

WhatWorksSC

expert series

An expert series building on the findings of the largest ever study of public education in South Carolina

Improving Learning in the Early Years

Early childhood education ranks as one of the most critical components of public education in our country. Study after study has proven that the majority of brain development happens before age five and long-term educational outcomes improve exponentially when students are offered challenging learning opportunities in the early years.

This paper seeks to further explore this issue. In order to frame the issue, the results of the recent Riley Institute study on public education will first be provided and discussed, a study that convincingly points to early childhood education as key to improving public education in South Carolina. Next, Dr. John Hester of Francis Marion University's Richardson Center for the Child will further introduce the issue and provide insight into why stakeholders from all over South Carolina have overwhelmingly identified a focus on the early years and early grades as vital for the state. Following, a sample of statewide initiatives currently in place will be highlighted, using data collected on each program to measure promise and effectiveness.

Finally, Dr. Dolores Stegelin of Clemson University will evaluate how the state is doing as a whole and will look at gaps between what research tells us needs to be done in South Carolina and what is actually taking place. Additionally, national models that could be relevant for South Carolina will be discussed.





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I. Background Information: Riley Institute Study

How do we know that South Carolina’s stakeholders believe that improving learning in the early years and early grades should be a priority? Results from the large-scale study conducted by the Riley Institute at Furman clearly show that various stakeholders from all over the state overwhelmingly support a focus on this issue.

Between May 2005 and November 2006, the Riley Institute project team spent more than 3,000 hours meeting with nearly 800 South Carolinians to gather their opinions on public education. The team met with businessmen and women, teachers of all levels, superintendents, parents, school board members, principals and students from every county and school district in the state - large and small, rural and urban, wealthy and poor.

Throughout the research, stakeholder groups across South Carolina voiced common support for improving education in the early childhood years and the early grades. Evidence for this is found in both the quantitative survey data and the qualitative discussion data. A majority of participating educators, school board members, and business leaders – in excess of 80 percent – endorsed the importance of the availability of public full-day kindergarten programs and early childhood education programs for all three- and four-year-olds. Similar numbers of participating stakeholders in all groups recommended family literacy programs and strategies to help parents become more involved in their children’s education, and only slightly lower numbers recommended smaller class sizes in the early grades. Clearly, the fact that 91 percent of surveyed parents endorsed the development of strategies to help them get involved in their children’s education speaks volumes about the urgency of the need.

The urgency of focusing on the early years and grades also was evident during discussion groups. According to one business person, “We’ve got one chance, and that’s from 0-6.” Another business person reported the following during a meeting: “South Carolina needs to commit appropriate resources to early childhood education in order that every student is given equal opportunity to begin becoming all that he/she can be.”

The need to focus on parent education and family literacy was also clear. One superintendent said families must understand that “education is as important as air to the quality of life.” Another superintendent emphasized the need to educate parents, saying that “educated parents equal nurtured children.” Principals voiced similar opinions in focus groups, endorsing home visitation programs for at-risk children as early as age three. “We need to invest more in this area (of parental education) as they are our children’s first teachers and set the tone for learning,” said one principal.

These data become even more significant in light of the fact that the people surveyed reside in the largest, smallest, wealthiest and poorest of school districts: the percentage of students on free or reduced lunch ranged from 13.5 percent to 92 percent. Clearly, concerns about the quality of the early childhood years and the early grades, from both the family and the school perspective, are widespread among educators, parents, and business leaders regardless of location and demographics.



Table 1 below shows the top-rated strategies that emerged in this area. More information on these strategies can be found on the Center's web site: <http://riley.furman.edu/education>

Table 1: Top-Rated Strategies for Early Childhood Years/Early Grades

Family literacy programs *	Teachers specialized in reading for grades 1-3
More strategies to help parents get involved in their child's schooling	More tutoring opportunities for students who are struggling
Small class size *	School lunches that are healthy and balanced
The availability of public early childhood education programs for all three- and four-year-olds	A system to ensure that children do not move beyond third grade without reading and writing fluency
The availability of full-day kindergarten programs	Intensive reading enrichment programs for students with reading difficulties
	Full-time nurses in all elementary schools
	Physical fitness programs for all elementary students

**Strategy applies to both Early Childhood Years and Early Grades*

II. Why Focus on The Early Years?

By John Hester, Francis Marion University

Few would argue that it is critical for South Carolina's future to simultaneously increase per capita income and the educational level of its citizenry. Many would agree that increasing income and its accompanying quality of life without improving the educational level of workers is not possible in a global, highly technological economy. But improving educational levels of South Carolinians without an accompanying increase in better paying jobs will result in South Carolina's best and brightest leaving the state for better paying jobs.

Complicating an already daunting task is the fact that South Carolina may have become largely balkanized into two South Carolinas—one primarily affluent, metropolitan and suburban, the other mostly rural, minority and poor. The per capita median income for the five wealthiest counties in South Carolina in 1999 was \$50,000 to \$52,000 and for the five lowest \$27,000 to \$32,000. The wealthiest are suburban (Beaufort, Lexington, Dorchester, Greenville and York) and the five lowest are rural and along the I-95 corridor (Allendale, Bamberg, Williamsburg, Dillon and Marlboro). The percentage of children in single parent homes is 24 - 27 % in the wealthiest and 40-56 % in the poorest. Mothers with less than a high school education varied from 17 - 25% among the wealthiest and 24 - 37% among the poorest.

