



# COMMONWEALTH of VIRGINIA

*Joint Legislative Audit and Review Commission  
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Richmond, Virginia 23219*

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## MEMORANDUM

**TO:** Delegate R. Steven Landes; Co-Chair, Joint Subcommittee on the Virginia  
Preschool Initiative  
Senator Emmett W. Hanger, Jr.; Co-Chair, Joint Subcommittee on the  
Virginia Preschool Initiative

**CC:** Members of the Joint Subcommittee on the Virginia Preschool Initiative  
Sarah Herzog; Legislative Fiscal Analyst, Senate Finance Committee  
Susan Hogge; Legislative Fiscal Analyst, House Appropriations Committee

**FROM:** Kimberly Sarte; Assistant Director for Ongoing Oversight and Fiscal  
Analysis *KS*

**SUBJECT:** Follow-up Response to Questions Regarding the 2007 JLARC Study of the  
Virginia Preschool Initiative

This memo provides information to address three questions I was asked during my June 11, 2015 presentation to the Joint Subcommittee on the Virginia Preschool Initiative (VPI). My presentation summarized a 2007 JLARC study, *Virginia Preschool Initiative (VPI): Current Implementation and Potential Changes*. The questions are listed below with a corresponding response. Attachments to this memo provide additional information for each of the responses.

1. Did the 2007 JLARC report include information on other states' use of the options for expanding access to preschool? – (*Delegate Landes, slide 12*)

The JLARC report included information on Pennsylvania's pre-k scholarship program and Kern County, California's "Ready to Start" summer program.

A sliding scale of parent fees was one of the options for expanding access in the JLARC report. Pennsylvania's pre-k scholarship program was presented as a way to help parents pay preschool fees. The Pennsylvania program was funded through

donations from corporations which receive a tax credit for their donations. This program still appears to be operational.

A five-week summer program was another option for expanding access in the JLARC report. The report cited the "Ready to Start" program in Kern County, California as an example of a summer pre-k program. Ready to Start was an intensive four-to-five week readiness program held during the summer. The program targeted incoming kindergartners with no preschool experience. This program still appears to be operational.

Attachment A provides excerpts from the JLARC report which discuss the pre-k scholarship and Ready to Start programs in more detail.

2. Were the estimated per-pupil costs of model programs, which ranged from \$9,500 to \$18,248, based on programs in other states? (*Delegate Landes, slide 15*)

The \$9,500 to \$18,248 range was based on three model pre-school programs: the High/Scope Perry Preschool Program, which operated in Michigan from 1962 to 1967; the Abecedarian Project, which operated in North Carolina from 1972 to 1985; and the Chicago Child-Parent Center Program, which has been operating since 1967. The report used earlier cost data that was available for the Perry Preschool Program and the Abecedarian Project and projected it forward to 2007 dollars. Then-current data was used to estimate the cost of the Chicago Child-Parent Program.

Attachment B provides excerpts from the JLARC report which discuss the 2007 cost estimates and programs in more detail.

3. What is the status of the JLARC report recommendations? (*Delegate Greason, slide 18*)

The first JLARC recommendation was that the Department of Education (DOE) conduct a longitudinal study of students completing VPI and other preschool programs to determine the programs' effects. This recommendation has largely been addressed by a study conducted by the Virginia Early Childhood Foundation. The results of this study were presented to the Subcommittee at the June 11<sup>th</sup> meeting.

The other three JLARC report recommendations were directed at the General Assembly. The General Assembly has not taken action on these recommendations to date. However, DOE staff indicate that the recommendations have been addressed administratively to some extent.

Attachment C provides additional information on the status of the JLARC recommendations.

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an incentive for them to consider private and religious-affiliated providers as an alternative. This situation could keep these providers who remain outside the State's pre-K system competitive, rather than driving them out of business.

- Participation in the State's expanded pre-K program would more likely be lower among the parents who would pay higher fees.

