up to our earlier study of the costs of an Evidence-Based approach to establishing high quality universal PreK-3rd programs in each of the 50 states. In our earlier work (summarized in the next section) we sought to estimate:

- The number of 3 and 4 year old children in each state
- The costs of providing PK 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
- The costs of a universal, integrated PK-3 education system
- The net public costs of that system

The result of that work was an Excel based simulation model that provided state level estimates of the costs of integrated PK-3 programs. The model was designed to allow users to simulate a wide range of alternative scenarios including:

- Eligibility for PK programs (i.e., all 3 and 4 year olds, 4 year olds only, children at the poverty level, 200% of the poverty level or 300% of the poverty level)
- The percentage of eligible children who participate in the PK program
- The pupil/teacher ratio in PK programs
- The level of support services available in PK programs
- All of the various components of the Evidence-Based model for K-3, which can be simulated separately for PK and K-3 components (for example, extended day and/or summer school programs could be part of the K-3 model, but not part of the PK model, or any combination of inclusion or non-inclusion can be simulated).

Our findings are described in detail in our earlier report, *An Evidence Based Approach to Estimating the National and State-by-State Costs of an Integrated Prek-3rd Education Program.*

This study added to that work through the following tasks:

- Drafting of a literature review and analysis of Parent and Community Involvement focused on understanding successful programs and estimating the resources needed to implement them at the PK-3 level
- Including the resources identified in our larger cost model
- Conducting site visits to schools/districts identified as having successful parent and/or community engagement programs along with strong integrated PreK-3rd programs. Sites were identified through discussions with Foundation Personnel, the literature review, and discussions with individuals in each of the states we visited.
- Developing this report describing our findings and cost estimates.

THE EVIDENCE-BASED APPROACH TO ESTIMATING THE COSTS OF PREK-3RD EDUCATION

To estimate the resources necessary for a high quality education program, our work relied on the Evidence-Based method developed by Allan Odden and Lawrence O. Picus. 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. 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. Figure 1 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)
- 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.[1]

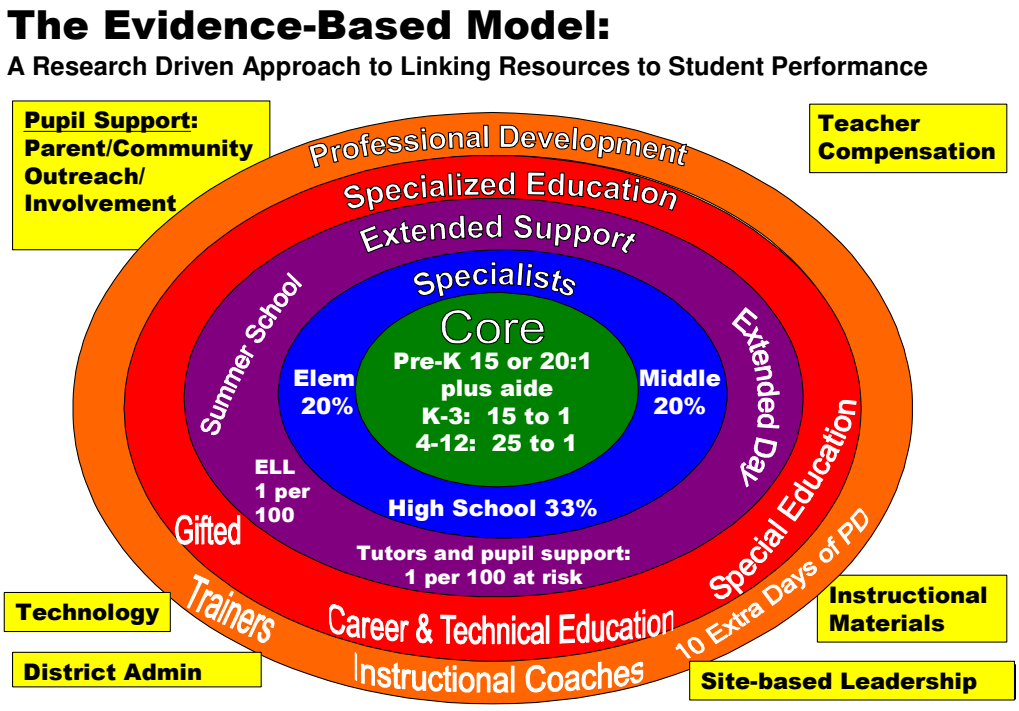

Figure 1: The Evidence-Based Model

The Cost Model

We found that 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. Costs also vary with the size of PreK classes.

Tables 1 and 2 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

[1] For details on this approach as applied to PreK-3rd programs, see Picus, Odden and Goetz, 2008; a more detailed description of the Evidence-Based model itself is available in Odden & Picus, 2008; chapter 4.

eligibility for 3-and 4-year-old children and alternative assumptions regarding the size of PreK classes. For example, if universal eligibility for 3-and 4-year-old children is assumed, 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 3 and 4 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, the estimated *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.[2] On a per child served basis these additional costs range from $2,237 to $3,975.

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.

Table 1: 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

[2] 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 2: 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 3: 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 4: 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

In summary our first study estimated 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 identified 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 was possible to simulate alternative staffing resource configurations for PreK-3rd programs providing a state-by-state estimate of the cost to implement the program. This same flexibility was utilized in deriving estimates of the costs of parent engagement programs as well. If it is assumed that 65% of 3-and 4-year-old children will participate in PreK programs, the estimated 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.

RESEARCH ON THE EFFECTIVENESS OF PARENT ENGAGEMENT PROGRAMS

Based on our review of theory and recent PreK-3rd program evaluations (see appendix A), it is clear that parent engagement programs work to develop parents' human and social-cultural capital, and many also work at developing political capital. However, like many prior reviews, our conclusions about the most effective parent engagement practices are tentative. Using recent "effectiveness" studies, it was difficult to find clear links between specific components of parent engagement programs and the ultimate outcome of improved academic achievement.

While the research we reviewed showed that programs for families with PreK children often had different activities and goals than did programs for elementary-aged it appeared to us that the necessary components and resources of all the programs were reasonably similar across program model and type.

Below we identify the most common components of programs that demonstrated at least some positive effect on children's academic achievement. While the research did not examine specific links between these components and improved student achievement, something that is even harder to do at the PreK-3rd level, the patterns identified in the studies we reviewed and our theoretical framework suggest that policymakers should consider the following aspects of parent engagement programs:

Initial Assessment Study

The literature suggests that educational systems need to pay attention to who they serve and the particular resources and needs that exist in their communities (Henderson & Mapp, 2002). Initial assessments can be used to identify the skills and knowledge that might best serve parents at their schools (human capital) as well as how to best connect families, schools, and communities (social-cultural capital of both parents and educators). Successful programs are based on assessments of both family and school staff perspectives. This can be as straightforward and obvious as asking: what do PreK-3rd grade teachers and families of children in those classes need to know to work as partners? Assessments can also provide information about whether advocacy behaviors in a particular community setting are likely to be successful (political capital).

Family-Community Liaison/Coordinator.

One thing that seems clear from the studies is that if parent engagement programs are to be successful in establishing a link to improved student performance, having staff dedicated to working with and coordinating parent efforts over time is essential. Our review showed that almost all programs that demonstrated some level of effectiveness included at least a part-time family/parent coordinator. Parent engagement staff appears to be necessary to ensure change and improvement can be made to programs over time. Moreover, it appears from the studies conducted to date that parent volunteers do not offer the same level of constancy and support for parents as do paid staff who are responsible for engaging parents and the community in the activities of the school and of their own children.

Other Program Components

Other components of parent engagement programs that seem to be successful in linking the roles of parents to student academic success include:

1. Individualized home visits (always used during the PreK years, usually to develop human capital, and often used during the school-age years, in part to develop teachers' social-cultural capital and understanding of families).

2. Parent meetings/group training activities and related materials/supplies/curricula (used across the PreK-3rd grade span, to develop both human and social-cultural capital of families and teachers, and sometimes to develop political capital).

3. Training for teachers/personnel to run home visits/parent engagement efforts (used in part to enhance teachers' social-cultural capital regarding their families and students).

4. Compensation for teacher time spent making personal connections with families.

5. Supplies/food/incentives for families/teachers to attend programming.

6. Translation and interpretation services and equipment, where necessary.

7. Childcare and/or transportation to allow family members to attend programs.

What Else Do We Need to Know?

It appears that the framework of human, social-cultural and political capital used in our review of the literature is promising. Our research suggests that there is a need for refining the study of parent engagement using this framework. Such theoretical framing would help to pinpoint the "black box" of parent engagement, or how programs result in academic gains for students. This may be one of the most important considerations in designing future research studies: while more experimental designs are necessary to help determine whether or not a program works, such studies must be supplemented with careful analyses of a program's implementation, context,

acceptance, and progress over time. Using the "lens" of capital to qualitatively study such contextual variables—at the same time as researchers evaluate experimental outcomes—will help produce study findings that policymakers can use to replicate or scale up projects. They will include both "whether" programs worked, and "how" they worked.

Longitudinal studies would also improve the state of knowledge on how parent engagement opportunities and challenges change as children age. The literature review suggested that programs for families with PreK children tended to focus on human capital (knowledge and skills about child development/academic work) as well as social-cultural capital (connections to others that had social-cultural savvy). As children aged into elementary schools, programs offered similar opportunities, but they also included more opportunities for families to develop political capital (become engaged in policy-making bodies). Understanding this developmental process as part of a parent engagement program as well as from the institutional perspective also seems important if we are to better understand ways schools can help parents help their children. Studies that follow particular families over time—for example examining the changing ways that parents choose to engage and the different opportunities that schools offer them—would elucidate this issue. In addition, while recent studies of political capital development are promising (e.g., Chrispeels & Rivero, 2001; Cucchiara, 2008; Kellogg Foundation, 2007), more work is necessary to understand whether and how this focus is critical to engaging families and shaping student achievement.

Most parent engagement efforts and studies flow from a deficit model where school districts and state programs try to consider what families need. Another way to think about school-family partnerships is to consider what school staff need in order to develop their own human, social-cultural, or political capital. In turn, work from this perspective could inform the design of pre-service and in-service teacher education programs. Yet, very few studies have evaluated how schools or teachers are doing as a result of parent-engagement programs.

Unfortunately, many programs discussed in our review of theory—especially smaller, non-state-sanctioned programs focusing on particular populations—did not have peer-reviewed evaluations to include in the analysis (e.g.,. PIQE, ENLACE, FACE). Further evaluation of parent programs with immigrant, low-income, and working-class backgrounds is also necessary if we are to fully understand how they might impact student achievement. New research is demonstrating that immigrant communities, in particular, may be engaged in ways that schools do not recognize (Dorner, under review-b; Pérez Carreón, et al., 2005), and that such new technology as online listservs are key places that a variety of families "engage" about school topics (Dorner, under review-a). Again, mixed-method, longitudinal research will help us better understand how programs work on intermediate goals (changing parents' human, social-cultural, or political capital), which in turn can shape children's performances at school.

Conclusion

In summary, while there is an extensive literature on parent engagement, it is difficult to find any work that lists exactly what it takes to encourage and engage parents in educational processes and development. This may not be surprising, and is no doubt partly because each context is unique and will benefit from specialized programs.

EXAMPLES OF PARENT ENGAGEMENT PROGRAMS

This section of the report describes our assessment of the resource needs of parent engagement programs and reviews our findings from site visits to four PreK-3rd programs identified as having successful parent engagement programs. As might be expected, the lack of a clear link between parent engagement and student achievement leads to a wide variety of programs and resource use strategies. Moreover, our site visits showed – perhaps not unexpectedly – that even well recognized programs that include a parent engagement component (such as HIPPY, or Schools of the 21st Century, implementation of those programs can vary substantially from location to location.

Parent engagement resources can be divided into a number of different strategies including:

- Outreach programs where school staff visited parents in their home
    - To discuss student progress
    - To provide materials to help students learn
    - To provide parenting skills
    - To offer support and materials for student learning
- Classes at school sites
    - To help with academics
    - To provide parenting skills
    - To develop political/organizing skills
    - To provide governance advice to the school/program
- Services at the school/program site
    - Health services
    - Social work services
    - Childcare at the site during parent meetings
- Parent volunteer programs at the school/program site

Moreover, the scope, range and combination of services varied from program to program, and often what was offered varied considerably from the study design. For example, our visit to an Arkansas HIPPY program found each para-professional's case load to be between 20 and 25 children and their families, roughly twice the ratio of one for every 12 families in the studies from our literature review. Tables 1 – 3 in the literature review in appendix A outline the parent engagement strategies used in the programs included in the study.

In our first study, we conducted site visits in five locations to understand how staff were used in PreK-3rd programs and assess the adequacy of our Evidence-Based model to fully staff high quality PreK-3rd programs. With the exception of the need for para-professional aides in the PreK classrooms, we found that even in the most ambitious Prek-3rd programs we visited, the staffing ratios from the Evidence-Based model were sufficient to meet the educational and service needs of PreK-3rd grade children, and that there were adequate resources to allow for integration of the PreK program with the primary grade (K-3) program at a school. The additional costs estimated in the model were therefore a function of the additional children in the school, and the class size ratios used to estimate PreK costs – thus our model allows the use to simulate the number of children eligible for PreK programs, the participation rate of those

eligible children, and the ratio of students to teachers (and at the PreK level aides) of each PreK-3rd grade class.

When pro-active parent engagement programs are added to the mix, we anticipated that the staffing needs of PreK-3rd programs would increase, and generally that seemed to be the case. To test our understanding and gather more evidence for our cost estimates, we visited four sites that implemented parent engagement strategies as part of their Prek-3rd strategies. Specifically we visited two schools in Tulsa Oklahoma, a school based program in Arkansas and a public program in Arkansas operated outside of the school system. A description of each program is included in appendix B.

Oklahoma

We chose Oklahoma because the state has a long history of offering universal PreK programs to four year olds, and because recent research as studied the academic outcomes of the programs (Gormley, et. al., 2005; Gormley & Phillips, 2005; and Wong, Cook, Barnett & Jung, 2008). The Oklahoma Early Childhood four-Year-Old program includes among its goals that "The program shall encourage family involvement to support the child's education experience." (http://sde.state.ok.us/Programs/ECEduc/4YearOld.html/) Moreover, Gormley's studies have found significant positive academic effects of the programs for letter word recognition, spelling and applied problem solving, while Wong's research fond positive impacts for vocabulary, at least in the short term.

We visited two elementary schools in Tulsa Oklahoma to better understand the organization of the programs and the staffing requirements of those programs. One of the schools enrolled approximately 900 students of which 60 were PreK students, while the second school has 365 students including 80 PreK children in classes of 20 with an aide.

Not surprisingly, the responsibilities of the staff members at each school include functions that can be identified as parent engagement as well as strategies that focus more directly on students and student needs. Dividing their time across those two functions was hard for the school principals and the individual staff to do, so our method was to estimate the resources each school would generate under the Evidence-Based model and compare those to what we observed in each school. The problem is further confounded by the fact that what we were looking at was only the resources needed for pupil engagement, and not the relative adequacy of the staffing for academic purposes across the PreK-3rd classes.

At the larger school we concluded that there were approximately 3.0 FTE positions at the school beyond the Evidence-Based model (outside of class size staff). Of these, one was a school psychologist whom one could reasonably assume would be funded through special education program funds, and the other two were para-professional aides. Our previous estimates of the costs of two additional aides in 2005-06 dollars was $26,500 each (salary and benefits) or a total cost of $53,000 for a school with 900 total students, approximately 560 K-3 students and 60 PreK students. Inflated to 2008-09 figures, assuming inflation over the three years of approximately 9 percent, the compensation costs for an aide would be $28,885, or $57,770 for two aides.

The smaller school did not generate the same level of staffing as the larger one. Moreover, it had a more extensive family outreach program and thus a considerable number of staff whose responsibilities included on community outreach and parent engagement. We estimated that school employed 6.1 FTE positions beyond the resources generated by the Evidence-Based model to provide these services. Most of those positions were certificated staff and not para-professionals. Assuming a staffing mix of 4.0 FTE certificated staff and 2.0 FTE with the 2005-06 total compensation for a certified staff member of $54,000 (estimated at $58,860 in 2008-09 dollars), the costs of this program amounted to $269,000 (293,210 today).

Arkansas

We also visited two programs in Arkansas because that state, as part of its efforts to meet the requirements of a school finance lawsuit has implemented an Evidence-Based funding system for the past five years, an important component of which includes funding for PreK programs. Specifically we visited a HIPPY (Home Instruction Program for Preschool Youngsters) in a rural part of the state, and a Schools of the 21st Century school in Northeastern Arkansas. Estimating the additional costs of each program was problematic given their stated goals and purposes, and the ways they currently operate.

The HIPPY program, although operated from a school site in one town, serves 120 to 130 students in a three county area that includes 12 different school districts. In fact, the program, which is managed state-wide through the Arkansas Children's Hospital, not the public school system, only resides in a school building because the district is facing declining enrollments and had plenty of surplus classroom space that could be adapted into a HIPPY office. The program staff included one full-time director and six full-time para-professional aides who conducted site visits to families to provide parents with support in parenting and academic skills to help their children. Because the school district did not charge the program for the classroom space, and provided the program with phone and an internet connection, the costs of the program were really only for personnel and transportation to the homes of each family. Total estimated program costs for 2008-09 were $222,170 or approximately $1,850 per pupil.

The second school in Arkansas used the Schools of the 21st Century model and in fact is named "School of the 21st Century." The program has been in existence at this school since 1991 when the current director traveled to Yale University for training from the program office there. It is currently designated as a Peer training site for the Yale based program. The school offers a wide range of services for children and their families including:

- Home visitation
- Before/After/Vacation care for school-age children
- Preschool for 3-5 year olds
- Early Care and Education for Infants to 36 months of age
- Information and referral services for parents to find community services
- Health related services
- Parent education and involvement

All of these services are included in the descriptions of the Schools of the 21st Century.

The program also included after school care at two additional school sites in the district. Total budget for the parent engagement component of the program was difficult to estimate because much of the funding for the program comes from short term grant programs which are combined with district funds – not all of which are directly generated by the students at that particular school. If the after-school program staff and the regular classroom teaches are not treated as part of the costs of parent engagement (although according to the program director, all have responsibility for parent outreach), then the school appears to have 9 part-time staff employed as aides whose responsibilities included parent engagement. This would amount to approximately 4.5 para-professional positions for a cost of $103,500 in 2005-06 terms ($112,815 in 2008-09).

Summary

When combined with the findings from the literature review, what is clear is that parent engagement programs offer a wide range of services to parents and families at varying costs depending on the qualifications of the employees who provide the services and the number of children and families served. Some of the strategies are more "family intensive" than others suggesting that there are variable ranges in the costs per family or child served.

For example, a school based parent engagement specialist might spend most of his or her time developing outreach programs and training other staff to work with parents and families. Under those circumstances, the size of the school might be secondary to the variety and level of services provided in terms of the number of children served. On the other had, for programs that have intensive and frequent visits to parents and families, the costs vary much more on the basis of individual case loads. We found, for example in Arkansas, staff in the HIPPY program we studied had case loads double the number of families in the study design from our literature review, and the para-professionals met with each family once a week rather than bi-weekly. Costs of the program would double on a per family served basis if the program were offered as originally proposed.

Unfortunately, current evidence (as described in our literature review) is not strong enough to enable us to form a firm, Evidence-Based recommendation as to what the costs of a parent engagement program might be. The wide variation in both service provision models, along with the paucity of studies that link parent engagement to academic success suggest a wide range of costs. The HIPPY program in Arkansas cost approximately $1,850 per pupil while the programs in Oklahoma ranged from $93 per PreK-3rd student to $1,254 per PreK-3rd student, all figures in 2008-09 dollars.

ESTIMATES OF THE COST OF PARENT ENGAGEMENT PROGRAMS IN INTEGRATED PREK-3RD PROGRAMS

As we hinted above, developing estimates of the cost of parent engagement programs on a "stand alone" basis is nearly impossible. This is in part because of the vast array of programs and services that fall into this category, and in part because programs that do have a parent engagement program often integrate them into the rest of the program so thoroughly that identifying specific program components is not possible. While this is a good thing in terms of

program operations and services to children, it complicates efforts to understand the independent costs of these programs.