South Carolina First Steps program, in collecting 1999 census data, found that approximately 20% of South Carolina's children younger than five years old live in poverty. Eight counties had rates above 30% and two were above 40%. Across the state, the percentage of children in poverty ranged from approximately 13% in York County to 47% in Allendale. Nine of the ten counties with rates higher than 30% are in the eastern portion of the state along the

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I-95 corridor.

The Pee Dee Region of South Carolina located along the I-95 corridor offers a snapshot of the difficulties in rural, somewhat isolated South Carolina counties. All nine counties of the Pee Dee meet the definition of “persistent poverty”—that is, being in the top two quartiles of poverty in 1980, 1990 and 2000 US census data.

Such persistent, intergenerational poverty especially impacts children and families. Considerable numbers of Pee Dee children five years of age or younger live in poverty (county statistics vary from 24 - 41%). The significant health care problems among South Carolina adults and children are well documented. Statistics find South Carolina ranked low among states on several health indices including low birth weight – 48th, infant mortality – 47th, and child mortality – 42nd. Four of the five South Carolina counties with the worst ranking in low birth weight are located in the Pee Dee Region. Among the nine Pee Dee counties the number of children born to single mothers varies by county from 34 - 45%, children born to a mother with less than a high school education 21 - 36%, and students dropping out of school by the 12th grade 33 - 47%. The dropout rate among African American males in the region is particularly high (41 - 55%).

Certainly poverty and distress know no county boundaries. Poverty can be found in any South Carolina county, but, as these data indicate, there are regions of our state in dire difficulty. In these poor counties there is high unemployment, higher dropout rates (although dropout rates are alarmingly high even in the more prosperous counties) and economies that are difficult to sustain. It will take statewide initiatives to begin to address these issues.

We know that poverty, wherever it is found in South Carolina, is associated with several childhood risk factors such as low birth weight, low maternal education, growing up in a single-parent home and higher dropout rates. Some children of poverty are certainly successful and their resilience bears research. However, data indicate that the risk factors associated with poverty are often found among children tested as “not ready” by kindergarten or “below basic” on South Carolina testing. Through no fault of their own, many young children (birth to four years) begin life with limited chances for academic success. These children are at risk due to the chronic impact of poverty, which often negatively impacts prenatal care, family literacy, child rearing and physical, social and cognitive development. Their families are frequently only marginally connected to the kinds of support families of young children need to promote readiness for school. As a result, children in poverty enter kindergarten programs behind, and few will overcome this early deficit. A long-term study conducted in South Carolina found that two-thirds of children scoring below basic on testing in the early grades were still below basic five years later. Clearly, a child who arrives at the school door for kindergarten already behind will have difficulty ever catching up.

So, if quality early childhood education is a critical need in South Carolina to combat the deleterious impact of poverty, is there evidence that early childhood education programs and initiatives can make a difference? If so, what are the elements of a high quality program or initiative, and with which populations can it be most effective?

There are many longitudinal studies addressing the impact of quality programs and initiatives, but let us turn to a well-controlled study from our neighboring state North Carolina. The Abecedarian Project, which lasted for thirty years, was conducted at the Frank Porter Graham Child Development Institute in Chapel Hill, North Carolina. The study randomly assigned poor infants to either an early intervention program or a control group. The children were followed into adulthood, and the positive impact of the program was enormous. Children in the intervention program had higher math and reading scores as adults and were more likely to attend college, more likely to have skilled jobs, and less likely to have their first child before age 18.



Estimates are that for every dollar spent on the project, two and a half dollars are saved as a result of the participants' higher incomes, less need for government services, and lower health care costs.

Other studies such as the Perry Preschool Program and Chicago Child-Parent Center Program have found varying positive benefits (lower crime rates, lower dropout rates, etc). Care must be taken not to present early childhood education as the panacea for all ills: however, it becomes clear that there are positive and long-term benefits for poor children from quality early childhood education intervention. Tax dollars spent on early childhood education diminish the need for later, more expensive government programs and enhance the chances for increased wages and resultant paid taxes.

An important question is as follows: Have identifiable factors that constitute quality been found? The answer is yes. Those factors in studies typically include lower child to adult ratios, allowing teachers to be more responsive to children; a planned curriculum; well-trained teachers; an active parent component; and a language-rich learning environment. Also, many of these long-term successful programs are year round, provide comprehensive health care and educational services, and begin during infancy. Such programming is not inexpensive, but cost-benefit estimates indicate a two to three dollar return for each one dollar spent.

So, if early childhood education has been shown to be verifiably effective, and we know what constitutes best practices, what are the obstacles to providing such programs at an early age to all South Carolina children? How do we bring about real and sustainable change in South Carolina to improve learning in the early years? Certainly, change must come with a realistic understanding of economic and governmental factors. All too often regions, and indeed, counties in South Carolina have fought each other for well-paying jobs. This detrimental economic strategy is one of counties sending parties of business and political leaders in search of that one large corporation that will bring a significant number of jobs to an employment-starved community.