\* ***The Option of a Scholarship Program.*** The State could further help families afford the fees for early childhood education by creating a tax credit that would raise money for scholarships. Pennsylvania currently has such a program. The Pennsylvania pre-K plan awards a corporation a 100 percent tax credit for its first \$10,000 in contributions to a nonprofit pre-kindergarten scholarship organization and up to a 90 percent credit for contributions up to \$100,000. The scholarships could be awarded based on family income or other indicators of need or risk.

Advocates for this approach have suggested that a scholarship approach is a less expensive approach to pre-K than governmental approaches, comparing Pennsylvania's low average scholarship cost to the per-pupil price tag that is associated with the State's planned expansion of pre-K. For example, in an article appearing in a Richmond newspaper under the headline "Education Tax Credits Cost Less, Do More on Pre-K," an education policy analyst stated:

The Pennsylvania business donation tax credit for pre-K is already helping thousands of low-income children [emphasis added] with a relatively small amount of money... The Commonwealth Foundation, a Pennsylvania think tank, found that those kids were helped with an average of just \$1,370, compared with the government-run plan that would cost \$6,750 per child.

This is not a case, however, in which there are two options for accomplishing the same end and one is simply less costly than the other. In a VPI classroom with 18 children, the current maximum number allowed by standards, the cited per-pupil scholarship amount of \$1,370 would provide \$24,660 for that classroom. Based on the average class size for VPI (about 15 children), the cited per-pupil amount would pay \$20,550 in costs. These amounts would pay the compensation costs of an instructional assistant for the class, but not the costs for a well-qualified lead teacher plus an instructional assistant plus reasonable support costs. An attempted State expansion of the program through just the use of a Pennsylvania-style scholarship program would not be adequate to meet

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the costs, leaving a substantial balance of unmet costs for the low-income family or for local government to pay if the program is to operate.

In addition, written policies regarding this scholarship fund would be needed to prevent misuse, specifying

- who would be administering the fund;
- who would be eligible to receive a scholarship, based on what criteria; and
- what the amount of the scholarship would be, based on what criteria.

Care should be taken to ensure that the scholarship would go only to families in need, and would be in proportion to need—rather than, for instance, a flat amount for which upper-middle- and upper-income parents would be eligible as well as lower-income parents.

### **The Option of Half-Day Versus Full-Day**

Most local VPI programs currently are full-day programs, lasting at least six hours. However, some localities have chosen to have half-day programs, meaning that the preschool class meets for approximately three hours each day. As a result, the State currently funds half-day VPI programs at 50 percent of the full-day per-pupil rate.

The State could choose to make available to all remaining four-year-olds a half-day, rather than a full-day, pre-K program. Choosing this option could reduce by 50 percent the State's share of the cost in the illustrative example (from \$53 million to about \$26.5 million), although the actual cost to be covered by the locality and parent fees may not necessarily decrease by 50 percent.

A 2006 study by Robin, Frede, and Barnett of the National Institute for Early Education Research (NIEER) found that the benefits of full-day preschool over half-day programs are significant. The NIEER study is based on a randomized trial that compared children from low-income families in a school district in New Jersey who attended half-day and full-day public preschool programs that lasted for 41 to 45 weeks. Results show that children attending a 2.5- to 3-hour public preschool program had improved (by six to seven standard score points) on vocabulary and math tests by the spring kindergarten assessment, but that children attending an eight-hour program had improved even more (by 11 to 12 standard score points). The authors concluded:

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Results of this study indicate that even students who are far behind at entry to preschool can develop vocabulary, math, and literacy skills that approach national norms if provided with extended-duration [that is, full-time] preschool that maintains reasonable quality standards.

Thus it appears, among low-income students at least, that half-day programs lasting the entire school year can benefit students, but that full-day programs can benefit them even more.