Consequently, to generate state-by-state estimates, we have first assumed that the resources available through the Evidence-Based, Prek-3rd estimates of our earlier report are adequate to meet parent engagement needs of K-3 programs (at levels deemed appropriate by individual schools or districts), and have then used our counts of 3 and 4 year old children to estimate a range for the costs of adding a parent engagement component for PreK children. In the estimates that follow, the low estimate would match the costs of providing parent engagement staff in a school, while the high estimate would represent the total costs of a program that included HIPPY type site visits to the families of all the 3 and 4 year olds in the program.

Table 1 summarizes the national estimates generated through this process using varying estimates of the eligible population of 3 and 4 year olds, and the estimated participation rate. If only the lowest income families are served through a parent engagement program, the national costs range from a low of $76.1 million to a high of just over $3 billion depending on the type of program implemented and the participation rate. On the other hand, national costs vary from $379.9 million to over $15 billion for universal eligibility and 100% participation. Using our most likely scenario of 65% participation rate, if only the poorest children's families are eligible for the program and only half of them enroll their children in a PreK program, then the estimated costs range from $98.9 million to $1.97 billion. If all children are eligible and participate, the high cost estimate is $9.8 billion, while the cost of a less extensive program would be just half a billion dollars. State by state estimates are provided in Appendix C.

Table 1: Estimated Costs of Additional Parent Engagement Programs for 3 and 4 Year old Children (Figures in Millions of Dollars)

Participation Rate	Estimated Costs of Parent Engagement Programs (Millions of Dollars)					
	Total Population		Less than 100% of Poverty		Less than 200% of Poverty	
	Low	High	Low	High	Low	High
100%	759.8	15,113.8	152.2	3,028.2	325.1	6,467.9
65%	493.8	9,824.0	98.9	1,968.3	211.1	4,204.2
50%	379.9	7,556.9	76.1	1,514.1	162.6	3,234.0

CONCLUSIONS

Our previous work highlighted the importance of PreK-3rd education programs and provided estimates of the costs of integrating PreK-3rd into the school costs. This work considered the merits and costs of including more extensive parent engagement programs in these PreK-3rd programs. We think many of those costs are already covered through the resources available in the Evidence Based model used to estimate the costs of PreK-3rd education.

Our research into the importance of parent engagement in PreK-3rd programs suggests that parent engagement does have some benefit in terms of improved student achievement. However, the current state of the literature is not clear as to what level of parental engagement is needed to see positive effects. Moreover, there are a wide variety of programs available to schools and school districts, with widely varying estimates of the costs. The cost of programs seems to be driven largely by the approach taken in terms of family visitations. The more visitations involved, the more labor intensive the program, and hence the higher the costs.

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Appendix A
Literature Review

PreK-3rd Education and Family "Capital:" A Comprehensive Approach to Evaluating Parent Engagement Programs

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This is a review for the study, "Including Community and Parent Engagement in Estimating the National Costs of an Integrated PreK-3 Program," work that was supported by the Strategic Knowledge Fund, which is co-funded by the Foundation for Child Development and the W.K. Kellogg Foundation. The Strategic Knowledge Fund is a partnership between the W.K. Kellogg Foundation (WKKF) and the Foundation for Child Development (FCD) created to fund projects that increase knowledge about children, birth to eight years old and their families, particularly children who are at-risk for poor educational outcomes.

PreK-3rd Education and Family "Capital:" A Comprehensive Approach to Evaluating Parent Engagement Programs

Each school served [by the Title I program of No Child Left Behind (NCLB)] shall jointly develop with parents for all children served . . . a school-parent compact that outlines how parents, the entire school staff, and students will share the responsibility for improved student academic achievement and the means by which the school and the parents will build and develop a partnership to help children achieve the State's high standards.

- NCLB, Title I, Section 1118 (c)(3)

Parent engagement, especially in pre-kindergarten and elementary schools, has become an accepted part of the rhetoric on student learning and achievement in the United States. Despite agreement that parents are critical to students' academic and developmental outcomes, however, the literature on this topic is so vast that it is often unclear (Nye, Turner, & Schwartz, 2006; Pérez Carreón, Drake, & Calabrese Barton, 2005). Standards for "parent involvement" and "engagement" can be vague and varied; programs work toward different outcomes; and research reviews appear to find conflicting results (Henderson & Mapp, 2002; Mattingly, Prislin, McKenzie, Rodriguez, & Kayzar, 2002; Nye, et al., 2006; SEDL, 2008). To make some sense of this terrain, this report proposes a theoretical framework based upon the intermediate goals of parent engagement projects, specifically: the development of families' human, social-cultural, and political capital. Given the national discussion on universal PreK and importance of family engagement in early educational experiences (Camilli, Vargas, Ryan, & Barnett, 2010; Reynolds & Temple, 2008a; Rolnick, 2003; Takanishi & Kauerz, 2008), we use this framework to qualitatively analyze recent evaluations of PreK-3rd grade programs. Our end goal is to utilize this framework and analysis to consider, if possible, what are the most important components of effective parent engagement programs.

Unlike previous reviews, this one analyzes the literature using programs' intermediate goals as the theoretically organizing factor, specifically, whether programs exist to develop parents' human, social-cultural, or political capital. Although most parent engagement programs' main purpose is certainly to improve students' academic achievement (often via social/emotional development in the early years), they take different paths to this end. For instance, some school districts aim to develop parents' abilities to help children with academic work by offering English-as-a-second-language classes; this instruction also develops parents' *human capital* skill set and, subsequently, their access to jobs (Kalil & Crosnoe, in press). Other projects focus on involving parents at school functions, which exist partly to increase their access to social networks and thereby develop their *social and/or cultural capital* (Pérez Carreón, et al., 2005). At the same time, federal and state governments are placing increased importance on the power of parents to become partners in and advocate for their children's education (Henderson, Mapp, Johnson, & Davies, 2007). Programs that highlight parents' engagement in policy-making strive to develop their *political capital*.

We use this lens of "capital" because it allows for an exploration of the foundations of programs, that is, the ways that policymakers and designers believe parents shape their children's school achievement. It also pinpoints the different foci of program evaluations, that is, whether researchers evaluate a change in parents' skills, cultural knowledge and social access, and/or advocacy behaviors. In turn, this approach helps to identify what kinds of components are necessary for successful programs. That is, development of parents' capital is the "black box," or how parent engagement programs potentially enhance student outcomes.

This report begins with a brief note about terminology, before explaining the state of the research and the proposed theoretical framework. Then, after a description of methodology, we qualitatively analyze a set of recent evaluations on PreK-3rd parent engagement efforts. The

report concludes with a discussion of which program components appear the most theoretically-compelling and effective at producing enhanced academic achievement for young children, noting that the extant work has many limitations. Thus, we also consider new directions for research on parent engagement programs and policies.

A Note about Terms

At the start, it is necessary to set definitions for key concepts and stakeholders. First, following King and Goodwin (2002, p. 5), we define *parent* as "any adult person who has responsibility for the care and welfare of a child within a family grouping or family community." In this review, "parent" stands for biological parents, step-parents, same-sex parents, grandparents, siblings and other primary caregivers of young children. We sometimes use "family" interchangeably with "parent," in part to remind readers that there are multiple primary caregivers of any one child (e.g., a mother *and* a grandparent).

Second, this report focuses on PreK through third-grade programs. *PreK* means formalized education programs designed for three- and four-year olds, such as Head Start. These formalized programs may exist within state-sponsored school systems, such as in Oklahoma (e.g., Gormley, Gayer, Phillips, & Dawson, 2005), or they may be situated within childcare centers, such as in Wisconsin (http://dcf.wisconsin.gov/childcare/programs.htm). "PreK" does not refer to the more generalized notion of "preschool," which sometimes means any learning from birth through age five that occurs before state-required, formal education begins (Takanishi & Kauerz, 2008).

Most important, following recent work (Calabrese Barton, Drake, Perez, St. Louis, & George, 2004; Pérez Carreón, et al., 2005), this report uses the term *parent engagement*, rather than the more commonly used term "parent involvement." We do so because "engagement" implies that caregivers take an active stance toward schooling and do not only wait for schools to

ask them to be "involved" on educators' terms. This also reflects a recent shift in practice: some U.S. parent programs are changing from historically school-centered efforts *for* parents, to more dynamic two-way models of engagement and partnership *with* parents (Henderson, et al., 2007).

Background Literature: Parent Engagement Program Evaluations

Over the years, evaluations of parent engagement programs have had mixed results. Even when meta-analyses and reviews specifically question, "Are parent engagement programs effective at improving student achievement?" the answer remains elusive (Henderson & Mapp, 2002; Mattingly, et al., 2002; Nye, et al., 2006). Three recent reviews of the literature aptly describe the limitations of the field, and are summarized here as background information.

First, Henderson and Mapp (2002) qualitatively examined 51 studies of parent engagement, produced from 1990 to 2001. These studies evaluated a range of outcomes including student achievement, parent attendance at school events, as well as the effects of community organizing on school facilities, resources, etc. Overall, they reported that many parent engagement programs work, with a number of studies demonstrating positive effects on students' academic achievement. A statistical meta-analysis by the Campbell Collaboration (Nye, et al., 2006), which only focused on the outcome of children's achievement, similarly found that programs that centered on improving children's academic performance, did so. However, a meta-analysis of 41 studies from an earlier time period—1969 to 1998 (Mattingly, et al., 2002)—suggested that there is "little empirical support for the widespread claim that parent involvement programs are an effective means of improving student achievement" (p. 549).

How did these research groups arrive at these various conclusions? Most significantly, each team asked a slightly different question, and they each followed a different methodology, thereby including different studies/programs in their analyses. Henderson and Mapp (2002)

wanted to uncover how programs work as well as whether or not they are effective. Therefore, they qualitatively examined the largest number of studies, which included a range of research designs. They concluded many different points, but—about academic performance—they chose to highlight this: "Programs and interventions that engage families in supporting their children's learning at home are linked to higher student achievement" (p. 25). Although the Campbell Collaboration conducted a statistical meta-analysis with very specific inclusion criteria, their overall finding mirrors Henderson and Mapp's conclusion (2002). They examined randomized controlled trials of programs where parents were involved for at least 20 days, and where the intervention focused on parents working with children on academic activities outside of school. Meanwhile, the quantitative meta-analysis of Mattingly and others (2002) drew from a range of studies dating back to the 1960s. With their broader inclusion criteria, they found that some programs demonstrated positive effects on student achievement, but others did not. In turn, statistical tests led to their claim that little evidence exists to support a consistent, causal link between parent programs and student achievement.

All of these reviews called for more rigorous research on parent engagement programs. First, there are very few experimental studies, which can most conclusively evaluate whether or not a program "works" overall (Shadish, Campbell, & Cook, 2001). Second, most existing studies have relatively small sample sizes, which limits the opportunity to find statistically significant effects. Third, and perhaps most important, very few studies have used longitudinal and mixed methods, which would help uncover both whether *and* how programs work. Such work is critical to understand implementation issues, to uncover which components are most critical, and to replicate and scale up successful programs. In the following section, we also argue that the field needs a theoretically unified approach. This would enhance analyses of both the mechanisms and the outcomes of parent engagement programs.

Theoretical Framing: Parent Engagement Programs and the Development of Capital

While traditional programs designed by schools acknowledged that parents are the first and most important "teachers" of their children (González, Moll, & Amanti, 2005), such programs generally conceived of parents' and teachers' roles and goals as separate. In this early conception, parents followed the school's lead, for example, by attending parent-teacher conferences and open houses or volunteering as "room mothers" (Calabrese Barton, et al., 2004; Zentella, 2005). Schools typically organized these interactions, leaving little room for parents' contributions and sometimes little access for low-income or otherwise disenfranchised families. In contrast, some current programs are emphasizing the importance of understanding family contexts, creating shared understandings of schooling, and developing multiple, open-ended pathways for parent engagement (Henderson, et al., 2007). This is a partnership view of home-school connections that seeks to improve outcomes for children through developing parents' (and teachers') skills; creating deeper and reciprocal connections among parents, teachers, and communities; and opening spaces for family involvement in policy-making. In other words, this new conception of parent engagement strives to develop various aspects of family "capital."

Broadly speaking, capital is a set of valued resources that people acquire, accumulate, and activate toward a purpose (Bourdieu, 2001; Calabrese Barton, et al., 2004; Portes, 1998; Spillane, Hallett, & Diamond, 2003). The different ways that parents tend to be involved in schooling, or engaged by schools, work to develop these different kinds of capital: (1) human capital, or training, skills, and knowledge; (2) social-cultural capital, or social connections, which often lead to understanding and utilizing new cultural practices; and (3) political capital, or access to school decision-making processes and/or advocacy roles. Each type of capital may interact with any other (Coleman, 1988), and any program may address one or more in its desired

goals. Nonetheless, for analytical purposes, we consider these types of capital more or less distinctly in the following discussion.

There is good reason to use this "capital" lens, as countless studies of preschool education, parent engagement, and child development demonstrate that improvement of family's capacities (e.g., human capital) and nurturing of early school-home relationships (e.g., social and cultural capital) will result in later, enhanced child outcomes, especially academic achievement. Both longitudinal studies and recent evaluations of newer programs bear this out (Cambell, Ramey, Pengelo, Sparling, & Miller-Johnson, 2002; Gormley, et al., 2005; Karoly, Kilburn, & Cannon, 2005; Reynolds & Clements, 2005; Reynolds & Temple, 2008a; Reynolds, Temple, Roberston, & Mann, 2001; Schweinhart & Weikart, 1997). For a summary, see Table 1.

- Table 1 about here -

Human Capital

Human capital involves the development of individuals' skills and capacities, which allow them to perform new tasks, or old tasks in better ways (Coleman, 1988; Spillane, et al., 2003). A number of parent programs focus on developing parents' human capital by providing additional training. The subsequent skills they develop may then serve dual purposes: to help parents help their children with academic work, for example, and to provide parents with new capabilities or knowledge that will improve their own economic opportunities. Theories and empirical studies on development suggest that continuing education for parents that results in improved homework help at home, as well as increased earnings from new jobs, can improve child achievement (Duncan, Huston, & Weisner, 2007; Epstein & Dauber, 1993; Henderson, et al., 2007; Kalil & Crosnoe, in press; King & Goodwin, 2002).

As reviewed above, both Henderson and Mapp (2002) and the Campbell Collaboration (Nye, et al., 2006) suggested that interventions that had parents working with children on academic activities outside of school significantly improved children's academic abilities. In addition, studies of parent engagement efforts like the Intergenerational Literacy Project found that parent engagement/literacy development programs improved parents' employability (Paratore, 2005; Paratore, Hindin, Krol-Sinclair, & Durán, 1999). Some examples of PreK-3rd programs that provide parent education include Head Start, Even Start, Parents as Teachers (PAT), the Comprehensive Child Development Program, and "HIPPY" (all reviewed below).

A glance at comprehensive school reform programs that emphasize parent engagement further demonstrates this focus on human capital development. Table 2 summarizes the historical development of Joyce Epstein's Network of Partnership Schools, James Comer's School Development Program, and Edward Zigler's Schools of the 21st Century. Epstein's work from the beginning had a focus on "parent involvement in learning activities at home," and one of the program's current strategies includes projects that enhance parents' skills. Comer's "Level I" likewise addresses "monitoring homework" and providing parents with the abilities to do so. Finally, the current manifestation of Zigler's work centers on home visits, parent-education workshops, training, and other opportunities, perhaps signifying the most substantial focus on human capital development of these three main programs.

- Table 2 about here –

Social and Cultural Capital

Recent work theorizes that developing parents' skills not only results in enhanced wages for the family and/or educational opportunities for children, but also increases parents' access to

various social networks and the cultural knowledge therein (Kalil & Crosnoe, in press). Many scholars use Pierre Bourdieu's conception of capital as a way to understand parents' access to and interfaces with institutions (e.g., Houtenville & Conway, 2008; Lareau & Horvat, 1999). Put simply, Bourdieu (2000) emphasizes that individuals from different social locations are socialized differently. Two of the terms he uses to describe this are *habitus,* a system of dispositions or a sense of what is natural or comfortable, and *field,* the institutional arrangements in which a person interacts. When a person's habitus is aligned with the field in which they interact, they enjoy social advantages (Houtenville & Conway, 2008). That is, they have access to a variety of social networks and, in turn, this provides access to cultural capital, or valued ways of being and doing in a particular society (Lareau, 1987; Lareau & Horvat, 1999; Lee & Bowen, 2006; Spillane, et al., 2003). Because of this link, we investigate social and cultural capital together, even though Bourdieu (2001) has made a distinction between the two.

Differences in access to social and cultural capital for families can produce barriers or advantages for young children as they transition to formal educational settings (Epstein, 1987). Studies in this area have highlighted how socio-cultural practices such as language and literacy use (e.g., González, et al., 2005; Heath, 1983); perceptions of homework and schooling (e.g., Lareau, 1987, 1989; Lareau & Horvat, 1999); parenting styles (e.g., Jones, 2007); and economic constraints (e.g., Bruckman, 2003) all shape families' access to schools and, likely, students' eventual achievement. On the flip-side, recent work is also critical of the social and cultural capital that *educators* have (or do not have) when it comes to working with immigrant or low-income populations; much of the parent involvement and engagement literature takes a deficit viewpoint (Calabrese Barton, et al., 2004). Although our approach may seem to do the same thing—suggesting that parents are deficit in skills, cultural knowledge, or political savvy—it is not our intent to focus only on what families "need." We believe that the lens of capital is also

useful for highlighting the skills, cultural capacities, and political abilities that parents bring *with* them to schools, as well as the capital that educators need to partner successfully with families. In summary, how school officials as well as how families are socialized to interact has a tremendous impact on the transition children that make between the worlds of home and school (e.g,. Rothstein, 2004), and in turn, on their ability to achieve.

Various studies from across the disciplines have concluded that children do well in school when parents have direct ties and supportive relationships with school teachers and staff (Reynolds & Clements, 2005). This body of work relates family engagement to higher academic achievement, more positive student attitudes toward schooling, more successful transitions between grade levels, and fewer instances of dropping out. For example, attending to selection effects, one longitudinal study found that the longer parents joined early childhood programs offered by the "Chicago Parent Centers" and the more active parents became in their children's schools, the better their children's outcomes across a variety of social and academic measures: 80% of the children whose parents remained engaged for the entire six-year program graduated from high school, in comparison to 38% of parents who were not involved at all (reported in Kalil & Crosnoe, in press).

Another look at the three comprehensive school reform programs (Table 2) underscores how parent engagement programs focus on social-cultural capital development. Epstein's work originally highlighted "parent involvement at school" and "school-to-home communication." Later conceptions took these goals a step further by making the social networks and connections among families, educators, and community members an explicit and focal part of schools through the "Action Team for Partnership." Comer's "Level II"—parents serving as volunteers—also addresses parents' social-cultural capital, highlighting the importance of parents' "physical presence" at school and school-sponsored programs. In contrast, the summary

of Zigler's program does not suggest an explicit focus on developing teams or encouraging presence at school events, but as Kalil and Crosnoe (in press) suggest, attending training programs is one way to simultaneously develop both human and social-cultural capital.

Political Capital

Theoretical as well as empirical work on political capital is the thinnest of the three areas proposed in this paper. To our knowledge, we are the first to use the term in reference to parent-engagement programs. More commonly, the term has been used in political science to refer to how much "capital" politicians have, in terms of voter support, or the empowerment and access that citizens have to participate in political decision-making (Sørensen & Torfing, 2003). It is this second idea that we apply here: what kind of political capital and involvement in school policy-making do parent engagement programs foster, and can this influence students' academic achievement in some way?