What results is an economic climate where each county has its own development board and industrial park in competition with neighboring counties. There are winners and losers, and often the neediest counties are the losers. Twenty-first century employers do not want to locate in counties with poorly educated workers, and as a result, education suffers in those counties. There is a cycle of frustration and decline. It is an old story. In the last 50 years there have been significant governmental changes that impact the issue of program funding. For years, legislative delegations, in particular state senators, ran South Carolina's county and municipal governments. It was an era of one state senator per county. This resulted in a state peppered with county fiefdoms, and a long tradition of division between counties.

With the enactment of one-person-one-vote standards and the advent of home rule in 1976, much changed. Many smaller rural counties no longer qualified for their own state senator, while some metro counties qualified for several. Constitutional referendums of the 1970s advanced the development of county-based government. Control of local affairs was now dispersed closer to the people and decentralized to multiple city and county governing bodies. For citizens, this meant more local autonomy over important issues related to water, land, sewer, and schools, but it also meant the demise of rural, state senator "barons" who for years had exerted disproportionate influence in Columbia for the benefit of sparsely populated counties.

These counties could no longer count on the powerful influence of their state legislators. Much of the power in the legislature shifted to the more populous counties of Greenville, Richland, and Charleston. In some cases, rural county citizens found that their state senator no longer even lived in their county. City and county governments with defined governing authority

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“Reform is now required that acknowledges historical divisions of government, economy and cultural tradition and develops an overarching economic strategy and education renewal plan. This will require local leadership, but also is dependent on state-wide initiatives. One of the logical places to begin is in the area of early childhood education and early intervention.”

began to flourish, controlling their own budgets and providing needed services. Many of these changes may have been healthy, but, in terms of state funding, they have created winners and losers—and again, the losers are often rural low-income counties.

Reform is now required that acknowledges historical divisions of government, economy and cultural tradition and develops an overarching economic strategy and education renewal plan. This will require local leadership, but also is dependent on state-wide initiatives. One of the logical places to begin is in the area of early childhood education and early intervention. Quite frankly, we know what constitutes effective early interventions; we know these interventions have positive and long-term effects on the most impoverished of children. It is a question of whether we have the will as a state to overcome economic and governmental competition and make early childhood education a priority.

III. Strategies in South Carolina: What Is South Carolina Doing to Address Early Childhood Education?

Before analyzing what should be done to address the need for improved early childhood education, it is important to look at what is currently happening around South Carolina pertaining to this issue. Initiatives highlighted below have been identified as promising based on information gathered from meetings throughout the state with education leaders and groups; phone calls, electronic mail and other correspondence with a variety of education and community leaders throughout the state; and from a survey sent to superintendents, principals, and education leaders statewide.

The initiatives highlighted below are supported by data that measure their effectiveness or have shown promise in terms of program development in accordance with recommended strategies that are grounded in research.

A larger list of initiatives can be found on the Center’s web site: <http://riley.furman.edu/education>.

Strategy #1

THE PARENT-CHILD HOME PROGRAM

Goal: The Parent-Child Home Program strives to prepare at-risk students for their first school experience through a series of home visits. Through these home visits, the goals are to increase a student’s language and literacy skills, enhance social and emotional development, and strengthen the parent-child relationship.

Short Summary: In 1994, South Carolina’s first Parent-Child Home program opened in Florence School District 3. Since then, the program has spread to many different school districts across the state. The Parent-Child Home Program provides intensive home visiting to parents of children aged 16 months to four years old, who are identified as at-risk and who receive free and reduced meals. Home visitors visit assigned homes a minimum of 46 times in a year. (Twice a week over 23 weeks.) The first visit of each week the home visitor brings a book or educational toy as a gift to the family. Consequently, over the course of two years, the families will acquire a library of children’s books and a large collection of stimulating toys. The home visitors model the behaviors for parents that enhance children’s development instead of directly teaching the parents the behaviors. Home visitors also help



parents realize their role as their children's first and most important teacher. Parents are never given homework or assignments to complete but are encouraged to continue quality play and reading between visits with the books and toys they receive each week.

Demographics:

Target Groups Served: Parents of free and reduced lunch eligible students between the ages of 16 months and four years old. Emphasis is on years two and three.

Target setting: Urban, rural, inner city

School/Districts Served: 22 Parent-Child Home Program replications are currently operating in South Carolina (Camden, Charleston County School District, Clarendon School District 3, Fort Mill School District, Georgetown, Columbia, Dillon School District 1-3, Dorchester School Districts 2 and 4, Florence School Districts 1, 2, 4 and 5, Horry County Schools, Lancaster, Lexington School District 1, Marion School District 2, Williamsburg County Schools)

Research and Evaluation: In 2002, a four-year study was done on children who participated in the Parent-Child Home Program. These students were given the Cognitive Skills Assessment Battery (CSAB), a test given to all first graders. 84.8% of Parent-Child Home Program children passed the assessment versus 74.4% of free and reduced meal eligible students statewide. 84% of at-risk identified African American children in the Parent-Child Home Program passed versus 75.6% of their respective peers. It was later noted that seven of the 84 children in the study were diagnosed with severe developmental delays. These children are now receiving special education services and are atypical of Parent-Child Home Program participants. All of these children failed the test. Without their scores, the pass rates for the program are 93.1% of Parent-Child Home Program receiving free or reduced meals and 92.7% of Parent-Child Home Program African American children. These scores exceed the state passage rates for each group by 18% each.