### \* The Option of a Summer Pre-K Program Lasting Five Weeks

Opponents to universal pre-K have promoted a summer pre-K program as a less-expensive alternative to a pre-K program lasting a full academic year. The idea of providing a summer pre-K program is not new to many school divisions in Virginia. At least 30 already provide their at-risk preschool students with classes or programs during the summer leading into the kindergarten year. In particular, of the 78 divisions responding to the JLARC staff survey,

- 16 reported providing summer school classes,
- 12 reported having a special transitional program for pre-K students moving to kindergarten, and
- two reported that the program offered by contracted providers continues during the summer.

The “Ready to Start” program is an example of a summer pre-K program that has been used as an alternative to a program lasting a full academic year. This program has been operating for the last four years in the Greenfield Union and Rosedale Union School Districts in Kern County, California. Ready to Start is an intensive, four- to-five week school readiness program targeting, in the summer before they enter kindergarten, those four-year-olds with no preschool experience. Classes meet for three hours per day for five days each week. Using certified teachers, teacher aides, classroom coaches, and existing school classroom facilities, the Ready to Start program provides a structured, academic pre-kindergarten curriculum designed to give students the skills most needed to succeed in kindergarten.

Children’s academic skills are evaluated on 24 key reading, math, and other skills before entering the program and at the end. In the Greenfield school district, the test scores of Ready to Start students were about 30 percent higher than scores of a control group of district students who did not attend any preschool. After one semester of kindergarten, the Ready to Start children continued to perform better than the students in the control group. In the Rosedale school district, follow-up testing showed the Ready to Start

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students performed as well or better than other kindergarteners, nine out of ten of whom had some type of preschool experience.

The cost of the Ready to Start program is about \$350 per student. Assuming that in Virginia all children not deemed “at risk” would participate in such a summer program, if there were no parent fees such that the State and local governments were to fully absorb the costs of such a program, the State share would be as much as \$13 million and the matching local share would be about \$11 million. If parent fees were to be collected on a sliding scale in a manner consistent with the illustrative example above, then the parents’ fee would increase by \$5.74 for every additional \$1,000 of income above \$15,000. As a result, parent fees would cover about \$16 million of the costs, the State share would be about \$4 million, and the local government share would be about \$3 million. However, assuming that 42 percent of the children not eligible for “at risk” preschool programs still have some preschool experience (as they do now), such that 58 percent would be participating in such a summer program, the cost estimates would be even lower.

According to the Rosedale School District Superintendent, the four-week summer pre-school program was intended as a first component, with a full school year program to be the next component added. However, after only the summer school component was pilot tested for a couple of years and the results became known, it was presented as an alternative to year-round pre-K. The full school year program component has not been added to the pilot Ready to Start program in Kern County. However, the option still exists to provide a four- to-five week summer program as a supplement to, rather than instead of, a pre-K program that takes place during the full academic year.

When comparing a four- to-five week program (such as the Ready to Start program) with a pre-K program that lasts a full school year (such as the VPI program generally is in local school divisions), a key decision is the amount of preparation and readiness for kindergarten to require. In particular, it appears that the standards of the Ready to Start program may be the most essential for school readiness, but they are not as comprehensive as *Virginia’s Foundation Blocks for Early Learning* (DOE’s standards for four-year-olds). For example, the Ready to Start Curriculum Scorecard has as a desired result of math activities that the student can accurately count from one to ten; the Virginia Mathematics Foundation Block objective is for the student to count to 20 or more. As another example, the Ready to Start Curriculum Scorecard has as a desired result of teaching alphabet letters that the student can say the alphabet in songs and games; the Virginia Literacy Foundation Block on letter knowledge aims to have the student correctly identify 10 to 18 alphabet letters by name in random order.

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In general, it appears that mastery of the Ready to Start objectives is necessary before the *Virginia Foundation Blocks* objectives could be achieved.

But the question of whether a more focused, shorter program is sufficient to meet the needs of students entering kindergarten may require the testing of pilot programs in Virginia before offering such a program statewide. Such pilot tests should compare kindergarten students who were in a four- to-five week pre-K program with

- kindergarteners who had no preschool experience, and
- kindergarteners who were in a full-day pre-K program that lasted the entire school year (about 40 to 45 weeks).