Very little research has explored this question, but preliminary program evaluations are promising. Some suggest that family advocacy can meet students' needs and increase their achievement by creating new facilities, improving school leadership and curriculum, and adding funding for after-school and family-support programs (Chrispeels & Rivero, 2001; Golan & Peterson, 2002; Henderson & Mapp, 2002; Kellogg Foundation, 2007). Projects such as the Parent Institute for Quality Education (PIQE, www.piqe.org) and Engaging LAtino Communities for Education (ENLACE) teach advocacy skills to immigrant, low-income, and non-native-English-speaking families. PIQE offers nine-week classes for parents, taught in native languages or English, to help them find ways to support their children's education and promote college application. Similarly, ENLACE encourages Latino parents to become "education advocates" (Kellogg Foundation, 2007). In addition, some districts have created local school councils made of parents, teachers, and other community members; these councils have varying degrees of

power in terms of setting and enacting school policy (Fung, 2004; Redding, Langdon, Meyer, & Sheley, 2005). Other districts are reaching out to families of all socio-economic backgrounds—including upper-income—to encourage political engagement in new ways (Cucchiara, 2008).

Turning again to the three major school reform initiatives summarized in Table 2 demonstrates the focus on political capital development. "Level III" of Comer's School Development Program stresses family engagement in school decision-making processes and "joint governance." Activities are developed by multi-stakeholder committees, and parents help to plan school- and student-centered programs. Both Epstein's and Zigler's work also make mention of "parent involvement in decision-making," and more recent conceptions of their work promotes collaboration with local communities, too. A cursory glance at national standards for parent engagement demonstrates the same. Appendix I lists the "National Standards for Family-School Partnerships." Standards 1 and 2 suggest that schools should be welcoming, communicative places that encourage partnerships (social-cultural capital for both family and school members). Standard 3 recommends enhancing parents' "knowledge and skills" (human capital). Standards 4-6 recommend that parents have opportunities to act as "advocates" and share in school decision-making (political capital).

In summary, this brief overview demonstrates the theoretical bases for parent programs and three key pathways toward improving student outcomes: the development of families' human, social-cultural, and political capital. Given this framework, we now turn to this review's criteria and an analysis of PreK-3rd program evaluations.

Methodology: Review Criteria and Analysis Procedures

Generally speaking, the evaluation studies examined below were chosen by conducting searches on the Education Resources Information Center (www.eric.ed.gov) and other databases,

which led to empirical research, literature reviews, books, scholarly presentations, websites, and government guides. We narrowed our selection to evaluations published in peer-reviewed journals, excluding unpublished reports, dissertations, presentations, and government documents.

Demographic Criteria

Primarily, this report analyzes U.S. parent engagement programs for families with three year-olds to third-graders (PreK-3rd). These programs addressed students from diverse family structures, ethnic/race backgrounds, and income and educational levels. At times, analyses extended beyond this young age group if the program itself extended beyond (e.g., CoZi schools go from PreK-6th grade).

Program Criteria

We analyzed evaluations of educational programs offered through institutions such as schools or early childhood programs with interventions directly aimed at involving parents of PreK-3rd children. Programs ranged from those at the system-level (e.g., Head Start) to local programs developed by individual schools or communities. We included studies of programs that have been part of active school-reform movements (e.g., School Development Program, National Network of Partnership Schools, Solid Foundation) and programs that are newer or district-based (e.g., HIPPY, Parents as Teachers). In addition, analyses concentrated on studies from the last decade, especially those published since the broad review completed by Henderson and Mapp (2002). As another rule of thumb, we generally prioritized programs that have a state/national presence or multiple sites, in part because this suggests that they can be replicated.

Methodological Criteria

Because we ultimately wanted to examine which components are most common in successful programs, the review primarily examined quantitative studies of individual programs that tested for an effect on student achievement or linguistic/cognitive development. We looked

for research that fit the "gold standard" of random assignment (Shadish, et al., 2001). However, because the extant published work contains few experiments, we also analyzed studies that used other causal research designs.

Analysis Procedure

As mentioned earlier, programs with the aim of engaging parents vary widely in their goals, the ages of the children whose parents they target, the types of engagement they seek to foster, and the outcomes they measure. To make sense of this, we began by creating domain charts for each program/study chosen according to the criteria above. This resulted in Table 3, which lists each program analyzed, their varied goals, the program's components, the outcomes measured by the evaluation, and the study's findings. Because we wanted to explore not only whether a program worked, but also how it worked, we turned to program descriptions on websites or in other publications to outline as many components of each program as possible.

Table 3 is organized developmentally, beginning with programs that target the parents of preschoolers and ending with programs for parents of school-aged children. Then, utilizing the theoretical framework, we studied Table 3 to find evidence for which processes effected changes in children's outcomes, especially those that are related to academic achievement (e.g., cognitive or linguistic development). In other words, we questioned whether the components of programs that appeared somewhat successful focused on developing parents' human, social-cultural, or political capital. This resulted in Table 4, which is discussed in detail below.

Findings: Parent Programs and Components That Develop Human, Social-cultural, and Political Capital

In this section, the theoretical overview helps to consider how parent engagement programs work, toward the end goal of defining the components necessary for PreK-3rd grade

projects. We begin by explaining Table 3 in detail and conclude with a discussion of which programs/components seem critical for children's academic achievement.

[- Table 3 about here -]

Program Goals

The left-most column in Table 3 reveals the wide range of parent-engagement objectives. Even for parents of infants, future student achievement figures prominently, but goals also include factors that are generally related to academic performance: child and parent physical/mental health; continuing education and literacy skills for family members (human capital development); parent presence at school, as well as connecting parents with other families, educators, and/or social services (social-cultural capital development); and parent involvement in policy and decision-making at the school or district level (political capital development). Thus, while the end goal is certainly the children's development, especially academic achievement, the intermediate goals of developing parents' capital is clear.

Some programs, particularly those for parents of very young children (e.g., Parents As Teachers, HIPPY), focus on human capital development, specifically: knowledge and skills useful for raising young children. Many of these training opportunities occur in the families' homes with visits from "parent educators." Other programs highlight literacy skills (e.g., Even Start). In programs for families of school-age students, however, parent-engagement projects are part of a larger educational program, and the engagement activities and goals develop a wider range of capital. For example, a few programs have parent and child mental health as their prime focus (e.g., FAST, The Incredible Years), while others work to involve not just parents but entire communities in the lives of children (e.g., CoZi, NNPS).

Study

The second column from the left references the study or studies examined.

Components and Resources

The middle column details each program's main components and if described, the resources necessary for such a parent program. Programs for PreK children—such as Parents as Teachers, HIPPY, Early Head Start and Even Start—center on home visits and group meetings of parents, run by trained staff members. Programs that focus on mental health (e.g., CCDP, The Incredible Years) also provide home visits as well as a case manager and/or related support groups of parents.

As children move into kindergarten and elementary school, however, more parent engagement projects occur at school. At this time, there also appears to be a general shift in objective from human capital training to social-cultural and political capital development. While many of the elementary school-based components still include parent education of various sorts (e.g., literacy courses or "helping children with homework"), they also strive to connect parents with social/health services and political participation opportunities (e.g., Abbot, CoZi, School Development Program, NNPS, Solid Foundation). As such, key components include parent meetings at school; creation of parent teams to plan events and share information; training for teachers about how to connect with families and create partnerships; and parent representation on governance committees or other school-level decision- or policy-making bodies.

Although programs that focus on PreK versus school-aged children and their families may differ somewhat in their activities and goals, they often require similar resources. For example, the PreK Parents as Teachers program utilizes: parent educators (case manager that visits a number of families); supervisor for parent educators; training and certification programs for parent educators; program materials for developmental screenings; curriculum materials for

home-based activities with families; and childcare, transportation, and meals for group meetings. Similarly, a K-3rd school-based program such as Solid Foundation requires the following: family-school facilitator/liaison (half-time position); training program for facilitator and entire school staff (three in-service days); payment for teachers (of one chosen grade level) to make one home visit/year; materials for three parent-education courses (focused on helping children learn, or human capital development); materials for three family participation evenings (focused on social-cultural and political capital development); and childcare and refreshments for family involvement meetings and events.

Outcomes Measured and Findings

The two right-most columns of Table 3 detail the outcomes measured and findings of each study. Similar to prior research reviews on parent engagement, findings from these recent studies are somewhat mixed.

First, as mentioned above, many PreK programs included home visits, suggesting a focus on training/human capital development, as well as group meetings that likely developed parents' social-cultural capital. Many programs that included these components—home visiting and group parent meetings—showed some effect on students' academic achievement, but the findings were not consistent (e.g., PAT, HIPPY, Early Head Start, Solid Foundation). Findings from one study of HIPPY demonstrated modest effects on students' test scores; however, another did not reach statistical significance. Likewise, the Comprehensive Child Development Program did not demonstrate positive effects on academic achievement, except for children with less-educated, low-income mothers.

Second, some of the more specifically targeted mental health/behavior programs were effective at reducing problem behaviors (e.g., FAST, The Incredible Years). While these programs did not test for effects on student achievement, they did demonstrate successful mental

health and social-emotional outcomes, which are often linked to academic achievement. Like many of the PreK programs, their key components included home visits and case managers.

Third, a number of comprehensive PreK programs with a focus on parent engagement had positive effects on some measures of academic achievement (e.g., Oklahoma 4K, Abbot, Early Head Start). Unfortunately, these studies have not parsed out whether or how the parent engagement piece is critical to their success. Also, they have utilized varying measures of academic achievement.

Fourth, programs focused on developing political capital positively increased parents' engagement in terms of number of meetings attended and making school policy (e.g., NNPS, CoZi). Studies of NNPS, however, did not link this result to children's outcomes of any kind, and even though CoZi parents became politically involved, CoZi students did worse on vocabulary tests than students at the comparison school.

In summary, an analysis of Table 3 demonstrates that some programs have had positive effects on various measures of academic achievement. However, some have not. As discussed in more detail below, further research is necessary to understand the links between parent engagement programs and student achievement. We now turn to examine the ways that the programs demonstrating some positive effects actually worked.

The Capital Pathways to Improving Students' Academic Achievement

To determine which program components seem essential to effective parent engagement programs, we used the proposed theoretical framework to more closely analyze a sub-set of evaluations. The goal here was to carefully analyze how programs worked, especially if and how the more successful programs fostered families' human, social-cultural or political capital. For greater clarity, this analysis focuses on the stand-alone parent-engagement programs (not

comprehensive PreK education like Oklahoma's) that demonstrated significant, positive effects on at least one measure of academic achievement, cognition, or linguistic development. These include PAT, HIPPY, Abbot, EvenStart, ProjectEASE, and Solid Foundation. In general, this analysis suggests that the more effective (in terms of children's academic outcomes) parent programs are likely to foster both human and social-cultural capital.

- Table 4 about here -

Human Capital. Programs that aimed to develop human capital typically engaged families through home visits. For families with the youngest children, these home visits provided parents with knowledge and skills related to child development and best practices for parenting (e.g., PAT, HIPPY, EvenStart). In contrast, programs for the families with elementary-aged students tended to focus on how to help children with school work (e.g., ProjectEASE, Solid Foundation). Across the age range, programs provided literacy training for parents (e.g., HIPPY, EvenStart) and suggested literacy practices to try out at home (ProjectEASE). This first row of Table 4 generally supports the claims of prior research: providing direct instruction to parents seems to improve children's academic achievement (Nye, et al., 2006). What is interesting is that the training can range from instruction on child development and parenting practices, to specific tips on helping children with school work.

Social-Cultural Capital. The same programs that aimed to develop human capital also had components in place to develop social-cultural capital. Getting parents together for meetings or classes, each program theoretically provided access to social networks and cultural knowledge and practices. Some also provided specific connections to community social/health services and organizations (e.g., Abbot). In this area, there is some difference across program type. Programs

that existed outside of an elementary school, such as PAT or HIPPY, did not conduct meetings within a classroom environment or with a teacher as one of the main members of the social network. In contrast, programs that were part of a school community, such as Abbot and Solid Foundation, specifically worked to forge connections among educators and families and encourage collaborations. In addition, many of these programs provided training *to teachers*, not just families. Though the causal link may be somewhat less obvious than the direct instruction of parents (human capital development) and children's academic outcomes, this row of Table 4 suggests that social-cultural capital is likewise important. In fact, of the programs reviewed here, it is impossible to separate the effects of human capital and social-cultural capital, as each program with positive student achievement gains had components that aimed to develop both.

Political Capital. As we have suggested throughout the paper, the development of political capital is the least researched and conceptualized. It is also the least addressed in these six more successful parent-engagement models in Table 4. However, the programs that specifically developed political capital were elementary school-based projects (e.g., Abbot and Solid Foundation), rather than programs for families with three- and four-year-olds. This makes some sense. For example, the goal of Parents as Teachers is to train families in best practices for well-rounded child development, not to train political/educational advocates. In contrast, the school-based programs that are moving toward the partnership model of parent engagement (as discussed above) have political capital development as a core goal. More research to flesh out the components, methods, and effects in this political realm is necessary.

Discussion and Conclusion

Based on a review of theory and recent PreK-3rd program evaluations, it is clear that parent engagement programs work to develop parents' human and social-cultural capital, and

many also work at developing political capital. However, like many of the prior reviews, our conclusions about the most effective parent engagement practices are tentative. Using recent "effectiveness" studies, it has proven difficult to find clear links between specific components of parent engagement programs and the ultimate outcome of improved academic achievement. Nonetheless, this review and comprehensive theoretical framework point to important considerations, as well as directions for future research.

Components Revisited

Although programs for families with PreK children versus elementary-aged children had some different activities and goals, the analyses above suggested that the necessary components and resources were similar across program model and type. The following is a review of the most common components of programs that demonstrated at least some positive effect on children's academic achievement. While the research did not examine specific links between these components and improved student achievement, the patterns discussed above and theoretical framework suggest that policymakers should consider these aspects:

Initial Assessment Study. Educational systems must pay attention to *who* they serve and the particular resources and needs that exist in their communities (Henderson & Mapp, 2002). Initial assessments will highlight which skills and knowledge might profit parents at their schools (human capital) as well as how to best connect families, schools, and communities (social-cultural capital of both parents and educators). Program designers must assess both families' and school staff's perspectives, for instance: what do PreK-3rd grade teachers and families need to know to work as partners? Assessments can also explore whether and how to encourage advocacy behaviors in a particular community setting (political capital).

Family-Community Liaison/Coordinator. Someone dedicated to working with and coordinating parent efforts over time is key. Almost all programs that demonstrated some level

of effectiveness included at least a part-time family/parent coordinator. Such a position is also critical to ensure change and improvement can be made to programs over the years. Parent volunteers do not offer the same important constancy (personal communication, Don Davies).

Other program components include:

8. Individualized home visits (always used during the PreK years, usually to develop human capital, and often used during the school-age years, in part to develop teachers' social-cultural capital and understanding of families).
9. Parent meetings/group training activities and related materials/supplies/curricula (used across the PreK-3rd grade span, to develop both human and social-cultural capital of families and teachers, and sometimes to develop political capital).
10. Training for teachers/personnel to run home visits/parent engagement efforts (used in part to enhance teachers' social-cultural capital regarding their families and students).
11. Compensation for teacher time spent making personal connections with families.
12. Supplies/food/incentives for families/teachers to attend programming.
13. Translation and interpretation services and equipment, where necessary.
14. Childcare and/or transportation to allow family members to attend programs.

Call for Future Research

This paper suggests that there is a need for refining the study of parent engagement using the lens of human, social-cultural, and political capital. Such theoretical framing would help to pinpoint the "black box" of parent engagement, or how programs result in academic gains for students. This may be one of the most important considerations in designing future research studies: while more experimental designs are necessary to help determine whether or not a program works, such studies must be supplemented with careful analyses of a program's implementation, context, acceptance, and progress over time. Using the "lens" of capital to

qualitatively study such contextual variables—at the same time as researchers evaluate experimental outcomes—will help produce study findings that policymakers can use to replicate or scale up projects. They will include both "whether" programs worked, and "how" they worked.

Longitudinal studies would also improve the state of knowledge on how parent engagement opportunities and challenges change as children age. The analyses above suggested that programs for families with PreK children tended to focus on human capital (knowledge and skills about child development/academic work) as well as social-cultural capital (connections to others that had social-cultural savvy). As children aged into elementary schools, programs offered similar opportunities, but they also included more opportunities for families to develop political capital (become engaged in policy-making bodies). More research is necessary to understand parent engagement as a developmental process from the parents' perspectives, as well as from the institutional perspective. Studies that follow particular families over time—for example examining the changing ways that parents choose to engage and the different opportunities that schools offer them—would elucidate this issue. In addition, while recent studies of political capital development are promising (e.g., Chrispeels & Rivero, 2001; Cucchiara, 2008; Kellogg Foundation, 2007), more work is necessary to understand whether and how this focus is critical to engaging families and shaping student achievement.

In addition, this proposed framework reminds us to foreground the roles that schools and educators play in "parent" engagement. As mentioned above, many engagement efforts and studies flow from a deficit model, as school districts and state programs try to consider what families need. Another way to think about school-family partnerships is to consider what *school staff need* in order to develop their own human, social-cultural, or political capital. In turn, work from this perspective could inform the design of pre-service and in-service teacher education

programs. Yet, very few studies have evaluated how schools or teachers are doing as a result of parent-engagement programs.

Similarly, many programs discussed in our review of theory—especially smaller, non-state-sanctioned programs focusing on particular populations—did not have peer-reviewed evaluations to include in the analysis (e.g.,. PIQE, ENLACE, FACE). Further evaluation of parent programs with immigrant, low-income, and working-class backgrounds is necessary. New research is demonstrating that immigrant communities, in particular, may be engaged in ways that schools do not recognize (Dorner, under review-b; Pérez Carreón, et al., 2005), and that such new technology as online listservs are key places that a variety of families "engage" about school topics (Dorner, under review-a). Again, mixed-method, longitudinal research will help us better understand how programs work on intermediate goals (changing parents' human, social-cultural, or political capital), which in turns can shape children's performances at school.

Conclusion

It should be clear from this report that there is an extensive literature on parent engagement, from theory to practice. Nevertheless, it was still difficult to find any work that lists exactly what it takes to encourage and engage parents in educational processes and development: a family-school liaison, a family center, teacher professional development, home visits? No doubt that this is partly because each context is unique and will benefit from specialized programs. However, if the United States wants to invest in universal PreK, federal, state and local governments will have to consider the components and resources necessary to create seamless, supportive PreK-3rd grade programs. Continued and rigorous research on the implementation and effects of scaled-up parent engagement programs will be exceedingly helpful toward this end, especially with a focus on the intermediate steps of developing families' "capital."

Table 1: Longitudinal Evaluations of Successful Early Childhood Education Programs*

Program	Study	Components & Resources	Outcomes Measured	Findings
Chicago Parent Child Centers Families and children preschool-grade 3 http://www.waisman.wisc.edu/cls/Program.htm	(Reynolds & Temple, 2008b; Temple & Reynolds, 2007)	At school: class for parents (1/2 day/week). Outreach. Health services (nurse on site). Parent Resource Room at each center w/FT parent resource teacher. School-community representative. GED classes.	Students' high school completion; college attendance; special education referrals; retentions; need for public assistance; health; arrests N= 989 treatment, 550 control Matched pair; quasi-experimental	Higher rates of high school completion & college attendance; Lower rates of special education, retention, arrest Cost benefit: $7.00
High/Scope Perry Preschool 3 & 4 year olds preschool with parent involvement focus http://secure.highscope.org/Content.asp?ContentId=219	(Schweinhart, 2005; Schweinhart & Weikart, 1997)	Bi-weekly home visits to families by teachers with BAs. Low teacher/child ratio. High/Scope curriculum.	Observations and surveys; Court and school records HS graduation; arrest rate; income; health; use of public assistance N= 58 matched pairs Random treatment	Higher graduation rates. More employment. Fewer lifetime arrests. Fewer health problems. Cost benefit: $16.14 per dollar spent.
Carolina Abecedarian Project Families and infants- 3rd grade children Childcare and preschool – 2nd grade classes http://www.fpg.unc.edu/~abc/#publications http://www.promisingpractices.net/program.asp?programid=132	(Campbell, Ramey, Pungello, Sparling, & Miller-Johnson, 2002; Pungello & Campbell, December 13, 2006)	At school: Group meetings for parents, social work and children's health care on site. Transportation to the center. Case manager for family thru child's 3rd grade year.	Students' IQ and academic achievement as they grew; Mothers' educational level and employment. N= 50 pairs of children Matched pairs, randomized treatment	Higher cognitive achievement in reading & math through age 21; enhanced language development; more years of education; more likely to attend a four-year college; older when first child born. Effects stronger than for most early childhood programs. Mothers from program achieved higher educational and employment status than mothers not in it. Cost benefit ratio: 2.5:1

*These programs are being phased out or no longer in existence, but recent longitudinal follow-up studies continue to demonstrate their effectiveness.