Program Resources

Annual Cost: Varies by site due to the number of homes and coordinators – must have one coordinator for every 60 families

Funding Sources: Individual replication sites receive funding from a wide variety of sources. These sources include federal Title I funds for disadvantaged students, federal Even Start, Early Head Start, state education funding, state public welfare funding, funding from local school districts, corporations, private social service organizations, community foundations, and individual donors

Staffing Needs: Each site has a site coordinator who recruits and trains home visitors.

Infrastructure/Equipment Needs: Books and toys to be provided to the families that the home visitors visit

Contact Information: Diana Bailey; Florence School District 1; DBailey@fsd1.org;
<http://www.parent-child.org>

Strategy #2

CLEMSON-BARNWELL FIRST STEPS PROJECT

Goal: The Clemson-Barnwell First Steps Partnership is a collaborative project that targets preschool teachers and classrooms in Barnwell County. The overarching goal of the project



is to improve the learning environments in the area's preschools and to test a model that can be utilized to improve early learning in rural settings.

Short Summary: The project is collaboration between Clemson University and Barnwell County's First Steps. The project began in 2006 and includes five components: 1) Certified Training 2) Directors Network Meeting 3) Technical Assistance and Site Visits 4) Professional Development 5) Reward Program for Centers and Directors School Level Focus: Professional Development

Demographics:

Target Groups Served: Educators and children in private childcare, Head Start and public pre-school programs

Target setting: Rural

School/Districts Served: Barnwell County (16 preschools)

School-level focus: Preschool

Research and Evaluation: Extensive evaluation has taken place and convincing results have been found. Over the past three years, the average Early Childhood Environmental Rating Scale (ECERS) score has risen in a majority of classrooms that have been engaged in the project. Eleven of 14 classrooms (79%) studied demonstrated improvement in the overall measures of the ECERS. The ECERS tool is on a seven-point scale, with seven being the highest indicator. The evaluation goal was to take baseline ECERS data from the participating centers and classrooms and to support their self-study, plans of study, and improvement over time.

Program Resources:

Annual Cost: Approximately \$70,000 per year

Funding Sources: Private donors; Clemson University; Barnwell Office of First Steps

Staffing Needs: Faculty and graduate students from Clemson University; volunteers from Barnwell County; Technical Assistant; Administrative Support; Project Director

Infrastructure/Equipment Needs: Office space and equipment, materials, educational incentives and office supplies are provided by First Steps and Clemson University

Partner Organizations: Clemson University School of Education; Office of First Steps; State of SC Office of First Steps; Head Start; State Department of Education

Contact Information: Dr. Delores Stegelin, Clemson University, dstegel@clemson.edu

Strategy #3

FRANCIS MARION UNIVERSITY'S RICHARDSON CENTER FOR THE CHILD

Goal: The primary mission of the Gail and Terry Richardson Center for the Child (RCC) at Francis Marion University (FMU) is to develop and disseminate best practices for teaching low-income children and to help them develop the readiness skills required for school success.

Short Summary: The RCC is a comprehensive early childhood service and research center.



The Center, which opened its doors in August of 2008, includes a best practices childcare facility to serve a diverse group of children from birth to four years of age. In addition, the RCC functions as a laboratory school with two FMU classrooms where faculty teach early childhood education, psychology and nursing, and directly observe preschool children and their teachers. The Center has a clinic to identify developmentally delayed children and design interventions. Critical to its mission is service to the community and research. The Center is adjacent to and works in cooperation with the Pee Dee Education Center, a consortium of 19 Pee Dee region public school districts. A South Carolina First Steps program to serve at-risk children also is housed at the Richardson Center for the Child.

Demographics:

School Level Focus: Birth to four years of age

Schools/Districts Served: Currently the Center serves 65 children and has the capacity to eventually serve 112 children. Most of the children served are from Florence District One, but the Center serves all of the Pee Dee area school districts

Target Settings: Preschool

Target Groups Served: RCC serves a diverse group of children but primarily seeks to develop strategies for working with children of poverty.

Research and Evaluation: Since the Center is in only its second year of operation, data collection is in its early stages. Children's development is being measured pre and post on various instruments, but to date has not yielded definitive results. Data concerning the teaching mission of the Center is encouraging with six Francis Marion classes in early childhood education and psychology taught full time in Spring 2010 at the Center. During that same semester, 53 FMU students spent 452 hours in the preschool classes gaining variable experience working with children 6 weeks to four years. Over 20 biology students built a nature trail and in the Fall of 2010 Spanish students will begin to offer Spanish training to three and four year olds.