Students in these pilot tests should be assessed using measures such as the Phonological Awareness and Literacy Screening (PALS-K) assessment and nationally normed tests such as the Woodcock-Johnson Achievement Test. The following questions when comparing these three groups of kindergarteners should be asked:

- Do students who had a four- to-five week pre-K program score significantly higher on these measures than students with no preschool experience?
- Does attending a full-day pre-K program during the entire school year result in better test scores or other outcomes, compared to attending the four- to-five week, half-day program? What exactly does a more extensive pre-K program buy?

### **The Option of Requiring All School Divisions to Offer Pre-K Program Addresses Equity Concerns, But Would Be Difficult**

Equity concerns could lead to the goal of providing all students in the State access to a pre-K program, regardless of what locality they live in. The current situation of having local participation in the VPI program voluntary could seem inequitable, from a family and student perspective. For example, it may seem inequitable when an at-risk child living in Manassas Park (which participates in the program) may have access to a free, high-quality, State-sponsored pre-K program, when that same child, if living in Manassas City (which does not participate) may not.

One proposed way of requiring all school divisions to offer a pre-K program is to include it in the Standards of Quality (SOQ). Including a pre-K program in the SOQ would be assuming that a pre-K program is an essential part of the State's minimum requirements

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### Prevailing Costs

Prevailing costs are calculated through the use of a linear weighted average. A linear weighted average is a measure of central tendency across divisions that weights reported unit costs near the median more heavily than costs in the extremes.

### Types of School Divisions

City divisions include urban divisions, which are located in metropolitan statistical areas (MSAs) that are less than 80 square miles in land area, and divisions in rural cities and towns, which are located outside of MSAs and are less than 80 square miles in land area.

Suburban divisions are located in MSAs with 80 or more square miles in land area.

Rural divisions are located outside of MSAs and have 80 or more square miles in land area.

These salaries are comparable to the prevailing salaries for public elementary school teachers and aides that will be used to determine State public education funding for the upcoming biennium. The prevailing elementary teacher and aide salaries that will be used for purposes of determining SOQ funding for the 2008-10 biennium are \$41,390 and \$14,820, respectively. (Localities in Northern Virginia will receive an additional cost of competing adjustment for their salaries.) Given that the parity K-12 spending level of \$7,920 discussed previously is based on these prevailing instructional salary costs, it is not surprising that many school divisions find \$5,700, which is 28 percent less than the parity amount, to be too low.

Another factor related to divisions' determination of whether \$5,700 is reported as adequate or nearly adequate is whether they are in city, suburban, or rural localities. As shown in Table 29, the average per-pupil amount deemed as adequate varies across city, suburban, and rural divisions with city divisions indicating the highest average per-pupil amount as necessary. The average per-pupil amount indicated as adequate in city divisions was \$7,883. The average per-pupil amount indicated as adequate in suburban divisions was \$7,578, and the average per-pupil amount indicated as adequate in rural divisions was \$6,053. The table shows that while the majority of rural school divisions may have reported that \$5,700 per pupil is adequate or nearly adequate, this is not the case in the majority of city and suburban school divisions where the cost of living is higher.

**Table 29: Per-Pupil Costs of Providing High-Quality Preschool Higher in City School Divisions**

Division Type <sup>a</sup>	Number Reporting \$5,700 as Adequate	Number Reporting Per-Pupil Amount Above \$5,700	Prevailing Per-Pupil Amount Reported	Percent of VPI Children Served, 2006-07
City (Urban & Rural City), n=16	4	12	\$7,883	46%
Suburban, n=20	6	14	\$7,578	28%
Rural, n=42	28	14	\$6,053	25%
Total, n=78	38	40	\$6,790	~100%

<sup>a</sup>Based on the 2004 JLARC report *Best Practices for Support Services of School Divisions*.

Source: JLARC staff survey of Virginia school divisions participating in the VPI program.