Table 2: Parent Engagement Strategies in Comprehensive School Reform Programs

	Early Ideas about Involvement	Current Engagement Strategies	Structures for Implementation
Epstein - Network of Partnership Schools	**Identified important types of parent involvement in elementary-high schools** • Basic obligations of parents • School-to-home communication • Parent involvement at school • Parent involvement in learning activities at home (Epstein 1987)	**Six Strategies to Develop Partnerships** • Parenting • Communicating • Volunteering • Learning at home • Decision-making involvement • Collaborating with community (Epstein 2006)	**Action Team for Partnership** • Formed to oversee school's partnership program • Comprised of parents, teachers, administrators, & community members • Create & monitor yearly "Action Plan" with goals for each of the 6 strategies (listed at left) (Epstein 2008)
Comer - School Development Program	**Identified parent involvement as a key component lodged in overall elementary school reform program** Mechanisms • Governance & management team • Mental health team • Parent participation team Operations • Develop & implement school plan • Staff development • Assessment & modification of school plan Guidelines • No-fault problem solving • Consensus decision-making • Collaboration (Comer & Hayne, 1991; Haynes Et al, 1988)	**Parent Participation Team** **Plans activities for parent participation program using following structure as a guide** • Level 1—General support to school by attending conferences, monitoring homework, supporting fund-raising • Level 2—Parents serve as volunteers in daily school affairs • Level 3—Parents participate in school decision making by serving on School Planning & Management Team (Comer, 2005)	**Operational Structure of Parent Participation Team** • School has parent-teacher organization • Activities developed by committee • Minutes from meetings distributed to all • Parents are a physical presence in the school • Work of parents supported by parent liaison • Parents assist in the planning of student-centered programs & activities for levels 1-3 • Parents regularly attend school-sponsored programs • Parents who are not physically involved in schools should be supported for ways they are involved (Retrieved 8/10/08 from: http://www.med.yale.edu/comer/about/parent.html)
Zigler - Schools of the 21st Century	**Parent services and support integrated with early childhood education for low-income families** • Based on changing patterns of work & family life • Encouraged integrated care, education, & family support services for infants to age 12 • Programs provides universal access to child care year round • Focus on overall development of child • Non-compulsory program • High-quality programming • Professional training & advancement opportunities for child care providers • Framework flexible to community needs (Zigler, 1991)	**Identified program components** • Guidance & support for parents • Early education & care • Before-school, after-school & vacation programs for school-age children • Health education and services • Networks and training for child care providers • Information and referral services Retrieved 8/10/08 from: http://www.yale.edu/21C/programcomponents.html	**Guidance and Support for Parents** • Home visits, playgroups • Parent education workshops for parents • Parent training & personal development opportunities • Program leadership coaching training with follow-up mentoring for school leaders • Parent involvement in decision-making (Gorham, et al, 2008)

Table 3: Effectiveness Studies of Parent Engagement Programs

	Program For Whom / Goals	Study/ Report	Components & Resources	Outcomes Measured	Findings
PreK	**Parents as Teachers (PAT)** Parents of children birth to age 5 *Goals:* **I**ncrease parent knowledge of early childhood development. **D**etect developmental delays early. **P**revent child abuse/neglect Increase school readiness and success. http://www.parentsasteachers.org/site/pp.asp?c=ekIRLcMZJxE&b=272091	(Zigler, Pfannenstiel, & Seitz, 2008)	Home visits by parent educators (monthly, bi-weekly, weekly, may begin prenatally). Group meetings of parents. Periodic developmental screenings. Supervisor for parent educators (salaried through another agency). Parent educators (salary and travel $17/hr; 20 hrs/wk). Program materials. Annual recertification for parent educators (@$35). Curriculum ($275/parent educator). Parent Educator training (@$475-$625).	School readiness (before entering kindergarten) in earlier study; academic achievement in 3rd grade. N= 5721 3rd and 6th graders (82% of original kdg. sample) Path analysis to test hypothetical causal models; chi-square to test fit of data to model.	Higher scores by PAT 3rd graders on Missouri Assessment Program Comm. Arts subtest; PAT students also had significantly greater readiness for Kdg, (using School Entry Profile); path analysis showed length of participation in PAT to be the best predictor of later academic achievement, as measured by the 3rd grade test.
	HIPPY (Home Instruction Program for Preschool Youngsters) Low income/ELL families of 4 & 5 year olds *Goals*: **E**mpower parents as primary educators of their children. **F**oster parent involvement. **M**aximize the chances of successful early school experiences. **F**amily literacy. http://www.hippyusa.org/	(Baker, Piotrkowski, & Brooks-Gunn, 1999; Bradley & Gilkey, 2002)	Biweekly home visits by trained paraprofessionals (parents)--1 for every 12 families. Bi-weekly group meetings of parents (with childcare). Home visits supervised by professional coordinator. Childcare provided for meetings. Week-long yearly intensive trainings for para-professionals: HIPPY estimates totals costs at $1,250/child/year	**Baker**: Students' cognitive skills; standardized achievement; classroom adaptation; length of parent's involvement in program. N= 226 children; 2 cohort randomized study (NY) and simple comparison (AK) **Bradley**: Students' achievement test scores; grades; behavior in 3rd and 6th grades. N= 1032 children (516 treatment); post hoc matching design	**Baker**: Mixed results for 1st graders on achievement tests (Cooperative Preschool Inventory; Metropolitan Readiness Test; Metropolitan achievement Test) and tests of adaptation (Child Classroom Adaptation Index); those in New York did better, but not statistically significant; high level of parent attrition. **Bradley**: modest positive impact on achievement test scores, grades, behavior in 3rd and 6th grades.

PreK	**Early Head Start** Parents and their children ages birth to 3 *Goals*: **P**arent education for interaction with their young children. **G**ood health and mental health of pregnant and new mothers. **M**utual parent support. http://www.mathematica-mpr.com/earlycare/ehstoc.asp **Head Start** Parents and children ages 3 to 5 *Goals*: **P**arents working or volunteering at Head Start centers. **S**trengthened family life through health, mental health, and social services. **C**ommunity involvement.	EHS: (Love, Kisker, & Ross, 2005) HS: Henry, Gordon, & Rickman, 2006; (Ludwig & Miller, 2007; Ludwig & Phillips, 2007)	EHS can be a center based, home based or mixed based program, with a variety of parent involvement options: Weekly home visits for parents of infants Parenting groups Social worker/case management. HS: Volunteer or employment opportunities at HS centers for parents. HS caseworker.	**Love:** Cognitive development (Bayley Scales of Infant Development, Mental Development Index); Language development (Peabody Picture Vocab); Child social/emotional development (Child Behavior Checklist); Parenting behavior Videotape of parent/child interaction yearly for 3 years N= 3001 families in 17 EHS centers; Randomized trial. **Henry:** Program quality (ECERS-R scale); Peabody Picture Vocabulary Test; Woodcock Johnson Achievement subtests: Letter-Word, Spelling, Applied Probs, Oral and Written Language Scales N = 134 treatment (HS) and 201 control (GA Pre-K) Quasi-experimental, propensity score matching **Ludwig & Miller:** N = varies for a range of hypotheses tested, control and treatment groups are by hundreds of individuals Regression discontinuity	**Love**: "Significant impacts on a range of child development and parenting outcomes" "Impacts were greater for children and parents attending the mixed-approach programs, which combined home- and center-based services" **Henry:** "Economically disadvantaged children attending a state prekindergarten program were at least as well prepared for school when they entered kindergarten as were children who attended Head Start (p. 93). **Ludwig:** 12% decrease in arrest rates for Afr. Americans; 22% more likely to graduate from college for whites

PreK	**Comprehensive Child Development Program (CCDP)** Low-income children birth-5 and parents *Goals*: **E**arly childhood. **I**ntervention/education. **C**ase management for families.	(Dearing, Kreider, Simpkins, & Weiss, 2006; St. Pierre, Layzer, Goodson, & Bernstein, 1999)	Case manager for each family (20 family caseload). Bi-weekly (1 ½ hr.) home visits providing parent education in child development. Help/counseling in gaining access to services available to families and children. Job training for parents.	**Dearing:** Family involvement (attendance at variety of school events); Child's literacy N= 329 children, followed from K-5th grades; Multilevel modeling **St Pierre:** Child's cognitive achievement (Kaufman ABC, Peabody Picture Vocab); N= 4400: 2213 treatment; 2197 control	**Dearing:** Not statistically significant for most, but parent involvement positively associated with average literacy for children with less-educated mothers. **St. Pierre:** No impacts

	The Incredible Years Parents, teachers and children , infants to school years *Goals:* **R**educe conduct problems in children. **P**romote children's social, emotional, academic competence. **P**ositive behavior/social skills. **I**ncrease positive and nurturing parenting. **I**mprove parents' problem-solving skills, anger management, and communication skills. **I**ncrease family support networks and school involvement. **H**elp parents and teachers work collaboratively to ensure consistency across settings. **I**ncrease parents' involvement in children's academic-related activities at home. http://www.incredibleyears.com	(Reid, Webster-Stratton, & Hammond, 2007; Webster-Stratton, Reid, & Stoolmiller, 2008)	Parent training/support groups: 2 hour meetings once a week for 12-18 weeks Transportation, childcare, and meals for parents' groups Videotape/DVD of instructional vignettes Manuals for parents, teachers. Books for children. Training for parent, teacher, and child trainers (for parent trainers, @ 3 days each = $400 plus airfare and lodging).	**Reid**: Pre and post testing with observations; coding for parent-child interaction and Child Behavior Checklist. N= 340 mothers and children Randomized matched pairs study with 2 intervention groups and control; 1 intervention included parent education along with school curriculum for child. **Webster-Stratton**: Pre and post testing of children's social and emotional competencies; observations of teacher classroom management; teacher surveys N= 1768 students; 120 classrooms & teachers Randomized matched pairs of intervention and control	**Reid**: Treatment group showed 95% decrease in negative child behavior 2 years post intervention. **Webster-Stratton**: Significant improvement in children's emotional self-regulation, social competence and conduct. Intervention teachers reported greater feeling of bond with parents, even with no parent involvement/education offered.

PreK	**Oklahoma Early Childhood Four-Year-Old program** Universally available to all 4 yr. olds in state. Full day and half day programs by public and private providers. *Goals:* State rules and regulations stipulate that "The program shall encourage family involvement to support the child's education experience." http://sde.state.ok.us/Programs/ECEduc/4YearOld.html	(Gormley, et al., 2005; Gormley & Phillips, 2005; Wong, Cook, Barnett, & Jung, 2008)	Avg. state spending of $3,433 per child (Barnett, Hustedt, Friedman, Boyd, & Ainsworth, 2007); from all sources: $6,577. Children may be served in a variety of settings, but all 4K teachers must have a BA in Early Childhood Education and are paid on the same salary scale as public school teachers	**Gormley** : Woodcock Johnson Achievement subtests: Letter-Word, Spelling, Applied Probs. N= 1567 beginning preschool children (control) **and** 3149 beginning kindergarteners (treatment) Regression-discontinuity design; treatment-on-the-treated because parents chose Tulsa Public Schools PreK program. **Wong**: Peabody Pic. Vocabulary Print Awareness Woodcock Johnson Math. Regression discontinuity design, randomly sampled states, classrooms, and students who had attended PreK programs or not	**Gormley**: Significant effects on all three subtests: .79 of standard deviation for Letter-Word; .64 for spelling; .38 for applied problems. **Wong**: "Positive impacts" only reliable for test of Vocabulary; "positive short-term effects on cognitive aspects of school readiness"
	Abbot Preschool Program (NJ) Available to disadvantaged 3 and 4 yr. olds living in "Abbott districts." Full day program plus wraparound childcare by public and private providers. *Goals:* **E**ncourage collaboration between families and school staff to foster student achievement. http://www.state.nj.us/education/abbotts/about/	(Frede, Jung, Barnett, Lamy, & Figueras, June 2007; Wong, et al., 2008)	Volunteer program for family members to work in classrooms. Parent education programs Parent participation on school leadership councils Full-time parent liaison Social and health services, transportation, and services for children with disabilities and with limited English proficiency, as needed. Certified teacher and assistant 1:15 adult/child ratio. $10,494 per student (Barnett, et al., 2007)	**Frede**: Peabody Picture Vocab.; : Woodcock Johnson Achievement subtests: Applied Probs.; Pre-CTOPPP N = 1071 kindergarteners **and** 778 4-year-olds Regression discontinuity design/Longitudinal cross sectional **Wong**: Peabody Pic. Vocabulary, Print Awareness, Woodcock Johnson Math Regression discontinuity design, randomly sampled states, classrooms, and students who had attended PreK programs or not	**Frede**: Meaningful effects for receptive vocabulary, math, and print awareness. For children who attended preschool for two years, gains in math and language are much larger. **Wong:** Positive results for all three tests but only reliable for PPVT

Pre K-3rd (and beyond)	**CoZi Schools** PreK- 6th grade students and families. *Goals:* **B**efore and after school childcare (including PreKs). **S**chool improvement. **P**arent engagement. **A**cademic achievement. **C**reating community to support children. http://info.med.yale.edu/comer/about/alliances.html	(Desimone, Finn-Stevenson, & Henrich, 2000; Finn-Stevenson & Stern, 1996; Finn-Stevenson & Stern, 1997) (Finn-Stevenson is descriptive study.)	Home visits for new to school parents (by Parents As Teachers). Group meetings with other parents. Preventative health care. Adult education. Child care from 7:00 a.m. to 6:00 p.m. year round. Parent participation in decision-making.	**Desimone:** Measured teacher, parent, and preschool student outcomes of CoZi school compared to regular school N = unclear. Preschoolers and their parents, plus teachers from all grades at the CoZi school and comparison school of similar population Mixed methods (surveys, observations, interviews)	**Desimone**: Higher parent and community participation rates at CoZi school. Peabody Picture Vocabulary Test for students showed more achievement at control school.
	Even Start Low income young school age children and their families *Goals:* **I**ncreased academic achievement for low income students. **E**ducation for parents. **A**ge-appropriate educational activities. **H**elp parents become active members in their child's education. **B**reak the cycle of poverty and low literacy by improving educational opportunities for families. http://www.doe.mass.edu/news/news.asp?id=3382	(St. Pierre, Ricciuti, & Rimdzius, 2005)	Family literacy service: Early childhood education for children (weekdays). Adult education and parenting education for parents (2 classes per week). Joint parent-child literacy activities (materials). Credentialed instructor for parent classes.	Peabody Picture Vocabulary Test III; Woodcock Johnson Achievement subtests: Letter-Word ID, Dictation, Applied Probs; Story and Print Concepts N= 97 EvenStart students and 44 control group students Randomized experiment; Path analysis	Positive relationship between number of hours children spent in early childhood education and scores on WJ. Positive relationships between number of hours parents spent in parenting education and students' PPVT scores. Negative relationship between number of hours parents spent in adult education and students scores on 2 WJ subtests.

PreK-3rd (and beyond)	**Families and Schools Together (FAST)** Families and children, aged 3-13. *Goals:* **I**ncrease children's feelings of affiliation to family/school. **I**ncrease parents' feelings of control over life, children. **I**ncrease positive interactions between parent and child. http://www.strengtheningfamilies.org/html/programs_1999/19_FAST.html	(Hernandez, May 2000; Kratochwill, McDonald, Levin, Young Bear-Tibbetts, & Demaray, 2004)	Home visits to each family. 8-week program with weekly meetings for entire family ($2000 for 10 families). Extended program: 30 2 ½ hr. group meetings of parents and school age children (over 2 yrs) with childcare. Training for "FAST collaborative team"— 4 days over 4 months: volunteers who lead meetings and conduct home visits ($3900). Meals for each meeting (prepared by families but purchased with program funds). Transportation (for parents) if needed. Supplies for crafts/other activities. One weekly $30 "gift basket" ($240). Outcome evaluation ($1000).	**Kratochwill:** Indicators of academic and behavioral performance: Child Behavior Checklist Less aggressive behavior (children) More competence (parents) N= 50 (pairs) Randomized intervention study.	On CBC: Teacher rating of "aggressive behavior" & parent rating of child as less "withdrawn" statistically significant. Decreased aggression and mental health issues for students. Increased parent involvement and feelings of competence. Results held through 1 year follow up.

Kindergarten	**Project EASE** Families and kindergarteners *Goals:* **A**ll students should have the strongest beginning of their educational career. **E**ach student will have a plan to meet individual needs. **P**arents are integral to the success of the their children. **E**arly efforts will yield long range success in school. http://gseweb.harvard.edu/~pild/projectease.htm	(Jordan, Snow, & Porche, 2000)	At school: Five monthly parent sessions (Sept. – Apr.). Title I staff teach the sessions, so no extra cost for personnel. At home: parent-child activities using books and materials provided by the program.	Language, measured with Peabody Picture Vocabulary Test; Sound and Print knowledge, measured with Comprehensive Assessment Program subtests; Parent participation N=248 Randomized intervention with control group	Statistically significant gains in language skills. High parent participation levels.
K-3rd (and beyond)	**School Development Program** Parents, teachers, school administrators, community members concerned with school age children *Goals*: "**I**nvolve parents at every level of school activity." "**F**acilitate positive relationships among parents, students, and school staff . . . for effective teaching and learning." "**C**ollaborative decision making and a culture of inclusion." http://www.schooldevelopmentprogram.org/downloads/Joyner-TransformingRevChapter02.pdf	(Comer, 2005; Comer & Haynes, 1991; Cook & Hirschfield, 2008; Haynes, 1998; Joyner, Ben-Avie, & Comer, 2004; Woodruff, Shannon, & Efimba, 1998)	Parent Team formed to plan usual parent events (Back To School) but also other activities, such as discussion groups to help parents know more about what and how their children learn and what services are available to children in the community.	**Cook**: involvement with juvenile justice system N = 1406 students from 20 schools Quasi experimental study: 10 treatment schools and 10 control Only Cook listed here because it is the most recent	**Cook**: students self-reported less acting out; official crime data did not show effect.