Program Resources:

Funding Sources: Parent fees, grants, donations and state appropriations

Staffing Needs: The Center employs professionals, graduate students, and undergraduates and also utilizes many volunteers

Infrastructure/Equipment Needs: This 15,000 square-foot facility is located on a site near the Pee Dee Education Center on the campus of FMU. The \$4.7 million building includes a child-care wing of two infant rooms, two toddler rooms, two rooms for the three- and four-year-olds, and two rooms for four- and five-year-olds; an office area for psychology and education faculty members; a central lobby and library that function as a family waiting area; observation and assessment rooms; and an outdoor play area.

Partner Organizations: Francis Marion University, Pee Dee Education Center, South Carolina First Steps

Contact Information: Dr. John R. Hester, Francis Marion University, 843-661-1635, jhester@fmarion.edu



IV. Strategies for Success: What Else Could South Carolina Do to Address Early Childhood Education?

By Dr. Dolores Stegelin, Clemson University

“High-quality early childhood education has the greatest positive effect on children from lower socioeconomic status, children who are at risk because of other circumstances, and children with disabilities and special needs.”

“Recent brain research has verified the importance of cognitive and social development in the early years, and this research has reinforced the importance of high quality early childhood care and education during the formative years.”

Overview

From a policy perspective, early childhood education (ECE) made tremendous strides during the latter part of the 1900's. As the 21st century unfolds, there is a growing number of policy makers and decision makers who embrace the role of early childhood education as a long-term economic investment. With about 60 percent of American children under the age of five spending part or most of their days in care and educational settings outside of the home, many policymakers seem to be jumping on the ECE bandwagon (*Research Points*, 2005). Evidence of the expanding ECE landscape on the national level can be seen in the funding of preschool programs by most states, development and implementation of learning standards for young children, and the growing acceptance of research-based information that documents the value of high-quality early childhood education as a means to enhancing school readiness and leveling the playing field for all children, regardless of income level, race, and ethnicity.

The purpose of this section is to provide an overview of current conceptions of what constitutes high-quality ECE in the United States, identify signal programs and supporting research studies, synthesize the key descriptors of essential components of high-quality ECE, review the current policy landscape for ECE with possible scenarios for the future, identify barriers in South Carolina that contribute to a gap between research and practice, and discuss plausible scenarios to move South Carolina forward in early childhood education.

High-quality early childhood education has the greatest positive effect on children from lower socioeconomic status, children who are at risk because of other circumstances, and children with disabilities and special needs (Stegelin, 2004). Research that began in the 1960's began to frame our understanding of the need for and value of early intervention and early education for young children with special needs, developmental delays, and at-risk home and family factors. Over the past 40 years, this research has increased in quantity and refinement. In addition, recent brain research has verified the importance of cognitive and social development in the early years (Begley, 2000), and this research has reinforced the importance of high quality early childhood care and education during the formative years.

Thus, the research foundation for the value of high quality ECE has been established now for over a century, with momentum building over the last 40 years. With our growing knowledge base of child development, multicultural variables, and the effects of poverty and low socioeconomic status on early child growth and development, the case for universal programs for young children is convincing. Leveling the playing field for all young children, providing equal access to early learning experiences, and assuring school readiness are all substantial reasons that ECE is now supported so broadly in the policy arena.

Defining Exemplary Early Childhood Education

The growing body of research literature on high quality early childhood education serves to define and delineate the key components of exemplary ECE programs (Barnett, 1995; Schweinhart & Weikart, 1985; Lazar, Darlington, Murray, Royce & Snipper, 1982), and these descriptors continue to change and evolve over time. The changing demographics of the United States and the shifting economic profiles of American families both underscore the need to continually examine what we consider to be essential components of quality ECE. In turn, the child



population under the age of five in the U. S. also continues to change, and we must continually address these children’s developmental, health, cultural, economic, and language needs.

To be certain, young children entering the Head Start classrooms of 2009 are very different from those of 40 years ago when Head Start was conceptualized and implemented initially. Children attending childcare and public school preschool programs also reflect a different and diverse profile related to SES, race and ethnicity, language, and culture. Contemporary teachers and researchers must be sensitive to these changes as curriculum and instructional strategies are put into place, parent education and involvement approaches are selected, and methods of assessment and evaluation of children and programs are developed and conducted.

Model Early Childhood Programs

When exploring the notion of components of high-quality ECE programs, it is helpful to study real-life examples. From the myriad programs that have been developed and evaluated, there are three programs that have emerged over time that continue to survive the close scrutiny of researchers and critics, both short- and long-term in nature. These programs will be discussed and others will be briefly identified. Much of the support for early childhood education for young children with developmental, environmental, and intervention needs comes from the strong evidence of impacts gathered from rigorous evaluation of three center-based, comprehensive ECE programs (Isaacs, 2008). These three programs are described briefly in the chart below (See Figure 1).