### \* COST OF PROVIDING HIGH-QUALITY PRESCHOOL ESTIMATED BY NATIONAL EXPERTS

A final approach to estimating the cost of high-quality preschool is basing it on costs reported in the research literature. At the lower



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end of the cost range, the National Pre-Kindergarten Center reports that pre-K costs typically range between \$6,000 and \$8,000 per pupil.

At the upper end of the cost range are some studies which have projected forward the costs of renowned preschool experiments, such as the Perry Preschool and the Abecedarian Project. A cost benefit analysis of the Perry Preschool program placed the cost at \$12,356 per child per year in 1992 dollars. Projected forward to 2007 dollars, the program cost is about \$18,248. A NIEER paper on the costs and benefits of the Abecedarian Project estimated that the annual costs of the program in a public school setting in 2002 dollars would be \$13,175. Projected forward to 2007, the cost is about \$15,090. This program had an average class size of 12 children and a staff to child ratio of 1 to 6.

Another per-pupil estimate has been developed by Dr. Robert Lynch at the Economic Policy Institute (EPI), based on the Chicago Child-Parent Center Program, which is known as a very high-quality preschool program. The program has a 17:2 student-teacher ratio and provides comprehensive preschool services. Since it assumes a half-day program, however, Dr. Lynch estimated the cost of a half-day high-quality preschool program, and found an average cost of \$6,300 nationally. Dr. Lynch also developed state-level estimates to reflect local factors such as teacher salaries. Based on Dr. Lynch's estimates, the cost of a half-day high-quality preschool program in Virginia would be approximately \$6,000 per student. This estimate is the same whether the program is targeted at the poorest 25 percent of three- and four-year-old children in the State or a universal program is provided.

This cost is for a half-day program, whereas VPI is almost exclusively full-day. Due to many of the fixed costs associated with a preschool program, it is not appropriate to simply double the half-day estimate. According to Dr. Lynch, a reasonable estimate for the cost of a full-day preschool program based on the Chicago-Child-Parent Center Program would be in the \$9,000 to \$10,000 range.

The per-pupil cost at the midpoint of this range, or \$9,500, is at the low end of cost estimates for the model programs (compared to Perry Preschool and Abecedarian). Using a per-pupil amount of \$9,500, the total cost of the VPI program would be \$117 million. The State's share of this cost would be \$74.6 million, which is \$30.9 million more than was appropriated for VPI for the 2006-07 school year.

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### **Some Researchers Suggest Preschool May Be Associated With Some Increases in Negative Behavior**

Some of the literature argues that formal early education can be emotionally detrimental to children younger than age six or seven. For example, David Elkind has written that by attempting to teach the wrong things at the wrong time, early instruction can permanently damage a child's self esteem, reduce a child's natural eagerness to learn, and block a child's natural gifts and talents.

A 2004 study (by Magnuson, Ruhm and Waldfogel) discussed both positive and negative short-term effects of pre-kindergarten on school readiness. They found pre-kindergarten participation to be associated with significantly higher reading and math skills at school entry, like many other researchers. However, they also found that children who attended preschool (more broadly defined) for longer hours had more behavior problems on average than those who did not, although this pattern did not hold true among the children who attended pre-kindergarten programs in the same schools where they attended kindergarten. Even more confusing, though, was that the absolute levels of aggressive behavior found in this study were typically quite low and levels of self-control were quite high, even for children who attended preschool. (Behavior problems were measured by how frequently a child fights, argues, gets angry, acts impulsively, or disturbs ongoing activities. Self-control was measured by how frequently the child respects the property of others, controls his or her temper, accepts peer ideas for group activities, and appropriately responds to peer pressure.)

A 2005 study (by Loeb, Bridges, Bassok, Fuller and Rumberger, from the Stanford University and University of California at Berkeley PACE Research Center) also suggests an association between preschool attendance and later behavioral problems when entering kindergarten. This study found that children who attended preschool at least 15 hours a week were more likely to display more negative social behaviors, such as acting up or having trouble cooperating, than their peers. Those patterns for former center-based preschoolers were the strongest among low-income black children and white children from high-income families.