K-3rd (and beyond)	**National Network of Partnership Schools (NNPS)** Schools, district, states, organizations *Goals:* **G**oal-linked programs of family and community involvement to support and increase student achievement. http://www.csos.jhu.edu/P2000/	(Epstein, 2007; Hutchins, Sheldon, & Epstein, 2008; Sheldon & Van Voorhis, 2004)	Training for staff to establish Action Team for Partnership to create school, family and community partnerships. Promoting 6 types of involvement: parenting, communicating, volunteering, learning at home, decision making, collaboration with community.	Improved parent involvement; Increased student achievement in reading, math and science Change in school or district programs of family and community involvement N= 50 districts: 400 elementary, middle or secondary schools Random samples; Longitudinal hierarchical linear model	Higher levels of family involvement (attending workshops, receiving newsletters, volunteering, serving on committees, making decisions) at NNPS schools.
	Solid Foundation Families of school age children *Goals:* **P**arent education focused on helping students learn. **P**arent participation in decision making at school. **T**eacher/Parent/Student compacts about each one's role in student learning. **O**utreach to parents. **A**lignment of school policies on homework and parent-teacher conferences. http://www.adi.org/solidfoundation/	(Redding, et al., 2005)	Parent representation on school governance and school policy setting committees Parent education: "courses" meeting once a week for 3 weeks, taught by parent volunteers—specifically aimed at helping children with school work Improved home-school communication through School-Home Links Home visits (once per school year) for one selected grade level Family Involvement Evenings (3 per school year) Parent education facilitator (1/2 time position). Training of facilitator and school staff (3 in-service days). Materials for parent education courses and for family involvement evenings (3 per year). Refreshments for monthly School Community Council meetings and for 3 family involvement evenings.	School's % of students meeting/exceeding state expectations on Illinois Standards Assessment Test N= 129 schools Post hoc comparison; statistically random matched comparison schools	Solid Foundation schools had statistically significant 4.5% gain in students meeting state expectations; statewide average gain was .1%

Table 4

Successful Programs, Their Strategies, and Family Capital Development

Capital Developed	Program Name	Program Age Range	Components/Strategies
Human	PAT	PreK (0-5)	Home visits on child development
	HIPPY	PreK (4-5)	Home visits on child development; literacy training
	Abbot	PreK (3-4)	Parent education
	EvenStart	K-varies	
	ProjectEASE	K	Literacy training; adult education; parent education
	Solid Fndtn	K-varies	Home activities using program materials
			Parent education (on school work help); home visits
Social-Cultural	PAT	PreK (0-5)	Parent group meetings
	HIPPY	PreK (4-5)	Parent group meetings
	Abbot	PreK (3-4)	Volunteer in classrooms; social/health services
	EvenStart	K-varies	
	ProjectEASE	K	Parent group classes
	Solid Fndtn	K-varies	Parent group classes
			Family involvement evenings
Political	Abbot	PreK (3-4)	Parent participation on school councils
	Solid Fndtn	K-varies	Parent participation in policy-making

Appendix A

PTA National Standards for Family-School Partnerships

(http://www.pta.org/1216.htm)

Standard 1: Welcoming all families into the school community—Families are active participants in the life of the school, and feel welcomed, valued, and connected to each other, to school staff, and to what students are learning and doing in class.

Standard 2: Communicating effectively—Families and school staff engage in regular, two-way, meaningful communication about student learning.

Standard 3: Supporting student success—Families and school staff continuously collaborate to support students' learning and healthy development both at home and at school, and have regular opportunities to strengthen their knowledge and skills to do so effectively.

Standard 4: Speaking up for every child—Families are empowered to be advocates for their own and other children, to ensure that students are treated fairly and have access to learning opportunities that will support their success.

Standard 5: Sharing power—Families and school staff are equal partners in decisions that affect children and families and together inform, influence, and create policies, practices, and programs.

Standard 6: Collaborating with community—Families and school staff collaborate with community members to connect students, families, and staff to expanded learning opportunities, community services, and civic participation.

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Appendix B
Site Visit Findings

Arkansas School Site Number 1 (School of the 21st Century)
Site visit scheduled for March 10, 2009, but interview with Program Director conducted by phone due to an unexpected and quite severe snow storm in NE Arkansas on that day.

According to the school district's website, the School of the 21st Century is a comprehensive, early childhood care and education plan that brings together an umbrella of services for the benefits of children and their families for 246 days a year. The site suggests that the schools is both affordable and of high quality.

The program at this 21st Century is based on Zigler's design. Its core components consist of:

- Home Visitation
- Before/After/Vacation care for school-age children
- Preschool 3-5 year olds
- Early Care and Education for Infant – 36 months
- Information and Referral
- Health Related Services
- Parent Education and Involvement

The school at Arkansas District 1 has been a designated demonstration site since 1996 for other programs to visit. As part of the AR 21C Network, Arkansas District 1 is also a peer training site for Yale University. It is the first schools of the 21st century program in Arkansas started in 1991 following a training program at Yale with Zigler's staff.

The mission statement for the school is:

"The School of the 21st Century is dedicated to the healthy growth and development of all children through continuity of support from birth to age twelve. We promote exceptional early care, education, and additional support services for children and families by linking school, home, and community resources to build an environment that values children."

The director of the school appears to be something of an entrepreneur within the school district (benefiting it appears from being married to the district's deputy superintendent). In addition to the Schools of the 21st century designation, the school collaborates with the Arkansas HIPPY program, and has a Head Start Even Start and as she said "as many programs as we can establish at the school."

As part of the program, the school offers 8 hours a month of parent education programs, and an additional 8 hours a month of literacy education for parents with their children. There is a parent meeting at the school every Monday night to be sure all parents (or as many as are able and willing to participate) can engage in the school's services and activities. To boost attendance they have found the funds to provide food and child care at the parent meetings, and encourage everyone in the community to come to the meetings.

Parent training efforts are coordinated with staff training and development so that both groups have the same information and can work together on a consistent and regular basis.

It appears that the school identifies sources of funding and programs and seeks grant and other funding to operate those programs and then blends them into the ongoing operations of the school. As a result there are a wide variety of programs and services provided to all students and families.

There is a substantial Health component to the program as well. There is a monthly meeting to help parents and school employees discuss and coordinate health issues and be sure parents understand how to help keep their children healthy, recognize symptoms of various illnesses, etc. and how to work together.

The school has received grants for a variety of purposes over the years, and the core seems to be the work with the Schools of the 21st century which serves infants to 5 year olds. In addition services at this school, the program serves children at another elementary school in the district.

There are also a number of after school programs both at this school, the other elementary school and in the district's middle school. The director estimates that the school's programs serve approximately 350 children at her school site and at the two other schools.

The school as begun a transition to K program for the entire district so parents, students and administrative staff can all meet each other before school begins each year. This is a two week transition program. This year 175 students were served.

Among the sources of funding are:

- Arkansas Better Chance an infant and toddler program -- $189,800
- Arkansas Better Chance Pre-school $521,000, plus $10,000 more for a an add-on
- Even Start $75,000
- Arkansas Better Change program $711,000
- Title I $50,000
- A summer school program for $90,000
- Accreditation support funds from the district for $6,000
- An a number of small grants in the range of $1,000 to $2,000

There are also district funds available at the school.

Staff:

- Director
- 1 Parent Educator
- 1 FTE office staff

- Part Time secretary
- 11 certified staff (one for each of 11 classrooms)
- 20 aides
- 4 volunteer grandmothers
- 2 workforce training volunteers
- 9 additional part time staff paid as aides
- 1 part time director at each of the other 2 after school programs
- 22 part time staff at two other after school programs
- 5 volunteers at the two other after school programs

Arkansas District 2: HIPPY (Home Instruction Program for Preschool Youngsters)
Site Visit March 13, 2009

Background on Arkansas HIPPY Programs (source: http://www.archildrens.org/community_outreach/arkansas_hippy.asp)

The Arkansas District 2 HIPPY program is part of a large network of HIPPY programs operated through the Arkansas Department of Health Services

HIPPY is a 30 week school readiness-parent involvement program for parents of three, four and some five year-old children. Most programs operate concurrently with the school year and are staffed by a professional coordinator and well-trained home based educators.

There are 31 funded agencies providing in-home parent education and support in 69 counties to children and families. HIPPY programs in Arkansas are sponsored by a variety of organizations which include:

7 Education Service Cooperatives
16 School Districts
6 Community-based Organizations
1 Head Start Agency
1 Housing Authority

Arkansas HIPPY programs receive funding from several sources, the majority coming from Arkansas Better Chance (ABC) legislation originally passed in 1991. Funding is also provided for ABC through passage of Act 1841, now Act 1332. Passage of this act earmarked dollars for early childhood programs including HIPPY. In 2004, Act 49 was enacted to provide grants to local programs like HIPPY. Funding is also provided by AmeriCorps, the Walton Family Foundation, Pre-K ELLA, TANF and other private donors.

The HIPPY curriculum consists of 9 storybooks, 30 age and developmentally appropriate curriculum packets and a set of colored shapes. Programs also provide other teaching supplies such as glue, scissors, pencils, and crayons.

Each Arkansas HIPPY program has an operating agreement with Arkansas Children's Hospital, the state sponsoring agency. This agreement entitles local programs to purchase the HIPPY curriculum, attend all workshops, trainings, and conferences sponsored by Arkansas HIPPY. Program assessments are conducted annually at each site to ensure that appropriate services are provided to families.

HIPPY often partners with the Division of Childcare and Early Childhood Education, local school districts, Title I, Even Start, Head Start, AmeriCorps, Meld, and the Departments of Education and Health. The Office of Juvenile Justice and Delinquency Prevention cited HIPPY as a model program.

The meeting took place in the HIPPY office which was a converted classroom in an elementary school in Arkansas District 2. Arkansas District 2 is a small town on Interstate 40 about 60 miles east of Little Rock. It is a poor rural area. There were a few fast food restaurants and a relatively new hotel at the freeway exit, but as one drove into town there was considerable evidence of high levels of poverty. The Arkansas District 2 "main street" was an attempt to reinvigorate the town with interesting shops, but most of them were closed or boarded up when I walked by.

The program serves three counties from this office. A total of six full time paraprofessional staff and one program director serve approximately 130 students from this location. Each of the staff members provide support to the families of 22-25 children. The director is responsible for all administration, management, budgeting and interface with the HIPPY program office at the Children's Hospital in Little Rock.

The paraprofessional staff meet with each parent at their homes for approximately 1 hour per week. The balance of their time is spent in preparation and travel to individual homes. The staff members I met with also indicated that one of their major problems is the mobility of many of their clients, as well as the difficulty of contacting them since they often do not have access to telephones. As a result, weekly meetings are often missed, and staff members frequently show up at a home only to find the parents have moved or are out having forgotten about the appointment.

The purpose of the program as described to me is to train parents to work with their children and help them prepare for school. The program staff collaborate with local Head Start programs, and work closely with the local school districts to identify children and families who would benefit from their services.

- Requirements to qualify for the program include:
- Families at 200% of poverty
- Single parents
- Parents without GED or equivalent education levels
- Children living with grandparents
- Children who are developmentally delayed
- English Language Learners

Program staff members work with the established HIPPY curriculum to give parents tools and activities they can use with their children. Specifically the program provides families with 9 storybooks, 30 age and developmentally appropriate curriculum packets and a set of colored shapes. Programs also provide other teaching supplies such as glue, scissors, pencils, and crayons.

Program staff members help parents use the curriculum materials with their children. In addition they work with parents to help children transition to kindergarten, as well as provide the parents with skills to work with their child's teacher.

The program also helps parents find pre-school programs for their children as well as day care providers.

Help for parents includes resources to help them earn a GED.

There is no expectation or opportunity for the HIPPY staff to coordinate with, or engage in PD with the teachers and staff of the Arkansas District 2 elementary school, or any of the schools in the three county area they serve.

The total budget for this HIPPY program for 2008-09 was $222,170 which funded the local director, six paraprofessional staff, travel and the curriculum materials provided to families. The Brinkley school district provided the classroom/office free of charge and provided the phone and internet connection to the program as well. (Note that the classroom being used appeared to be in a wing of the school that was largely vacant, and the staff indicated that the school has experienced declining enrollments for over a decade.)

Program is focused on both human and social capital aspects. Note that site visits and support are approximately ½ of what the programs studied by Baker, Piotrkowski and Brooks-Gunn (1999) and Bradley and Gilkey (2002).

Tulsa Oklahoma Case Studies

In the 2008-09 school year, the Tulsa School District served 41,000 students in a city of population 400,000. The District has 183 preschool programs, 107 elementary schools, 53 middle schools, and 35 high schools. This report reviews 2 of the eighteen "community schools" in Tulsa in an attempt to relay how these elementary schools approach parent engagement services and to specifically analyze the resources necessary to provide such services. Rogers Elementary School and Lampham Elementary School[3] have been chosen for this analysis due to the recommendation, from a variety of organizations, that they provide excellent services in this area. The end goal of this research is to determine whether the Evidence-Based Approach to school finance adequacy for PreK-3rd grade education, advocated by Lawrence O. Picus and Associates for the Foundation for Child Development (FCD), includes the resources necessary in the "pupil support" category of this model to fund effective parent engagement programs. Both of these schools have a vast array of community building strategies that are pivotal to the approach of their schools' missions; this report is limited to those strategies focused on parent engagement within the pupil support category, and specifically to the personnel and fiscal resources dedicated to parent engagement in grades PreK-3rd.

Lampham Elementary

"Stabilize the neighborhood; that's what we intended to do" –Lampham Elementary School Principal

Lampham Elementary School serves roughly 900 students (of which 60 are PreK students, related to the school via an external organization, outside of the K-6 funding system, and this organization typically has a waiting list of 20 students), including a body comprised of students who are 59 percent Hispanic, 11 percent African American, and 11 percent American Indian. The Hispanic population has continued to grow, and the students in the school, within this category, tend to come directly from Mexico. The average class size across grades in this K-6 elementary school is 20. Eighty-three percent of students receive free or reduced price lunch (FRL) and 13 percent have Individual Education Plans (IEPs). The principal of this year-around school has worked to build the school into not only an environment to educate children, but an institution that builds a community within the neighborhood in which it resides, hence the declaration of the school as a "community school." This duel purpose of dealing with changing student demographics and its effect on academic achievement as well as the attempt to deal with a fiscally declining neighborhood business situation has led, since 1997, to the vision of the school.

As of 2007, Lampham Elementary School is in compliance with AYP standards set forth by the No Child Left Behind (NCLB) Act. As of 2008, scores for math and reading,

[3] All names in this section are psuedonems.

including subgroups such as low-income, female, and non-white students, surpass those of the state and District in the District's Academic Performance Index.

Concerning professional development and curriculum, the school leaders recognized that there were areas in which the curriculum could improve, as students were not scoring well on standardized tests. The school completed data analyses to determine the areas in which teachers should cover so as to improve performance on subsections of tests. This alignment between curriculum and what is taught in the classroom, professional development and analyses that occurred while substitute teachers taught regular education classes, led to more understanding of the issues: students did not enter the school prepared. Based on this information, during the first year of restructuring, the school accepted 4-year-olds into the traditionally 5-year-olds early education program; one hundred eighty students now have PreK experience before entering the school.

This community vision of the school and the school's work to improve academic performance has led to various programmatic strategies:

- All communication with parents in the community is written in both Spanish and English so as to engage parents who are not fluent in English.
- Outreach activities include those not directly related to student achievement; for example, last year 150 families received food baskets during the winter holiday season via the school.
- The school analyzes test score data to determine gaps in a students' understanding of material. "Kid Nights" are designed around these areas (e.g. 2nd graders were having trouble with a money subsection of the curriculum, so the school provided money games for students to bring home to parents for the purpose of parents playing these games with their children).
- The school uses innovative strategies to engage parents with the school. For example, they host "Mom's Night," during which they may have hairdressers, Mary Kay salespeople, masseuses, and/or nail care experts. Typical prizes for these and other parent events is some type of necessity, such as toiletries. (Dad's Night also is part of the school's calendar.)
- Some parent nights are dedicated for specific age groups. For example, a night is dedicated to only parents of PreK-3rd grade students in an attempt to relay to parents a greater understanding of the development of children at this age.
- The ELL program is divided into tiers: kindergarten is full emersion; those students still performing below performance standards are placed in a 1st grade classroom with a bi-lingual teacher; and 4th and 5th grade ELL students are part of a pull out program.
- The school offers a $2000 stipend to teachers who pass an ELL/Spanish test and teach a normal course load of students.
- In the first week of school, teachers attempt to visit every home on their "wishlist." These teachers contact families and offer to come to the student's parent's house. If the parent does not want a teacher to visit their home, teachers suggest a "neutral space." After the initial visit, teachers schedule additional visits

on a "need basis" (the Principal suggests many teachers continue home visits beyond those necessary for a "need basis").

- Since the school has institutionalized parent involvement, the parents of students in the school now anticipate that if they are part of this school, they will need to be involved.
- Lampham Elementary School has more National Board certified teachers than any school in the state of Oklahoma.
- Another organization, next door to Lampham Elementary School, Tulsa Educare, runs the local Head Start program; hence, a good deal of communication and shared space exists between this program and early education services provided by the school.
- The school has a relationship with Tulsa University. In prior years, the school was not a recipient of student teachers. Currently, student teachers do complete practicums at Lampham Elementary School, and the Principal is invited to lecture at Tulsa University.

Using the Evidence-Based Approach for school finance adequacy, an elementary school with student enrollment of 924 and 83 percent FRL would trigger the following pupil support resources (to be used to build a team of personnel who would serve a variety of purposes, including resources for a nurse, counselor, social worker, parent liaison, etc.)[4]: 7.2 FTE pupil support personnel. This FTE calculation does not include staff necessary for special education services.

Lampham Elementary School employs the following staff members who would fall into the "pupil support" category of the Evidence-Based model. (It is difficult to specify the time each spends on parent engagement as they are part of a comprehensive program for pupil and community support):

1.0 FTE Counselor
.25 FTE Counselor
1.0 FTE Social Worker
1.0 FTE Psychologist
1.0 FTE ELL Teacher Leader
1.0 FTE Parent Facilitator
1.0 FTE Bilingual PreK Paraprofessional
1.0 FTE Bilingual PreK Paraprofessional

[4]"An Evidence Based Approach to Estimating the National and State-by-State Costs of an Integrated PreK-3rd Education Program" (Picus, Odden, and Goetz, 2008) reference the research behind these data calculations. See also the rational behind a 1/100 FRL staff/student ratio and 1/100 ELL staff/student ratio in Odden, A. R., Picus, L. O., Goetz, M., & Aportela, A. (2008). Funding schools adequately in North Dakota: Resources to double student performance. (Prepared for the North Dakota Education Improvement Commission.) North Hollywood, CA: Lawrence O. Picus & Associates.

2.0 FTE Counselors/Therapists (funded through DaySprings, a non-profit organization)
0.5 FTE Parent Liaison (funded through the Community Service Council)
0.5 FTE Community Organizer (volunteer through the Community Service Council)

Of staff funded by the school via the Tulsa School District, the quantity of FTE personnel is close to those provided in the Evidence-Based model presented to the Foundation for Child Development. 3.0 FTE staff members are funded through other means (the last 3 positions listed), and this can be attributed to the efforts of the school to access resources outside of the school funding system. If the school funding system attempted to include resources for such personnel, the model would need to increase its resources in this area. However, one could suggest that some of the funding for the personnel listed overall, such as a 1.0 psychologist, would be funded through other official means (in this case special education). Additionally, 2.0 FTE are paraprofessionals, whose cost is about the same as 1.0 certified FTE. The responsibilities of many of these staff members are outside the purview of parent engagement though would be included in the “pupil support” category of the Evidence-Based model.

Rogers Elementary School

Rogers Elementary School serves 365 students, including a body comprised of students who are 27 percent African American, 25 percent Caucasian, 18 percent Hispanic, and 17 percent American Indian. Eighty-two percent of students receive free or reduced price lunch (FRL) and 16 percent have Individual Education Plans (IEPs). The school had decreasing enrollment to the point of 170 students 2002-03 which led to the district planning to bus students to neighboring schools; they have since increased enrollment. In 2005, the school was physically rebuilt, largely due to an influx of local business donations. Like Lampham Elementary School, Rogers Elementary School is one of the "community schools" in the Tulsa School District, with a focus on building the community via the efforts of personnel in the school as well as interaction with local businesses and the parents of their students.

The current principal joined the faculty of Rogers Elementary School in 2003-04. Previously working in a school with 42 percent FRL students, she was tapped to run a school with twice that poverty level.

The principal decided to participate in the community school movement by 1) welcoming all parents into the building 2) asking parents to observe and participate in classroom activities 3) offering opportunities for parents to volunteer in the school and 4) reviewing literature on urban schooling, including specifically discipline and, more generally, school culture. The principal suggests that these actions, coupled with a focus on discipline within the school, spurred their enrollment: parents began to bring their children to the school; the student body grew from 170 to 300 in 2003-04, with enrollment in 2008-09 of 380, with 60 transfers from other schools. (A possible side note related to discipline: uniforms are required in the school during normal school hours (donated by a church ~$12,000.))

The school's Academic Performance Index (API), which is based on reading scores, math scores, and attendance in 3rd, 4th, and 5th grades now surpasses most of the District's affluent schools. Before becoming a community school, Rogers Elementary School was rated last in the API for the Tulsa School District. The school now has a 100 percent passing rate on this index.