Figure 1: Three Influential Early Childhood Programs: Abecedarian, Perry Preschool, and Chicago Child-Parent Centers Projects

ECE Program	Description of Program	Key Findings
<p>Abecedarian Project</p>	<p>Intensive full-day, full-year program from infancy through kindergarten. Center-based program with low child-teacher ratios (3:1 for infants and 6:1 for preschoolers). Supplemented by home visits during the first three years. Costs per child averaged \$42,871 for full multi-year program.</p>	<ul style="list-style-type: none"> • Research design included random assignment of children to control or participating groups with 111 subjects. • Evidence base is strong indicating cognitive and social gains, including long-lasting IQ gains. • Strong effects on school outcomes are demonstrated, including reduced placement in special education and grade retention. • Increased high school graduation rates were evident. • Benefit-cost estimate for this program is \$3.23 for each \$1.00 invested.



<p>High Scope/ Perry Preschool Project</p>	<p>Enrolled three and four year old children at risk for academic failure in preschool classes that operated five days a week during the academic year. The curriculum was designed to support cognitive development and children’s self-directed learning, along with weekly home visits. Average child-teacher ratio was less than 6:1 and program costs averaged \$14,830/child for the two-year program.</p>	<ul style="list-style-type: none"> • Research design included random assignment of children to control or participating group with 123 subjects. • Strong effects on school outcomes, including reduced placement in special education and grade retention. • Increased high school graduation rates were evident. • Benefit-cost estimate for this program is between \$5.15 and \$17.00 for every \$1.00 invested.
<p>Chicago Child-Parent Centers Project</p>	<p>Provides a half-day, center-based preschool program at twenty centers run by the Chicago Public Schools. The preschool program, which averaged \$6,913 per child over two years, included an active family involvement component and a six-week summer program.</p>	<ul style="list-style-type: none"> • Research design does not include random assignment and included 989 children who received intervention and 550 who did not. • Strong effects on school outcomes, including reduced placement in special education and grade retention. • Increased high school graduation rates are evident. • Benefit-cost estimate for this program is \$7.14 for each \$1.00 invested.

Outcomes of Effective High-Quality ECE Programs

It is important to note that these three well-known programs represent different time parameters. The Abecedarian Project and the High Scope/Perry Preschool Project were earlier models, with the latter dating back to the 1960s. In contrast, the Chicago Child-Parent Centers Project is a contemporary model with a larger research sample. Nonetheless, there are clear similarities across these three high-quality programs and it is these similarities on which we wish to focus. We turn now to common outcomes across these three models and the impressive results that have given shape and direction to our current policy efforts in ECE. Even though these three high quality ECE models were implemented in different geographical places and at different times, some of the outcomes have long-lasting implications for children, families, researchers, teachers, and program design specialists.

The most valuable outcomes are listed below, all of which have resulted in better outcomes for children and families as well as positive economic outcomes for society and taxpayers. Separate outcomes by the children’s race or family income are not available, and all three programs served predominantly African-American children from low SES families. Sample sizes



were usually small and therefore not large enough to support analysis among different sub-groups, and this is an area of research in need of further work. Of particular importance is the finding with the Chicago Child-Parent Centers Project that children who participated longer and had greater follow up in elementary school had greater positive long-term outcomes. This has implications for designing ECE programs, age of recommended entrance, and years or duration of the planned intervention. These outcomes are listed in *Figure 2*.

Figure 2: Impact and Outcomes of High-Quality ECE Models on Children, Families, and Society

Impact or Outcome	Explanation	Implications
Reduced use of special education for participating young children	Special education placement rates fell dramatically from 48 percent to 25 percent for Abecedarian and from 22 percent to 12 percent for Chicago Child Parent Centers	Reduced placements into special education means reduced costs for schools due to reduced need for specialists, such as therapists, special education teachers, and increased self-esteem and feelings of competence among children.
Less grade retention for participating young children	Grade retention refers to requiring a child to repeat a grade due to poor academic performance. These rates fell for children enrolled in all three programs, with a particularly large decline for participants in the Abecedarian program from 55 percent to 31 percent (<i>Research Brief #4, 2008</i>)	Retaining children in the same grade leads to lower self-esteem of children as well as increased financial burdens to schools that must also provide both teaching and classroom resources for children to repeat the same academic experience.
Less special education or grade retention	The likelihood of children participating in any of these three programs being placed in special education or being held back a year fell by more than 50 percent for the Perry Preschool children, from 38 percent to 17 percent.	Again, when schools can promote children to the next grade, positive gains are reflected. If either special education or grade retention is diminished, there are financial benefits for schools in terms of providing teaching and classroom resources for either case.
Higher IQ scores	Children participating in the Abecedarian Project scored 4.5 percentage points higher than comparable children who did not participate in the program (89.7 compared to 85.2, measured at age 21)	Few early intervention programs have shown long-term gains in IQ scores. Higher IQ scores may reflect better academic outcomes and fewer placements in classes for children who are cognitively at-risk.