### **\* Several Studies Indicate That Preschool Programs for At-Risk Four-Year-Olds Can Have Positive Longer-Term Impacts**

Several studies provide strong evidence that early childhood interventions for at-risk children can have significant positive longer-term effects. However, the content of each program varies, and different groups of disadvantaged children are targeted, making it initially difficult to generalize about what works for which type of children. In other words, these programs may include activities

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which would not be part of a state-run pre-kindergarten program for at-risk four-year-olds, such as VPI.

The best research studies are designed so that a conclusion can be drawn with confidence that the results obtained are due only to the intervention. Generally, the strongest research design involves identifying a pool of potential participants and then randomly assigning some children to an experimental group and some to a control or comparison group. This practice increases confidence that estimated effects (such as differences in test scores) are due to the program rather than to preexisting differences between program and comparison groups.

Among the studies with strong research designs, the three most-frequently discussed early childhood intervention programs are the High/Scope Perry Preschool Program, the Abecedarian Project, and the Chicago Child-Parent Center Program.

Studies of four other programs also provide strong evidence that early childhood interventions (that include a center-based early childhood education component) can have long-term effects on at-risk children. Studies of all of these seven programs included a control or comparison group of children not receiving the intervention services, so that comparisons could be made with the group of children receiving the treatment services.

**High/Scope Perry Preschool Program.** This program operated from 1962 to 1967 in Ypsilanti, Michigan. The program targeted black children who were living in poverty and had IQs in the range of 70 to 85. They were deemed to be at risk for "retarded intellectual functioning and eventual school failure." Children had one or two years of half-day preschool for seven months a year. The school-year program emphasized learning through active and child-initiated experiences rather than through directed teaching. Teachers conducted part-day, daily classroom sessions for children and weekly home visits. Children had to have a parent home during the day.

Data were collected annually for these children at ages three through 11, and then at ages 14, 15, 19, 27, and 40. Compared to individuals assigned to a control group, former preschoolers

- at age 14 scored significantly higher on tests of basic achievement;
- had a significantly lower rate of becoming teen parents;
- graduated regular high school at a significantly higher rate;
- at age 19 had a significantly higher rate of employment, had been employed for more months since leaving school, and had

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more total months of employment the year in which they turned 19;

- at ages 27 and 40 had higher earnings; and
- by age 40 had been arrested significantly fewer times.

***Abecedarian Project.*** This program operated in North Carolina from 1972 to 1985. The targeted population was black children from low-income families who were at risk for developmental delays and school failure. Children entered the program at an average of 4.4 months of age, so the program was serving infants and toddlers, as well as four-year-olds. The program provided high-quality, educational day care eight hours a day, five days a week, year-round. It featured a curriculum that addressed cognitive, social and emotional, and linguistic development. Teachers had bachelor's degrees, and there was a low child-to teacher ratio. The program involved both a preschool component and a school-age component.

Outcome data on all children were collected over two decades, with studies conducted at ages 12, 15, and 21. Compared to the control group, children who participated in the program had

- higher cognitive test scores from the toddler years to age 21;
- smaller proportions of children repeating a grade or being placed in special education;
- higher academic achievement in both reading and math from the primary grades through young adulthood;
- lower frequency of becoming teen parents; and
- more years of education and greater frequency of attending a four-year college.

***Chicago Child-Parent Center Program.*** The Chicago Child-Parent Center Program has been in operation since 1967. This program included children from low-income families in high-poverty Chicago neighborhoods. Children were ages three to nine. Children in the program were provided with comprehensive educational and family support services. The program focused on developing skills in reading, math, and communication. The centers operated during the school year through the Chicago public school system and were located in elementary schools. The preschool provided a structured part-day program for children ages three and four. Related program services continued after kindergarten entry and through grades 1, 2, or 3. Many children received tutoring in reading and math until the third grade. The program also included home visitation by the staff, and provided health screening, speech therapy, nursing, and meal services. The parent program included a parent

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resource room with educational workshops, reading groups, and craft projects. Parents volunteered in classroom, attended school events and field trips, and were assisted in completing high school.