The school offers universal four-year-old PreK student services, with classes that have a maximum of 20 students and a full-time paraprofessional assistant. Schools in the district are required to admit students up to the point in which seats are filled. Rogers Elementary School funds PreK classrooms ½ through the Tulsa School District and ½ through Title I funds. (Schools in the District that do not receive Title I funds must find another way to fund the other half of the program, and they usually choose to request parents take on this financial responsibility. Schools may also opt to run a ½ day program funded by TSD.)

The school focuses on math and reading, and much of this content is taught thematically through social studies and science. Rogers Elementary School is a year-around school (9 weeks in school, 3 weeks out of school; four camps occur during the 6 week summer session, typically funded via faith-based organizations); and interim periods of instruction/activities occur during the 3 week periods.

In the first year of the principal's tenure, standardized test scores plummeted, partially because the principal was given the opportunity to terminate the employment or retire one-half of the school's staff. A union exists in the District and this was the first time the principal had grievances filed by affected teachers—in an effort to build a new staff who believed in the new mission of the school. Policies were in place or were put into place; some of which are itemized below:

- The school implemented "brain-based classrooms" (e.g. dim lighting, colors a person would seen in nature, deliberate attempts to present pleasant smells, music playing during instruction). This environment exists in most classrooms.
- Little distinction of the PreK-3 program vs. PreK-5 program exists concerning attempts at parent engagement/involvement.
- The school continues to determine how to engage students' parents; some events bring no parents, others bring 200.
- The "Baby School" serves 6 month olds to age 3 and has 160 children on the waitlist.

The school currently receives funding via the school district (state and local sources), federal government support (Title I), philanthropic and other grant organizations (such as faith-based organizations to fund summer school and other programs), family payments for programs; twenty-seven partners exist with Rogers Elementary School in the 2009-10 school year, a jump from 3 at the time of the principals instatement.

Some of these business and parent outreach efforts are run via the school's outreach coordinator, who works with a wide variety of programs and issues, such as parents with abuse problems, a food panty, community dinners, literacy nights, clothing drives, local donations from businesses; importantly, the school and their outreach coordinator work to help parents navigate the "system" (e.g. keeping parent's electricity on).

A typical component of the parent engagement program would include "Community Dinners," usually scheduled when parent's welfare check funds are running out; these dinners can pull in 400 people in the community—students, parents, grandparents, friends. Prizes are typically practical items, such as shampoo or toilet paper. Other outreach activities include allowing parents to use the library for online job applications.

Using the Evidence-Based Approach for school finance adequacy, an elementary school with student enrollment 320 and 82 percent FRL would trigger the following pupil support resources (to be used to build a team of personnel who would serve a variety of

purposes, including resources for a nurse, counselor, social worker, parent liaison, etc.)[5]: 2.6 FTE pupil support personnel.

The elementary school employs the following staff members. (It is difficult to specify the time each spends on parent engagement as they are part of a comprehensive program for pupil and community support):

1.0 FTE Community Schools Coordinator—funded through outside funds
0.5 FTE Speech Pathologist
1.0 FTE Social Services Worker
1.0 FTE Eugene Filed Foundation Director—funded through outside funds
1.0 FTE Truancy/Attendance Counselor—funded through outside funds
0.1 FTE TA and PTA President (Benchmark Tests)
1.0 FTE Counselor/Social Worker
1.0 FTE Parent Facilitator—funded through Title I funds
1.0 FTE Social Worker—funded through DaySprings, a non-profit organization
1.0 FTE Therapist—funded through DaySprings, a non-profit organization

The Evidence-Based Approach to school finance adequacy does not provide the resources necessary to fund the "pupil support" staff in this school. Assuming that the Speech Pathologist is funded separately and the latter two positions are funded via other organizations, the school employs 6.1 FTE in pupil support, and a good deal of these personnel or, at least, a portion of their time, is dedicated to parent engagement.

[5]"An Evidence Based Approach to Estimating the National and State-by-State Costs of an Integrated PreK-3rd Education Program" (Picus, Odden, and Goetz, 2008) reference the research behind these data calculations. See also the rational behind a 1/100 FRL staff/student ratio and 1/100 ELL staff/student ratio in Odden, A. R., Picus, L. O., Goetz, M., & Aportela, A. (2008). Funding schools adequately in North Dakota: Resources to double student performance. (Prepared for the North Dakota Education Improvement Commission.) North Hollywood, CA: Lawrence O. Picus & Associates.

	Universal 100% Participation			
	4 Year Olds Only		3 and 4 Year Olds	
	Low	High	Low	High
U.S.	$ 379,541,463.00	$ 7,550,018,350.00	$ 759,775,590.00	$ 15,113,815,500.00
Alabama	$ 6,003,894.00	$ 119,432,300.00	$ 11,152,188.00	$ 221,844,600.00
Alaska	$ 688,665.00	$ 13,699,250.00	$ 1,576,815.00	$ 31,366,750.00
Arizona	$ 8,764,506.00	$ 174,347,700.00	$ 17,370,447.00	$ 345,541,150.00
Arkansas	$ 3,732,183.00	$ 74,242,350.00	$ 7,409,310.00	$ 147,389,500.00
California	$ 50,462,265.00	$ 1,003,819,250.00	$ 99,783,327.00	$ 1,984,937,150.00
Colorado	$ 6,134,838.00	$ 122,037,100.00	$ 12,476,787.00	$ 248,194,150.00
Connecticut	$ 3,819,603.00	$ 75,981,350.00	$ 7,800,747.00	$ 155,176,150.00
Delaware	$ 986,265.00	$ 19,619,250.00	$ 2,204,658.00	$ 43,856,100.00
District of Columbia	$ 573,252.00	$ 11,403,400.00	$ 1,185,378.00	$ 23,580,100.00
Florida	$ 21,083,007.00	$ 419,393,150.00	$ 41,227,086.00	$ 820,108,700.00
Georgia	$ 12,865,341.00	$ 255,923,450.00	$ 25,744,167.00	$ 512,115,150.00
Hawaii	$ 1,675,209.00	$ 33,324,050.00	$ 3,380,922.00	$ 67,254,900.00
Idaho	$ 1,984,155.00	$ 39,469,750.00	$ 4,104,648.00	$ 81,651,600.00
Illinois	$ 16,888,335.00	$ 335,950,750.00	$ 33,552,354.00	$ 667,439,300.00
Indiana	$ 8,395,575.00	$ 167,008,750.00	$ 16,345,215.00	$ 325,146,750.00
Iowa	$ 3,598,077.00	$ 71,574,650.00	$ 7,207,035.00	$ 143,365,750.00
Kansas	$ 3,678,522.00	$ 73,174,900.00	$ 7,186,947.00	$ 142,966,150.00
Kentucky	$ 4,767,180.00	$ 94,831,000.00	$ 9,669,117.00	$ 192,342,650.00
Louisiana	$ 5,407,485.00	$ 107,568,250.00	$ 11,390,547.00	$ 226,586,150.00
Maine	$ 1,330,458.00	$ 26,466,100.00	$ 2,648,175.00	$ 52,678,750.00
Maryland	$ 6,827,781.00	$ 135,821,450.00	$ 13,670,721.00	$ 271,944,450.00
Massachusetts	$ 7,299,756.00	$ 145,210,200.00	$ 13,990,362.00	$ 278,302,900.00
Michigan	$ 12,461,907.00	$ 247,898,150.00	$ 24,924,930.00	$ 495,818,500.00
Minnesota	$ 6,112,704.00	$ 121,596,800.00	$ 12,816,330.00	$ 254,948,500.00
Mississippi	$ 3,344,652.00	$ 66,533,400.00	$ 7,278,366.00	$ 144,784,700.00
Missouri	$ 6,704,649.00	$ 133,372,050.00	$ 14,430,903.00	$ 287,066,350.00
Montana	$ 1,167,987.00	$ 23,234,150.00	$ 2,065,344.00	$ 41,084,800.00
Nebraska	$ 2,284,359.00	$ 45,441,550.00	$ 4,634,469.00	$ 92,191,050.00
Nevada	$ 3,463,041.00	$ 68,888,450.00	$ 6,824,154.00	$ 135,749,300.00
New Hampshire	$ 1,142,133.00	$ 22,719,850.00	$ 2,513,697.00	$ 50,003,650.00
New Jersey	$ 10,411,815.00	$ 207,116,750.00	$ 21,246,966.00	$ 422,654,700.00
New Mexico	$ 2,597,490.00	$ 51,670,500.00	$ 5,509,692.00	$ 109,601,400.00
New York	$ 22,803,414.00	$ 453,616,300.00	$ 46,007,007.00	$ 915,193,150.00
North Carolina	$ 11,537,859.00	$ 229,516,550.00	$ 22,639,827.00	$ 450,362,150.00
North Dakota	$ 613,800.00	$ 12,210,000.00	$ 1,220,253.00	$ 24,273,850.00
Ohio	$ 13,673,325.00	$ 271,996,250.00	$ 27,602,772.00	$ 549,087,400.00
Oklahoma	$ 4,708,869.00	$ 93,671,050.00	$ 8,844,579.00	$ 175,940,550.00
Oregon	$ 3,787,518.00	$ 75,343,100.00	$ 8,388,228.00	$ 166,862,600.00
Pennsylvania	$ 13,130,670.00	$ 261,201,500.00	$ 26,852,820.00	$ 534,169,000.00
Rhode Island	$ 980,871.00	$ 19,511,950.00	$ 2,300,727.00	$ 45,767,150.00
South Carolina	$ 5,304,627.00	$ 105,522,150.00	$ 10,435,530.00	$ 207,588,500.00
South Dakota	$ 1,147,248.00	$ 22,821,600.00	$ 2,256,738.00	$ 44,892,100.00
Tennessee	$ 7,635,672.00	$ 151,892,400.00	$ 14,405,142.00	$ 286,553,900.00
Texas	$ 36,588,897.00	$ 727,843,650.00	$ 73,112,694.00	$ 1,454,392,300.00
Utah	$ 4,371,279.00	$ 86,955,550.00	$ 8,870,898.00	$ 176,464,100.00
Vermont	$ 689,409.00	$ 13,714,050.00	$ 1,373,796.00	$ 27,328,200.00
Virginia	$ 9,529,245.00	$ 189,560,250.00	$ 19,201,524.00	$ 381,965,800.00
Washington	$ 7,182,483.00	$ 142,877,350.00	$ 14,847,636.00	$ 295,356,200.00
West Virginia	$ 1,974,297.00	$ 39,273,650.00	$ 3,862,383.00	$ 76,832,350.00
Wisconsin	$ 6,550,455.00	$ 130,304,750.00	$ 13,024,371.00	$ 259,086,950.00
Wyoming	$ 674,436.00	$ 13,416,200.00	$ 1,206,861.00	$ 24,007,450.00

Less than 100% of Poverty
100% Participation

	4 Year Olds Only		3 and 4 Year Olds	
	Low	High	Low	High
U.S.	$ 75,816,018.00	$ 1,508,168,100.00	$ 152,228,817.00	$ 3,028,207,650.00
Alabama	$ 1,368,960.00	$ 27,232,000.00	$ 2,517,231.00	$ 50,073,950.00
Alaska	$ 102,579.00	$ 2,040,550.00	$ 205,437.00	$ 4,086,650.00
Arizona	$ 1,828,752.00	$ 36,378,400.00	$ 3,691,542.00	$ 73,433,900.00
Arkansas	$ 937,812.00	$ 18,655,400.00	$ 1,915,335.00	$ 38,100,750.00
California	$ 9,583,743.00	$ 190,644,350.00	$ 19,094,667.00	$ 379,840,150.00
Colorado	$ 1,055,550.00	$ 20,997,500.00	$ 2,093,802.00	$ 41,650,900.00
Connecticut	$ 453,840.00	$ 9,028,000.00	$ 861,645.00	$ 17,140,250.00
Delaware	$ 142,848.00	$ 2,841,600.00	$ 316,758.00	$ 6,301,100.00
District of Columbia	$ 184,326.00	$ 3,666,700.00	$ 384,927.00	$ 7,657,150.00
Florida	$ 4,259,307.00	$ 84,728,150.00	$ 7,664,874.00	$ 152,473,300.00
Georgia	$ 2,921,781.00	$ 58,121,450.00	$ 5,683,602.00	$ 113,060,900.00
Hawaii	$ 218,550.00	$ 4,347,500.00	$ 361,119.00	$ 7,183,550.00
Idaho	$ 365,490.00	$ 7,270,500.00	$ 745,581.00	$ 14,831,450.00
Illinois	$ 2,962,887.00	$ 58,939,150.00	$ 6,061,554.00	$ 120,579,300.00
Indiana	$ 1,645,170.00	$ 32,726,500.00	$ 3,128,334.00	$ 62,230,300.00
Iowa	$ 649,605.00	$ 12,922,250.00	$ 1,210,395.00	$ 24,077,750.00
Kansas	$ 833,187.00	$ 16,574,150.00	$ 1,352,871.00	$ 26,911,950.00
Kentucky	$ 1,005,237.00	$ 19,996,650.00	$ 2,338,113.00	$ 46,510,850.00
Louisiana	$ 1,829,868.00	$ 36,400,600.00	$ 3,622,071.00	$ 72,051,950.00
Maine	$ 356,841.00	$ 7,098,450.00	$ 540,609.00	$ 10,754,050.00
Maryland	$ 668,298.00	$ 13,294,100.00	$ 1,287,027.00	$ 25,602,150.00
Massachusetts	$ 1,090,611.00	$ 21,694,950.00	$ 2,010,474.00	$ 39,993,300.00
Michigan	$ 2,819,481.00	$ 56,086,450.00	$ 5,079,288.00	$ 101,039,600.00
Minnesota	$ 856,344.00	$ 17,034,800.00	$ 1,837,308.00	$ 36,548,600.00
Mississippi	$ 1,083,078.00	$ 21,545,100.00	$ 2,341,089.00	$ 46,570,050.00
Missouri	$ 1,386,258.00	$ 27,576,100.00	$ 3,046,215.00	$ 60,596,750.00
Montana	$ 295,275.00	$ 5,873,750.00	$ 471,696.00	$ 9,383,200.00
Nebraska	$ 348,564.00	$ 6,933,800.00	$ 870,666.00	$ 17,319,700.00
Nevada	$ 340,101.00	$ 6,765,450.00	$ 897,729.00	$ 17,858,050.00
New Hampshire	$ 100,254.00	$ 1,994,300.00	$ 253,518.00	$ 5,043,100.00
New Jersey	$ 1,077,312.00	$ 21,430,400.00	$ 2,512,581.00	$ 49,981,450.00
New Mexico	$ 684,666.00	$ 13,619,700.00	$ 1,559,796.00	$ 31,028,200.00
New York	$ 4,726,074.00	$ 94,013,300.00	$ 9,720,639.00	$ 193,367,550.00
North Carolina	$ 2,932,383.00	$ 58,332,350.00	$ 5,485,326.00	$ 109,116,700.00
North Dakota	$ 50,871.00	$ 1,011,950.00	$ 169,725.00	$ 3,376,250.00
Ohio	$ 3,092,715.00	$ 61,521,750.00	$ 6,452,433.00	$ 128,354,850.00
Oklahoma	$ 1,171,707.00	$ 23,308,150.00	$ 2,398,935.00	$ 47,720,750.00
Oregon	$ 632,121.00	$ 12,574,450.00	$ 1,691,205.00	$ 33,642,250.00
Pennsylvania	$ 2,417,070.00	$ 48,081,500.00	$ 4,868,922.00	$ 96,854,900.00
Rhode Island	$ 121,737.00	$ 2,421,650.00	$ 372,651.00	$ 7,412,950.00
South Carolina	$ 1,154,223.00	$ 22,960,350.00	$ 2,449,806.00	$ 48,732,700.00
South Dakota	$ 153,450.00	$ 3,052,500.00	$ 374,883.00	$ 7,457,350.00
Tennessee	$ 1,780,206.00	$ 35,412,700.00	$ 3,497,916.00	$ 69,582,200.00
Texas	$ 9,233,598.00	$ 183,679,100.00	$ 18,721,272.00	$ 372,412,400.00
Utah	$ 487,692.00	$ 9,701,400.00	$ 1,206,861.00	$ 24,007,450.00
Vermont	$ 133,362.00	$ 2,652,900.00	$ 209,994.00	$ 4,177,300.00
Virginia	$ 1,332,504.00	$ 26,506,800.00	$ 2,840,220.00	$ 56,499,000.00
Washington	$ 1,119,255.00	$ 22,264,750.00	$ 2,435,763.00	$ 48,453,350.00
West Virginia	$ 578,460.00	$ 11,507,000.00	$ 1,148,457.00	$ 22,845,650.00
Wisconsin	$ 1,087,542.00	$ 21,633,900.00	$ 2,042,652.00	$ 40,633,400.00
Wyoming	$ 154,473.00	$ 3,072,850.00	$ 183,303.00	$ 3,646,350.00

	Less Than 200% of Poverty 100% Participation			
	4 Year Olds Only		3 and 4 Year Olds	
	Low	High	Low	High
U.S.	$ 161,831,067.00	$ 3,219,220,150.00	$ 325,144,833.00	$ 6,467,934,850.00
Alabama	$ 2,749,917.00	$ 54,702,650.00	$ 5,101,515.00	$ 101,481,750.00
Alaska	$ 182,001.00	$ 3,620,450.00	$ 451,980.00	$ 8,991,000.00
Arizona	$ 4,171,701.00	$ 82,985,450.00	$ 8,249,565.00	$ 164,104,250.00
Arkansas	$ 2,078,643.00	$ 41,349,350.00	$ 4,192,905.00	$ 83,407,250.00
California	$ 21,921,681.00	$ 436,076,450.00	$ 43,466,619.00	$ 864,658,550.00
Colorado	$ 2,350,017.00	$ 46,747,650.00	$ 4,859,994.00	$ 96,677,300.00
Connecticut	$ 993,147.00	$ 19,756,150.00	$ 2,084,595.00	$ 41,467,750.00
Delaware	$ 292,299.00	$ 5,814,550.00	$ 644,397.00	$ 12,818,650.00
District of Columbia	$ 276,489.00	$ 5,500,050.00	$ 549,630.00	$ 10,933,500.00
Florida	$ 9,719,802.00	$ 193,350,900.00	$ 18,408,048.00	$ 366,181,600.00
Georgia	$ 6,093,267.00	$ 121,210,150.00	$ 12,057,543.00	$ 239,854,350.00
Hawaii	$ 625,611.00	$ 12,444,950.00	$ 994,449.00	$ 19,782,050.00
Idaho	$ 802,497.00	$ 15,963,650.00	$ 1,716,129.00	$ 34,138,050.00
Illinois	$ 6,268,851.00	$ 124,702,950.00	$ 12,575,646.00	$ 250,160,700.00
Indiana	$ 3,753,015.00	$ 74,656,750.00	$ 7,007,829.00	$ 139,403,050.00
Iowa	$ 1,458,333.00	$ 29,009,850.00	$ 2,842,824.00	$ 56,550,800.00
Kansas	$ 1,761,420.00	$ 35,039,000.00	$ 3,068,535.00	$ 61,040,750.00
Kentucky	$ 1,964,625.00	$ 39,081,250.00	$ 4,326,732.00	$ 86,069,400.00
Louisiana	$ 2,757,915.00	$ 54,861,750.00	$ 5,995,431.00	$ 119,263,950.00
Maine	$ 578,646.00	$ 11,510,700.00	$ 1,040,112.00	$ 20,690,400.00
Maryland	$ 1,719,291.00	$ 34,200,950.00	$ 3,563,667.00	$ 70,890,150.00
Massachusetts	$ 2,205,588.00	$ 43,874,600.00	$ 4,022,622.00	$ 80,019,900.00
Michigan	$ 5,306,394.00	$ 105,557,300.00	$ 10,017,030.00	$ 199,263,500.00
Minnesota	$ 1,926,402.00	$ 38,320,900.00	$ 4,227,408.00	$ 84,093,600.00
Mississippi	$ 1,915,893.00	$ 38,111,850.00	$ 4,116,831.00	$ 81,893,950.00
Missouri	$ 3,139,866.00	$ 62,459,700.00	$ 6,839,499.00	$ 136,054,550.00
Montana	$ 530,472.00	$ 10,552,400.00	$ 977,430.00	$ 19,443,500.00
Nebraska	$ 959,760.00	$ 19,092,000.00	$ 2,098,545.00	$ 41,745,250.00
Nevada	$ 1,315,764.00	$ 26,173,800.00	$ 2,769,540.00	$ 55,093,000.00
New Hampshire	$ 261,051.00	$ 5,192,950.00	$ 519,405.00	$ 10,332,250.00
New Jersey	$ 2,638,131.00	$ 52,478,950.00	$ 5,574,420.00	$ 110,889,000.00
New Mexico	$ 1,272,891.00	$ 25,320,950.00	$ 2,952,936.00	$ 58,741,200.00
New York	$ 9,516,132.00	$ 189,299,400.00	$ 18,662,310.00	$ 371,239,500.00
North Carolina	$ 5,675,790.00	$ 112,905,500.00	$ 11,257,650.00	$ 223,942,500.00
North Dakota	$ 224,781.00	$ 4,471,450.00	$ 453,840.00	$ 9,028,000.00
Ohio	$ 5,811,477.00	$ 115,604,650.00	$ 12,229,407.00	$ 243,273,150.00
Oklahoma	$ 2,271,060.00	$ 45,177,000.00	$ 4,523,334.00	$ 89,980,300.00
Oregon	$ 1,628,988.00	$ 32,404,600.00	$ 3,659,178.00	$ 72,790,100.00
Pennsylvania	$ 5,225,112.00	$ 103,940,400.00	$ 10,478,031.00	$ 208,433,950.00
Rhode Island	$ 312,759.00	$ 6,221,550.00	$ 812,727.00	$ 16,167,150.00
South Carolina	$ 2,283,987.00	$ 45,434,150.00	$ 4,856,181.00	$ 96,601,450.00
South Dakota	$ 482,019.00	$ 9,588,550.00	$ 911,214.00	$ 18,126,300.00
Tennessee	$ 3,714,234.00	$ 73,885,300.00	$ 6,963,747.00	$ 138,526,150.00
Texas	$ 18,972,186.00	$ 377,403,700.00	$ 38,796,903.00	$ 771,766,350.00
Utah	$ 1,838,517.00	$ 36,572,650.00	$ 3,894,933.00	$ 77,479,850.00
Vermont	$ 274,350.00	$ 5,457,500.00	$ 505,548.00	$ 10,056,600.00
Virginia	$ 3,075,789.00	$ 61,185,050.00	$ 6,638,247.00	$ 132,051,150.00
Washington	$ 2,795,022.00	$ 55,599,900.00	$ 5,819,847.00	$ 115,771,150.00
West Virginia	$ 1,004,307.00	$ 19,978,150.00	$ 2,106,636.00	$ 41,906,200.00
Wisconsin	$ 2,440,692.00	$ 48,551,400.00	$ 4,791,639.00	$ 95,317,550.00
Wyoming	$ 292,485.00	$ 5,818,250.00	$ 469,650.00	$ 9,342,500.00