<p>Behavioral and Socio-emotional Outcomes</p>	<p>All three programs reflected reduced rates in criminal activity, teen pregnancy and childbearing, and other social behaviors.</p>	<p>These social outcomes result in improved quality of life for the participants as well as a reduction in social welfare costs for society and taxpayers related to incarceration, high-risk pregnancies, and medical costs.</p>
<p>Health and Safety Outcomes</p>	<p>Evaluation of these model programs did not report positive or negative outcomes related to health. However, related to safety, children participating in the Chicago Child-Parent Centers had much lower rates of child abuse and neglect than did the comparison group, and they had lower rates of out-of-home placement.</p>	<p>The Chicago Child-Parent Centers Project had a very strong parent education/involvement component, and the positive outcomes related to abuse and neglect are encouraging. With the growing epidemic of childhood obesity, high-quality ECE programs may need to target and measure health measures more closely, especially as related to good eating habits and healthy body weight measures.</p>
<p>Parent Outcomes</p>	<p>These three programs did not focus on impacts on the children's parents. However, the Chicago Child-Parent Centers reported positive impacts on the parenting behaviors of mothers some years after program participation, and a survey of younger Abecedarian mothers found positive effects on the mother's level of education and decreased likelihood of repeated pregnancies.</p>	<p>These three programs do not provide a great deal of data on positive outcomes or impacts for parents of participating children. This is an area in need of further research and understanding, and with the increased diversity of parents and families in the US, there is a need to do comparative studies of parent outcomes related to gender, age, race, ethnicity, SES, and cultural variables.</p>
<p>Longitudinal Outcomes</p>	<p>All three of these programs represent what we refer to as long-term or longitudinal outcomes and we need more in-depth research of this kind. The long-lasting effects on children who participated in these three programs include the following: education level, earnings, criminal activity, and other social behaviors. Adult outcomes were primarily positive with the exception of long-term changes in IQ gains and achievement test scores.</p>	<p>When long-term gains can be associated with a high-quality ECE program, everyone benefits. From an economic perspective, these programs show that investing in high-quality ECE programs results in enduring, sustainable changes in the lives of participants that also bring large financial gains for taxpayers. Paying up front when at-risk children are in need is a much wiser way to spend taxpayer dollars than paying for incarceration, truancy, pregnancy, school dropout, and welfare in the later years.</p>



<p>Specific Long-term Outcomes:</p> <ul style="list-style-type: none"> • High school graduate rates • Labor force performance • Criminal activity • Teen parenting • Social and health behaviors 	<p>High school graduate rates increased under all three programs, measured at age 21 years or older. Example: 66 percent of Perry preschoolers ended up with a high school degree by age 27, compared to 45 percent of control group.</p> <p>Labor force performance was higher for participants as measured by higher salaries (Perry and Abecedarian), higher rates of employment (Perry, age 40), higher rates of placement in high-skilled jobs (Abecedarian, age 21), and marginally higher rates of full-time employment or college attendance (Chicago Child-Parent Centers, age 24)</p>	<p>Again, when outcomes or gains can be shown to endure into adulthood, the long-term benefits to individuals and to society are much greater. In fact, these three model programs have been instrumental in shaping our understanding of the value of investing in very young children: The gains are not only immediate and intermediate, but they often last a lifetime. This evidence strengthens the argument for high-quality ECE being an economic investment, not just an educational or social investment.</p>
<p>Benefit-Cost Estimates</p>	<p>This term refers to return on the investment: how much do we get back for each dollar that is invested. All three of these programs were found to return overall benefits that exceed program costs, with the return per \$1 invested ranging from \$3.23 for the Abecedarian Project, and between \$5.15 to \$17.1 for Perry Preschool, to \$7.14 for Chicago Child-Parent Centers.</p>	<p>Perhaps this evidence has made the greatest impact on taxpayers, legislators, and other decision-makers for making the case for investing in high-quality ECE programs. While social and academic outcomes are clearly impressive, taxpayers are more convinced to contribute to these programs when they see the long-term economic investment for them and the society in which they live.</p>

Note: Figure 1 includes information and data derived and adapted from the following sources: Research Brief #4, 2008; Stegelin, 2004; Reynolds, Temple, Robertson & Mann, 2001.

Closing the Gap: Discrepancies between Research and Practice in South Carolina

South Carolina is a state of contradictions: while it is a poor state, South Carolina's citizens demonstrate remarkable resiliency and innovation. An example of this resiliency is the important Cooper Ruling (2005) that set the stage for policy and program innovations, particularly for the state's poorest and historically most neglected counties and communities. Through resiliency, a group of school districts pressed on until a successful court decision was rendered that documented and verified that, historically, some communities, especially along the I-95 corridor, had suffered for decades from lack of equal access to quality early childhood education services. In turn, young children in these communities had not reached academic readiness and had not fared as well as many other young children in South Carolina in negotiating the educational and economic opportunities of the state. Thus, the Cooper Ruling can be deemed a successful example of policy progress that is moving the state forward.

South Carolina has also demonstrated resiliency and innovation in other aspects of early childhood education. The 4K program that has emerged and gained momentum from the Cooper Ruling is perceived nationally as a very positive indicator of quality early childhood pro-

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“While South Carolina clearly has made strides in early childhood education since the beginning of the new millennium, there remain significant barriers to steady and continuous progress.”



“When citizens within a local community can come together and identify early childhood education as the top priority, then all things can happen. When children become the focus rather than funds, territorialism, and control, then children benefit, families benefit, and South Carolina benefits. The answer lies within developing a “child-centered” policy-making process and establishing programs that keep the child’s current and future well being as the focus.”

gramming. In addition, Head Start and Early Head start federal funding has increased in local communities in South Carolina, and South Carolina has adopted *Early Learning Standards* and is engaged in the *Good Start, Grow Smart* movement. The state has been active at the national level in contributing toward establishing rating scales for child care centers and in building datasets that bring together child indicators from several state agencies, including the Department of Social Services, Health and Human Services, State Department of Education, and other child-related service agencies. The Office of First Steps in South Carolina has garnered recognition for its advocacy and policy initiatives on behalf of young children and its successful efforts to bring together grassroots individuals and programs in each of the counties.

Barriers to progress in South Carolina

While South Carolina clearly has made strides in early childhood education since the beginning of the new millennium, there remain significant barriers to steady and continuous progress. These barriers include but are not limited to these factors:

- A state economy that struggles from an inadequate, unstable tax base and inconsistent state revenue
- Obstacles to attracting new industry and highly educated professionals and workers due to inconsistent quality in early childhood and K-12 public education
- Historically entrenched differentiation of expectations and opportunities for individuals based on income, race, and geographic variables within the state
- Challenges to setting education as the top priority in the state and establishing funding for early childhood, K-12, and higher education that supports continued growth and quality
- Rural and urban poverty in historically impoverished communities along the I-95 corridor that require immense policy and economic investment in order to reverse these entrenched practices

Looking Ahead and Moving Forward: Aligning Research, Policy, and Practice

Perhaps one of the bright spots in early childhood education is the emerging federal movement and policy momentum in this area. While the Obama administration has been met with initial challenges of a large-scale recession, unemployment, and foreign conflicts, the fact remains that this administration strongly believes that early childhood education is the foundation for improved academic readiness and achievement in the United States. Funding for innovative programs that effectively meet the needs of children in at-risk and poor homes and communities has been earmarked. The time for real innovation and thinking outside of the box is here; traditional models of serving young children may be challenged by community-based programs that redefine how to provide services to an increasingly diverse and complex child population.

Second, South Carolina must be successful in aligning state goals with the new and emerging national early childhood policies. This means that South Carolina legislators, school administrators, state agency decision-makers, and grass-roots citizenry must become more visible at the national level and be more willing to forge successful working relationships at the federal level. South Carolina must become more aggressive in seeking stimulus and federal funding and in proposing innovative collaborations across agencies that maximize the use of federal and state dollars. Third, South Carolina must be successful in electing and supporting early childhood advocates and decision-makers. We must carefully evaluate future legislators, state leaders, and local decision-makers and make sure that early childhood education is at the top



of their priorities. Fourth, we must be more successful at building collaborations and community capacity and in striving toward racial and income equality and equal access to services.

In short, South Carolina must make a commitment to making every child count. My own work in Barnwell County, South Carolina, has convinced me that the solutions lie within the people. When citizens within a local community can come together and identify early childhood education as the top priority, then all things can happen. When children become the focus rather than funds, territorialism, and control, then children benefit, families benefit, and South Carolina benefits. The answer lies within developing a “child-centered” policy- making process and establishing programs that keep the child’s current and future well being as the focus.

References

- Author. (Fall 2005). Early childhood education: Investing in quality makes sense.
- *Research Points*, 3(2), 1-6. American Educational Research Association retrieved August 13, 2009, www.developingchild.harvard.edu
- Barnett, W.S. (1995). Long-term effects of early childhood care and education on disadvantaged children’s cognitive development and school success. In S. Boocock & W.S. Barnett (Eds.), *Early Childhood Care and Education for Disadvantaged Children: Long-Term Effects*. Albany, NY: SUNY Press.
- Begley, S. (2000). Wired for thought. *Newsweek*, Fall/Winter 2000, 25-30.
- Isaacs, J. (September 2008). Research brief #4: Model early childhood program. *First Focus*:
- *Center on Children & Families at the Brookings Institution*, Washington, DC.
- Lazar, I, Darlington, R., Murray, H., Royce, J., & Snipper, A. (1982). Lasting effects of early education: A report from the consortium for longitudinal studies. *Monographs of the Society for Research in Child Development*, 47 (Serial No. 195).
- Reynolds, A. J., Temple, J. A., Robertson, D. L., Mann, E. A. (2001). Long-term effects of an early childhood intervention on educational achievement and juvenile arrest- A 15-year follow-up of low-income children in public schools. *Journal of American Medical Association*, 285(18), 2339-2346.
- Schweinhart, L. J., & Weikart, D. P. (1985, April). Evidence good early childhood programs work.
- *Phi Delta Kappan*, 66(8), 545-551.
- Stegelin, D. (2004). Early childhood education. In F. P. Schargel & J. Smink (Eds).
- *Helping students graduate: A strategic approach to dropout prevention* (pp. 115-123). Larchmont, NY: Eye on Education.

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