	Universal 65% Participation			
	4 Year Olds Only		3 and 4 Year Olds	
	Low	High	Low	High
U.S.	$ 246,701,950.95	$ 4,907,511,927.50	$ 493,854,133.50	$ 9,823,980,075.00
Alabama	$ 3,902,531.10	$ 77,630,995.00	$ 7,248,922.20	$ 144,198,990.00
Alaska	$ 447,632.25	$ 8,904,512.50	$ 1,024,929.75	$ 20,388,387.50
Arizona	$ 5,696,928.90	$ 113,326,005.00	$ 11,290,790.55	$ 224,601,747.50
Arkansas	$ 2,425,918.95	$ 48,257,527.50	$ 4,816,051.50	$ 95,803,175.00
California	$ 32,800,472.25	$ 652,482,512.50	$ 64,859,162.55	$ 1,290,209,147.50
Colorado	$ 3,987,644.70	$ 79,324,115.00	$ 8,109,911.55	$ 161,326,197.50
Connecticut	$ 2,482,741.95	$ 49,387,877.50	$ 5,070,485.55	$ 100,864,497.50
Delaware	$ 641,072.25	$ 12,752,512.50	$ 1,433,027.70	$ 28,506,465.00
District of Columbia	$ 372,613.80	$ 7,412,210.00	$ 770,495.70	$ 15,327,065.00
Florida	$ 13,703,954.55	$ 272,605,547.50	$ 26,797,605.90	$ 533,070,655.00
Georgia	$ 8,362,471.65	$ 166,350,242.50	$ 16,733,708.55	$ 332,874,847.50
Hawaii	$ 1,088,885.85	$ 21,660,632.50	$ 2,197,599.30	$ 43,715,685.00
Idaho	$ 1,289,700.75	$ 25,655,337.50	$ 2,668,021.20	$ 53,073,540.00
Illinois	$ 10,977,417.75	$ 218,367,987.50	$ 21,809,030.10	$ 433,835,545.00
Indiana	$ 5,457,123.75	$ 108,555,687.50	$ 10,624,389.75	$ 211,345,387.50
Iowa	$ 2,338,750.05	$ 46,523,522.50	$ 4,684,572.75	$ 93,187,737.50
Kansas	$ 2,391,039.30	$ 47,563,685.00	$ 4,671,515.55	$ 92,927,997.50
Kentucky	$ 3,098,667.00	$ 61,640,150.00	$ 6,284,926.05	$ 125,022,722.50
Louisiana	$ 3,514,865.25	$ 69,919,362.50	$ 7,403,855.55	$ 147,280,997.50
Maine	$ 864,797.70	$ 17,202,965.00	$ 1,721,313.75	$ 34,241,187.50
Maryland	$ 4,438,057.65	$ 88,283,942.50	$ 8,885,968.65	$ 176,763,892.50
Massachusetts	$ 4,744,841.40	$ 94,386,630.00	$ 9,093,735.30	$ 180,896,885.00
Michigan	$ 8,100,239.55	$ 161,133,797.50	$ 16,201,204.50	$ 322,282,025.00
Minnesota	$ 3,973,257.60	$ 79,037,920.00	$ 8,330,614.50	$ 165,716,525.00
Mississippi	$ 2,174,023.80	$ 43,246,710.00	$ 4,730,937.90	$ 94,110,055.00
Missouri	$ 4,358,021.85	$ 86,691,832.50	$ 9,380,086.95	$ 186,593,127.50
Montana	$ 759,191.55	$ 15,102,197.50	$ 1,342,473.60	$ 26,705,120.00
Nebraska	$ 1,484,833.35	$ 29,537,007.50	$ 3,012,404.85	$ 59,924,182.50
Nevada	$ 2,250,976.65	$ 44,777,492.50	$ 4,435,700.10	$ 88,237,045.00
New Hampshire	$ 742,386.45	$ 14,767,902.50	$ 1,633,903.05	$ 32,502,372.50
New Jersey	$ 6,767,679.75	$ 134,625,887.50	$ 13,810,527.90	$ 274,725,555.00
New Mexico	$ 1,688,368.50	$ 33,585,825.00	$ 3,581,299.80	$ 71,240,910.00
New York	$ 14,822,219.10	$ 294,850,595.00	$ 29,904,554.55	$ 594,875,547.50
North Carolina	$ 7,499,608.35	$ 149,185,757.50	$ 14,715,887.55	$ 292,735,397.50
North Dakota	$ 398,970.00	$ 7,936,500.00	$ 793,164.45	$ 15,778,002.50
Ohio	$ 8,887,661.25	$ 176,797,562.50	$ 17,941,801.80	$ 356,906,810.00
Oklahoma	$ 3,060,764.85	$ 60,886,182.50	$ 5,748,976.35	$ 114,361,357.50
Oregon	$ 2,461,886.70	$ 48,973,015.00	$ 5,452,348.20	$ 108,460,690.00
Pennsylvania	$ 8,534,935.50	$ 169,780,975.00	$ 17,454,333.00	$ 347,209,850.00
Rhode Island	$ 637,566.15	$ 12,682,767.50	$ 1,495,472.55	$ 29,748,647.50
South Carolina	$ 3,448,007.55	$ 68,589,397.50	$ 6,783,094.50	$ 134,932,525.00
South Dakota	$ 745,711.20	$ 14,834,040.00	$ 1,466,879.70	$ 29,179,865.00
Tennessee	$ 4,963,186.80	$ 98,730,060.00	$ 9,363,342.30	$ 186,260,035.00
Texas	$ 23,782,783.05	$ 473,098,372.50	$ 47,523,251.10	$ 945,354,995.00
Utah	$ 2,841,331.35	$ 56,521,107.50	$ 5,766,083.70	$ 114,701,665.00
Vermont	$ 448,115.85	$ 8,914,132.50	$ 892,967.40	$ 17,763,330.00
Virginia	$ 6,194,009.25	$ 123,214,162.50	$ 12,480,990.60	$ 248,277,770.00
Washington	$ 4,668,613.95	$ 92,870,277.50	$ 9,650,963.40	$ 191,981,530.00
West Virginia	$ 1,283,293.05	$ 25,527,872.50	$ 2,510,548.95	$ 49,941,027.50
Wisconsin	$ 4,257,795.75	$ 84,698,087.50	$ 8,465,841.15	$ 168,406,517.50
Wyoming	$ 438,383.40	$ 8,720,530.00	$ 784,459.65	$ 15,604,842.50

Less than 100% of Poverty
65% Participation

	4 Year Olds Only		3 and 4 Year Olds	
	Low	High	Low	High
U.S.	$ 49,280,411.70	$ 980,309,265.00	$ 98,948,731.05	$ 1,968,334,972.50
Alabama	$ 889,824.00	$ 17,700,800.00	$ 1,636,200.15	$ 32,548,067.50
Alaska	$ 66,676.35	$ 1,326,357.50	$ 133,534.05	$ 2,656,322.50
Arizona	$ 1,188,688.80	$ 23,645,960.00	$ 2,399,502.30	$ 47,732,035.00
Arkansas	$ 609,577.80	$ 12,126,010.00	$ 1,244,967.75	$ 24,765,487.50
California	$ 6,229,432.95	$ 123,918,827.50	$ 12,411,533.55	$ 246,896,097.50
Colorado	$ 686,107.50	$ 13,648,375.00	$ 1,360,971.30	$ 27,073,085.00
Connecticut	$ 294,996.00	$ 5,868,200.00	$ 560,069.25	$ 11,141,162.50
Delaware	$ 92,851.20	$ 1,847,040.00	$ 205,892.70	$ 4,095,715.00
District of Columbia	$ 119,811.90	$ 2,383,355.00	$ 250,202.55	$ 4,977,147.50
Florida	$ 2,768,549.55	$ 55,073,297.50	$ 4,982,168.10	$ 99,107,645.00
Georgia	$ 1,899,157.65	$ 37,778,942.50	$ 3,694,341.30	$ 73,489,585.00
Hawaii	$ 142,057.50	$ 2,825,875.00	$ 234,727.35	$ 4,669,307.50
Idaho	$ 237,568.50	$ 4,725,825.00	$ 484,627.65	$ 9,640,442.50
Illinois	$ 1,925,876.55	$ 38,310,447.50	$ 3,940,010.10	$ 78,376,545.00
Indiana	$ 1,069,360.50	$ 21,272,225.00	$ 2,033,417.10	$ 40,449,695.00
Iowa	$ 422,243.25	$ 8,399,462.50	$ 786,756.75	$ 15,650,537.50
Kansas	$ 541,571.55	$ 10,773,197.50	$ 879,366.15	$ 17,492,767.50
Kentucky	$ 653,404.05	$ 12,997,822.50	$ 1,519,773.45	$ 30,232,052.50
Louisiana	$ 1,189,414.20	$ 23,660,390.00	$ 2,354,346.15	$ 46,833,767.50
Maine	$ 231,946.65	$ 4,613,992.50	$ 351,395.85	$ 6,990,132.50
Maryland	$ 434,393.70	$ 8,641,165.00	$ 836,567.55	$ 16,641,397.50
Massachusetts	$ 708,897.15	$ 14,101,717.50	$ 1,306,808.10	$ 25,995,645.00
Michigan	$ 1,832,662.65	$ 36,456,192.50	$ 3,301,537.20	$ 65,675,740.00
Minnesota	$ 556,623.60	$ 11,072,620.00	$ 1,194,250.20	$ 23,756,590.00
Mississippi	$ 704,000.70	$ 14,004,315.00	$ 1,521,707.85	$ 30,270,532.50
Missouri	$ 901,067.70	$ 17,924,465.00	$ 1,980,039.75	$ 39,387,887.50
Montana	$ 191,928.75	$ 3,817,937.50	$ 306,602.40	$ 6,099,080.00
Nebraska	$ 226,566.60	$ 4,506,970.00	$ 565,932.90	$ 11,257,805.00
Nevada	$ 221,065.65	$ 4,397,542.50	$ 583,523.85	$ 11,607,732.50
New Hampshire	$ 65,165.10	$ 1,296,295.00	$ 164,786.70	$ 3,278,015.00
New Jersey	$ 700,252.80	$ 13,929,760.00	$ 1,633,177.65	$ 32,487,942.50
New Mexico	$ 445,032.90	$ 8,852,805.00	$ 1,013,867.40	$ 20,168,330.00
New York	$ 3,071,948.10	$ 61,108,645.00	$ 6,318,415.35	$ 125,688,907.50
North Carolina	$ 1,906,048.95	$ 37,916,027.50	$ 3,565,461.90	$ 70,925,855.00
North Dakota	$ 33,066.15	$ 657,767.50	$ 110,321.25	$ 2,194,562.50
Ohio	$ 2,010,264.75	$ 39,989,137.50	$ 4,194,081.45	$ 83,430,652.50
Oklahoma	$ 761,609.55	$ 15,150,297.50	$ 1,559,307.75	$ 31,018,487.50
Oregon	$ 410,878.65	$ 8,173,392.50	$ 1,099,283.25	$ 21,867,462.50
Pennsylvania	$ 1,571,095.50	$ 31,252,975.00	$ 3,164,799.30	$ 62,955,685.00
Rhode Island	$ 79,129.05	$ 1,574,072.50	$ 242,223.15	$ 4,818,417.50
South Carolina	$ 750,244.95	$ 14,924,227.50	$ 1,592,373.90	$ 31,676,255.00
South Dakota	$ 99,742.50	$ 1,984,125.00	$ 243,673.95	$ 4,847,277.50
Tennessee	$ 1,157,133.90	$ 23,018,255.00	$ 2,273,645.40	$ 45,228,430.00
Texas	$ 6,001,838.70	$ 119,391,415.00	$ 12,168,826.80	$ 242,068,060.00
Utah	$ 316,999.80	$ 6,305,910.00	$ 784,459.65	$ 15,604,842.50
Vermont	$ 86,685.30	$ 1,724,385.00	$ 136,496.10	$ 2,715,245.00
Virginia	$ 866,127.60	$ 17,229,420.00	$ 1,846,143.00	$ 36,724,350.00
Washington	$ 727,515.75	$ 14,472,087.50	$ 1,583,245.95	$ 31,494,677.50
West Virginia	$ 375,999.00	$ 7,479,550.00	$ 746,497.05	$ 14,849,672.50
Wisconsin	$ 706,902.30	$ 14,062,035.00	$ 1,327,723.80	$ 26,411,710.00
Wyoming	$ 100,407.45	$ 1,997,352.50	$ 119,146.95	$ 2,370,127.50

	Less Than 200% of Poverty 65% Participation			
	4 Year Olds Only		3 and 4 Year Olds	
	Low	High	Low	High
U.S.	$ 105,190,193.55	$ 2,092,493,097.50	$ 211,344,141.45	$ 4,204,157,652.50
Alabama	$ 1,787,446.05	$ 35,556,722.50	$ 3,315,984.75	$ 65,963,137.50
Alaska	$ 118,300.65	$ 2,353,292.50	$ 293,787.00	$ 5,844,150.00
Arizona	$ 2,711,605.65	$ 53,940,542.50	$ 5,362,217.25	$ 106,667,762.50
Arkansas	$ 1,351,117.95	$ 26,877,077.50	$ 2,725,388.25	$ 54,214,712.50
California	$ 14,249,092.65	$ 283,449,692.50	$ 28,253,302.35	$ 562,028,057.50
Colorado	$ 1,527,511.05	$ 30,385,972.50	$ 3,158,996.10	$ 62,840,245.00
Connecticut	$ 645,545.55	$ 12,841,497.50	$ 1,354,986.75	$ 26,954,037.50
Delaware	$ 189,994.35	$ 3,779,457.50	$ 418,858.05	$ 8,332,122.50
District of Columbia	$ 179,717.85	$ 3,575,032.50	$ 357,259.50	$ 7,106,775.00
Florida	$ 6,317,871.30	$ 125,678,085.00	$ 11,965,231.20	$ 238,018,040.00
Georgia	$ 3,960,623.55	$ 78,786,597.50	$ 7,837,402.95	$ 155,905,327.50
Hawaii	$ 406,647.15	$ 8,089,217.50	$ 646,391.85	$ 12,858,332.50
Idaho	$ 521,623.05	$ 10,376,372.50	$ 1,115,483.85	$ 22,189,732.50
Illinois	$ 4,074,753.15	$ 81,056,917.50	$ 8,174,169.90	$ 162,604,455.00
Indiana	$ 2,439,459.75	$ 48,526,887.50	$ 4,555,088.85	$ 90,611,982.50
Iowa	$ 947,916.45	$ 18,856,402.50	$ 1,847,835.60	$ 36,758,020.00
Kansas	$ 1,144,923.00	$ 22,775,350.00	$ 1,994,547.75	$ 39,676,487.50
Kentucky	$ 1,277,006.25	$ 25,402,812.50	$ 2,812,375.80	$ 55,945,110.00
Louisiana	$ 1,792,644.75	$ 35,660,137.50	$ 3,897,030.15	$ 77,521,567.50
Maine	$ 376,119.90	$ 7,481,955.00	$ 676,072.80	$ 13,448,760.00
Maryland	$ 1,117,539.15	$ 22,230,617.50	$ 2,316,383.55	$ 46,078,597.50
Massachusetts	$ 1,433,632.20	$ 28,518,490.00	$ 2,614,704.30	$ 52,012,935.00
Michigan	$ 3,449,156.10	$ 68,612,245.00	$ 6,511,069.50	$ 129,521,275.00
Minnesota	$ 1,252,161.30	$ 24,908,585.00	$ 2,747,815.20	$ 54,660,840.00
Mississippi	$ 1,245,330.45	$ 24,772,702.50	$ 2,675,940.15	$ 53,231,067.50
Missouri	$ 2,040,912.90	$ 40,598,805.00	$ 4,445,674.35	$ 88,435,457.50
Montana	$ 344,806.80	$ 6,859,060.00	$ 635,329.50	$ 12,638,275.00
Nebraska	$ 623,844.00	$ 12,409,800.00	$ 1,364,054.25	$ 27,134,412.50
Nevada	$ 855,246.60	$ 17,012,970.00	$ 1,800,201.00	$ 35,810,450.00
New Hampshire	$ 169,683.15	$ 3,375,417.50	$ 337,613.25	$ 6,715,962.50
New Jersey	$ 1,714,785.15	$ 34,111,317.50	$ 3,623,373.00	$ 72,077,850.00
New Mexico	$ 827,379.15	$ 16,458,617.50	$ 1,919,408.40	$ 38,181,780.00
New York	$ 6,185,485.80	$ 123,044,610.00	$ 12,130,501.50	$ 241,305,675.00
North Carolina	$ 3,689,263.50	$ 73,388,575.00	$ 7,317,472.50	$ 145,562,625.00
North Dakota	$ 146,107.65	$ 2,906,442.50	$ 294,996.00	$ 5,868,200.00
Ohio	$ 3,777,460.05	$ 75,143,022.50	$ 7,949,114.55	$ 158,127,547.50
Oklahoma	$ 1,476,189.00	$ 29,365,050.00	$ 2,940,167.10	$ 58,487,195.00
Oregon	$ 1,058,842.20	$ 21,062,990.00	$ 2,378,465.70	$ 47,313,565.00
Pennsylvania	$ 3,396,322.80	$ 67,561,260.00	$ 6,810,720.15	$ 135,482,067.50
Rhode Island	$ 203,293.35	$ 4,044,007.50	$ 528,272.55	$ 10,508,647.50
South Carolina	$ 1,484,591.55	$ 29,532,197.50	$ 3,156,517.65	$ 62,790,942.50
South Dakota	$ 313,312.35	$ 6,232,557.50	$ 592,289.10	$ 11,782,095.00
Tennessee	$ 2,414,252.10	$ 48,025,445.00	$ 4,526,435.55	$ 90,041,997.50
Texas	$ 12,331,920.90	$ 245,312,405.00	$ 25,217,986.95	$ 501,648,127.50
Utah	$ 1,195,036.05	$ 23,772,222.50	$ 2,531,706.45	$ 50,361,902.50
Vermont	$ 178,327.50	$ 3,547,375.00	$ 328,606.20	$ 6,536,790.00
Virginia	$ 1,999,262.85	$ 39,770,282.50	$ 4,314,860.55	$ 85,833,247.50
Washington	$ 1,816,764.30	$ 36,139,935.00	$ 3,782,900.55	$ 75,251,247.50
West Virginia	$ 652,799.55	$ 12,985,797.50	$ 1,369,313.40	$ 27,239,030.00
Wisconsin	$ 1,586,449.80	$ 31,558,410.00	$ 3,114,565.35	$ 61,956,407.50
Wyoming	$ 190,115.25	$ 3,781,862.50	$ 305,272.50	$ 6,072,625.00

	Universal 50% Participation			
	4 Year Olds Only		3 and 4 Year Olds	
	Low	High	Low	High
U.S.	$ 189,770,731.50	$ 3,775,009,175.00	$ 379,887,795.00	$ 7,556,907,750.00
Alabama	$ 3,001,947.00	$ 59,716,150.00	$ 5,576,094.00	$ 110,922,300.00
Alaska	$ 344,332.50	$ 6,849,625.00	$ 788,407.50	$ 15,683,375.00
Arizona	$ 4,382,253.00	$ 87,173,850.00	$ 8,685,223.50	$ 172,770,575.00
Arkansas	$ 1,866,091.50	$ 37,121,175.00	$ 3,704,655.00	$ 73,694,750.00
California	$ 25,231,132.50	$ 501,909,625.00	$ 49,891,663.50	$ 992,468,575.00
Colorado	$ 3,067,419.00	$ 61,018,550.00	$ 6,238,393.50	$ 124,097,075.00
Connecticut	$ 1,909,801.50	$ 37,990,675.00	$ 3,900,373.50	$ 77,588,075.00
Delaware	$ 493,132.50	$ 9,809,625.00	$ 1,102,329.00	$ 21,928,050.00
District of Columbia	$ 286,626.00	$ 5,701,700.00	$ 592,689.00	$ 11,790,050.00
Florida	$ 10,541,503.50	$ 209,696,575.00	$ 20,613,543.00	$ 410,054,350.00
Georgia	$ 6,432,670.50	$ 127,961,725.00	$ 12,872,083.50	$ 256,057,575.00
Hawaii	$ 837,604.50	$ 16,662,025.00	$ 1,690,461.00	$ 33,627,450.00
Idaho	$ 992,077.50	$ 19,734,875.00	$ 2,052,324.00	$ 40,825,800.00
Illinois	$ 8,444,167.50	$ 167,975,375.00	$ 16,776,177.00	$ 333,719,650.00
Indiana	$ 4,197,787.50	$ 83,504,375.00	$ 8,172,607.50	$ 162,573,375.00
Iowa	$ 1,799,038.50	$ 35,787,325.00	$ 3,603,517.50	$ 71,682,875.00
Kansas	$ 1,839,261.00	$ 36,587,450.00	$ 3,593,473.50	$ 71,483,075.00
Kentucky	$ 2,383,590.00	$ 47,415,500.00	$ 4,834,558.50	$ 96,171,325.00
Louisiana	$ 2,703,742.50	$ 53,784,125.00	$ 5,695,273.50	$ 113,293,075.00
Maine	$ 665,229.00	$ 13,233,050.00	$ 1,324,087.50	$ 26,339,375.00
Maryland	$ 3,413,890.50	$ 67,910,725.00	$ 6,835,360.50	$ 135,972,225.00
Massachusetts	$ 3,649,878.00	$ 72,605,100.00	$ 6,995,181.00	$ 139,151,450.00
Michigan	$ 6,230,953.50	$ 123,949,075.00	$ 12,462,465.00	$ 247,909,250.00
Minnesota	$ 3,056,352.00	$ 60,798,400.00	$ 6,408,165.00	$ 127,474,250.00
Mississippi	$ 1,672,326.00	$ 33,266,700.00	$ 3,639,183.00	$ 72,392,350.00
Missouri	$ 3,352,324.50	$ 66,686,025.00	$ 7,215,451.50	$ 143,533,175.00
Montana	$ 583,993.50	$ 11,617,075.00	$ 1,032,672.00	$ 20,542,400.00
Nebraska	$ 1,142,179.50	$ 22,720,775.00	$ 2,317,234.50	$ 46,095,525.00
Nevada	$ 1,731,520.50	$ 34,444,225.00	$ 3,412,077.00	$ 67,874,650.00
New Hampshire	$ 571,066.50	$ 11,359,925.00	$ 1,256,848.50	$ 25,001,825.00
New Jersey	$ 5,205,907.50	$ 103,558,375.00	$ 10,623,483.00	$ 211,327,350.00
New Mexico	$ 1,298,745.00	$ 25,835,250.00	$ 2,754,846.00	$ 54,800,700.00
New York	$ 11,401,707.00	$ 226,808,150.00	$ 23,003,503.50	$ 457,596,575.00
North Carolina	$ 5,768,929.50	$ 114,758,275.00	$ 11,319,913.50	$ 225,181,075.00
North Dakota	$ 306,900.00	$ 6,105,000.00	$ 610,126.50	$ 12,136,925.00
Ohio	$ 6,836,662.50	$ 135,998,125.00	$ 13,801,386.00	$ 274,543,700.00
Oklahoma	$ 2,354,434.50	$ 46,835,525.00	$ 4,422,289.50	$ 87,970,275.00
Oregon	$ 1,893,759.00	$ 37,671,550.00	$ 4,194,114.00	$ 83,431,300.00
Pennsylvania	$ 6,565,335.00	$ 130,600,750.00	$ 13,426,410.00	$ 267,084,500.00
Rhode Island	$ 490,435.50	$ 9,755,975.00	$ 1,150,363.50	$ 22,883,575.00
South Carolina	$ 2,652,313.50	$ 52,761,075.00	$ 5,217,765.00	$ 103,794,250.00
South Dakota	$ 573,624.00	$ 11,410,800.00	$ 1,128,369.00	$ 22,446,050.00
Tennessee	$ 3,817,836.00	$ 75,946,200.00	$ 7,202,571.00	$ 143,276,950.00
Texas	$ 18,294,448.50	$ 363,921,825.00	$ 36,556,347.00	$ 727,196,150.00
Utah	$ 2,185,639.50	$ 43,477,775.00	$ 4,435,449.00	$ 88,232,050.00
Vermont	$ 344,704.50	$ 6,857,025.00	$ 686,898.00	$ 13,664,100.00
Virginia	$ 4,764,622.50	$ 94,780,125.00	$ 9,600,762.00	$ 190,982,900.00
Washington	$ 3,591,241.50	$ 71,438,675.00	$ 7,423,818.00	$ 147,678,100.00
West Virginia	$ 987,148.50	$ 19,636,825.00	$ 1,931,191.50	$ 38,416,175.00
Wisconsin	$ 3,275,227.50	$ 65,152,375.00	$ 6,512,185.50	$ 129,543,475.00
Wyoming	$ 337,218.00	$ 6,708,100.00	$ 603,430.50	$ 12,003,725.00

Less than 100% of Poverty
50% Participation

	4 Year Olds Only		3 and 4 Year Olds	
	Low	High	Low	High
U.S.	$ 37,908,009.00	$ 754,084,050.00	$ 76,114,408.50	$ 1,514,103,825.00
Alabama	$ 684,480.00	$ 13,616,000.00	$ 1,258,615.50	$ 25,036,975.00
Alaska	$ 51,289.50	$ 1,020,275.00	$ 102,718.50	$ 2,043,325.00
Arizona	$ 914,376.00	$ 18,189,200.00	$ 1,845,771.00	$ 36,716,950.00
Arkansas	$ 468,906.00	$ 9,327,700.00	$ 957,667.50	$ 19,050,375.00
California	$ 4,791,871.50	$ 95,322,175.00	$ 9,547,333.50	$ 189,920,075.00
Colorado	$ 527,775.00	$ 10,498,750.00	$ 1,046,901.00	$ 20,825,450.00
Connecticut	$ 226,920.00	$ 4,514,000.00	$ 430,822.50	$ 8,570,125.00
Delaware	$ 71,424.00	$ 1,420,800.00	$ 158,379.00	$ 3,150,550.00
District of Columbia	$ 92,163.00	$ 1,833,350.00	$ 192,463.50	$ 3,828,575.00
Florida	$ 2,129,653.50	$ 42,364,075.00	$ 3,832,437.00	$ 76,236,650.00
Georgia	$ 1,460,890.50	$ 29,060,725.00	$ 2,841,801.00	$ 56,530,450.00
Hawaii	$ 109,275.00	$ 2,173,750.00	$ 180,559.50	$ 3,591,775.00
Idaho	$ 182,745.00	$ 3,635,250.00	$ 372,790.50	$ 7,415,725.00
Illinois	$ 1,481,443.50	$ 29,469,575.00	$ 3,030,777.00	$ 60,289,650.00
Indiana	$ 822,585.00	$ 16,363,250.00	$ 1,564,167.00	$ 31,115,150.00
Iowa	$ 324,802.50	$ 6,461,125.00	$ 605,197.50	$ 12,038,875.00
Kansas	$ 416,593.50	$ 8,287,075.00	$ 676,435.50	$ 13,455,975.00
Kentucky	$ 502,618.50	$ 9,998,325.00	$ 1,169,056.50	$ 23,255,425.00
Louisiana	$ 914,934.00	$ 18,200,300.00	$ 1,811,035.50	$ 36,025,975.00
Maine	$ 178,420.50	$ 3,549,225.00	$ 270,304.50	$ 5,377,025.00
Maryland	$ 334,149.00	$ 6,647,050.00	$ 643,513.50	$ 12,801,075.00
Massachusetts	$ 545,305.50	$ 10,847,475.00	$ 1,005,237.00	$ 19,996,650.00
Michigan	$ 1,409,740.50	$ 28,043,225.00	$ 2,539,644.00	$ 50,519,800.00
Minnesota	$ 428,172.00	$ 8,517,400.00	$ 918,654.00	$ 18,274,300.00
Mississippi	$ 541,539.00	$ 10,772,550.00	$ 1,170,544.50	$ 23,285,025.00
Missouri	$ 693,129.00	$ 13,788,050.00	$ 1,523,107.50	$ 30,298,375.00
Montana	$ 147,637.50	$ 2,936,875.00	$ 235,848.00	$ 4,691,600.00
Nebraska	$ 174,282.00	$ 3,466,900.00	$ 435,333.00	$ 8,659,850.00
Nevada	$ 170,050.50	$ 3,382,725.00	$ 448,864.50	$ 8,929,025.00
New Hampshire	$ 50,127.00	$ 997,150.00	$ 126,759.00	$ 2,521,550.00
New Jersey	$ 538,656.00	$ 10,715,200.00	$ 1,256,290.50	$ 24,990,725.00
New Mexico	$ 342,333.00	$ 6,809,850.00	$ 779,898.00	$ 15,514,100.00
New York	$ 2,363,037.00	$ 47,006,650.00	$ 4,860,319.50	$ 96,683,775.00
North Carolina	$ 1,466,191.50	$ 29,166,175.00	$ 2,742,663.00	$ 54,558,350.00
North Dakota	$ 25,435.50	$ 505,975.00	$ 84,862.50	$ 1,688,125.00
Ohio	$ 1,546,357.50	$ 30,760,875.00	$ 3,226,216.50	$ 64,177,425.00
Oklahoma	$ 585,853.50	$ 11,654,075.00	$ 1,199,467.50	$ 23,860,375.00
Oregon	$ 316,060.50	$ 6,287,225.00	$ 845,602.50	$ 16,821,125.00
Pennsylvania	$ 1,208,535.00	$ 24,040,750.00	$ 2,434,461.00	$ 48,427,450.00
Rhode Island	$ 60,868.50	$ 1,210,825.00	$ 186,325.50	$ 3,706,475.00
South Carolina	$ 577,111.50	$ 11,480,175.00	$ 1,224,903.00	$ 24,366,350.00
South Dakota	$ 76,725.00	$ 1,526,250.00	$ 187,441.50	$ 3,728,675.00
Tennessee	$ 890,103.00	$ 17,706,350.00	$ 1,748,958.00	$ 34,791,100.00
Texas	$ 4,616,799.00	$ 91,839,550.00	$ 9,360,636.00	$ 186,206,200.00
Utah	$ 243,846.00	$ 4,850,700.00	$ 603,430.50	$ 12,003,725.00
Vermont	$ 66,681.00	$ 1,326,450.00	$ 104,997.00	$ 2,088,650.00
Virginia	$ 666,252.00	$ 13,253,400.00	$ 1,420,110.00	$ 28,249,500.00
Washington	$ 559,627.50	$ 11,132,375.00	$ 1,217,881.50	$ 24,226,675.00
West Virginia	$ 289,230.00	$ 5,753,500.00	$ 574,228.50	$ 11,422,825.00
Wisconsin	$ 543,771.00	$ 10,816,950.00	$ 1,021,326.00	$ 20,316,700.00
Wyoming	$ 77,236.50	$ 1,536,425.00	$ 91,651.50	$ 1,823,175.00

	Less Than 200% of Poverty 50% Participation			
	4 Year Olds Only		3 and 4 Year Olds	
	Low	High	Low	High
U.S.	$ 80,915,533.50	$ 1,609,610,075.00	$ 162,572,416.50	$ 3,233,967,425.00
Alabama	$ 1,374,958.50	$ 27,351,325.00	$ 2,550,757.50	$ 50,740,875.00
Alaska	$ 91,000.50	$ 1,810,225.00	$ 225,990.00	$ 4,495,500.00
Arizona	$ 2,085,850.50	$ 41,492,725.00	$ 4,124,782.50	$ 82,052,125.00
Arkansas	$ 1,039,321.50	$ 20,674,675.00	$ 2,096,452.50	$ 41,703,625.00
California	$ 10,960,840.50	$ 218,038,225.00	$ 21,733,309.50	$ 432,329,275.00
Colorado	$ 1,175,008.50	$ 23,373,825.00	$ 2,429,997.00	$ 48,338,650.00
Connecticut	$ 496,573.50	$ 9,878,075.00	$ 1,042,297.50	$ 20,733,875.00
Delaware	$ 146,149.50	$ 2,907,275.00	$ 322,198.50	$ 6,409,325.00
District of Columbia	$ 138,244.50	$ 2,750,025.00	$ 274,815.00	$ 5,466,750.00
Florida	$ 4,859,901.00	$ 96,675,450.00	$ 9,204,024.00	$ 183,090,800.00
Georgia	$ 3,046,633.50	$ 60,605,075.00	$ 6,028,771.50	$ 119,927,175.00
Hawaii	$ 312,805.50	$ 6,222,475.00	$ 497,224.50	$ 9,891,025.00
Idaho	$ 401,248.50	$ 7,981,825.00	$ 858,064.50	$ 17,069,025.00
Illinois	$ 3,134,425.50	$ 62,351,475.00	$ 6,287,823.00	$ 125,080,350.00
Indiana	$ 1,876,507.50	$ 37,328,375.00	$ 3,503,914.50	$ 69,701,525.00
Iowa	$ 729,166.50	$ 14,504,925.00	$ 1,421,412.00	$ 28,275,400.00
Kansas	$ 880,710.00	$ 17,519,500.00	$ 1,534,267.50	$ 30,520,375.00
Kentucky	$ 982,312.50	$ 19,540,625.00	$ 2,163,366.00	$ 43,034,700.00
Louisiana	$ 1,378,957.50	$ 27,430,875.00	$ 2,997,715.50	$ 59,631,975.00
Maine	$ 289,323.00	$ 5,755,350.00	$ 520,056.00	$ 10,345,200.00
Maryland	$ 859,645.50	$ 17,100,475.00	$ 1,781,833.50	$ 35,445,075.00
Massachusetts	$ 1,102,794.00	$ 21,937,300.00	$ 2,011,311.00	$ 40,009,950.00
Michigan	$ 2,653,197.00	$ 52,778,650.00	$ 5,008,515.00	$ 99,631,750.00
Minnesota	$ 963,201.00	$ 19,160,450.00	$ 2,113,704.00	$ 42,046,800.00
Mississippi	$ 957,946.50	$ 19,055,925.00	$ 2,058,415.50	$ 40,946,975.00
Missouri	$ 1,569,933.00	$ 31,229,850.00	$ 3,419,749.50	$ 68,027,275.00
Montana	$ 265,236.00	$ 5,276,200.00	$ 488,715.00	$ 9,721,750.00
Nebraska	$ 479,880.00	$ 9,546,000.00	$ 1,049,272.50	$ 20,872,625.00
Nevada	$ 657,882.00	$ 13,086,900.00	$ 1,384,770.00	$ 27,546,500.00
New Hampshire	$ 130,525.50	$ 2,596,475.00	$ 259,702.50	$ 5,166,125.00
New Jersey	$ 1,319,065.50	$ 26,239,475.00	$ 2,787,210.00	$ 55,444,500.00
New Mexico	$ 636,445.50	$ 12,660,475.00	$ 1,476,468.00	$ 29,370,600.00
New York	$ 4,758,066.00	$ 94,649,700.00	$ 9,331,155.00	$ 185,619,750.00
North Carolina	$ 2,837,895.00	$ 56,452,750.00	$ 5,628,825.00	$ 111,971,250.00
North Dakota	$ 112,390.50	$ 2,235,725.00	$ 226,920.00	$ 4,514,000.00
Ohio	$ 2,905,738.50	$ 57,802,325.00	$ 6,114,703.50	$ 121,636,575.00
Oklahoma	$ 1,135,530.00	$ 22,588,500.00	$ 2,261,667.00	$ 44,990,150.00
Oregon	$ 814,494.00	$ 16,202,300.00	$ 1,829,589.00	$ 36,395,050.00
Pennsylvania	$ 2,612,556.00	$ 51,970,200.00	$ 5,239,015.50	$ 104,216,975.00
Rhode Island	$ 156,379.50	$ 3,110,775.00	$ 406,363.50	$ 8,083,575.00
South Carolina	$ 1,141,993.50	$ 22,717,075.00	$ 2,428,090.50	$ 48,300,725.00
South Dakota	$ 241,009.50	$ 4,794,275.00	$ 455,607.00	$ 9,063,150.00
Tennessee	$ 1,857,117.00	$ 36,942,650.00	$ 3,481,873.50	$ 69,263,075.00
Texas	$ 9,486,093.00	$ 188,701,850.00	$ 19,398,451.50	$ 385,883,175.00
Utah	$ 919,258.50	$ 18,286,325.00	$ 1,947,466.50	$ 38,739,925.00
Vermont	$ 137,175.00	$ 2,728,750.00	$ 252,774.00	$ 5,028,300.00
Virginia	$ 1,537,894.50	$ 30,592,525.00	$ 3,319,123.50	$ 66,025,575.00
Washington	$ 1,397,511.00	$ 27,799,950.00	$ 2,909,923.50	$ 57,885,575.00
West Virginia	$ 502,153.50	$ 9,989,075.00	$ 1,053,318.00	$ 20,953,100.00
Wisconsin	$ 1,220,346.00	$ 24,275,700.00	$ 2,395,819.50	$ 47,658,775.00
Wyoming	$ 146,242.50	$ 2,909,125.00	$ 234,825.00	$ 4,671,250.00