Follow-up outcome data were collected for all children at ages 6, 9, 10, 11, 14, and 21. Relative to the comparison group, participants had a

- higher rate of high school completion,
- lower rate of juvenile arrest,
- lower rate of arrest for violent crimes,
- lower frequency of repeating a grade or placement of special education, and
- lower rate of child maltreatment.

The other four programs and study findings regarding long term effects are shown in Exhibit 1. The studies of these programs are also considered to have strong research designs (meaning their results are less subject to alternative explanations).

Other research from large-scale public early childhood education programs shows long-term effects that are similar to those of the seven studies regarding elementary and middle school achievement and school success. This research include studies of large-scale programs such as the Cincinnati Title I preschool, the Maryland Extended Elementary Pre-K Program, and the Michigan School Readiness Program.

However, studies of these large-scale programs cannot use random assignment to construct a comparison group (usually because members of the target population cannot be randomly denied access to the program). Instead, researchers construct a comparison group either (1) by matching as closely as possible members of the comparison group with members of the treatment group on a number of characteristics thought to be relevant (for example, parental education, family income level, ethnic or racial background); or (2) by using statistical techniques to control for initial differences on key characteristics. Unfortunately, in neither approach is it possible to know with certainty that all of the key characteristics were matched or controlled for. Therefore, random assignment, which presumably equalizes the groups initially, is generally thought to be the most rigorous methodological approach. However, information from other studies may be used to supplement the information from experiments using random assignment, especially if their findings are consistent with those of the experiments.

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### Exhibit 1: Other Programs Provide Strong Evidence of Long-Term Effects of Preschool on At-Risk Four-Year-Olds

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#### **Syracuse Family Development Research Program (FDRP)**

The FDRP operated in Syracuse, New York, from 1969 to 1976.

**Who.** Targeted young, black, single, low-income mothers who were in the last trimester of their first or second pregnancy. Services targeted to children began prenatally and lasted until children reached elementary school age.

**What.** Weekly home visits by paraprofessionals, parent training, individualized day care, and structured preschool.

**Long-Term Effects.** Follow-up data were collected from children at ages five, six, and 15. Compared to children in the control group, participants had

- higher IQ scores
- more positive behaviors
- (among girls) better grades, attendance, and teacher ratings.

#### **Infant Health and Development Program (IHDP)**

The IHDP operated in eight medical institutions throughout the United States from 1985 to 1988.

**Who.** Targeted low-birthweight, premature infants upon discharge from the neonatal nursery until 36 months of age.

**What.** Comprehensive intervention consisting of early childhood development programs and family support services tailored to reduce the prevalence of health and developmental problems among low-birthweight, premature infants.

Provided home visiting, parent group meetings, and a center-based child development program for children.

**Long-Term Effects.** Follow-up data were collected from children at ages three, five and eight. Compared to children in the control group, participants had

- higher IQ and achievement test scores
- fewer behavior problems.

#### **Early Training Project (ETP)**

The ETP was implemented from 1960 to 1964 in Murfreesboro, Tennessee.

**Who.** Demonstration project that served a cohort of children born in 1958 from low-income families.

**What.** Designed to improve the educability of young children. Consisted of a ten-week summer preschool program for the two or three summers prior to first grade and weekly home visits during the remainder of the year.

**Long-Term Effects.** Follow-up data were collected from children at ages three through 11. Compared to children in the control group, participants had

- higher IQ and achievement test scores
- fewer placements in special education
- (among girls) fewer teen pregnancies.

#### **Head Start**

Head Start is a federally funded program initiated in the 1960s. There is no single Head Start program model and programs exist in all 50 states.

**Who.** Targets children ages three to five from low-income families.

**What.** Community-based preschool program with an overall goal of increasing the school readiness of eligible young children. Head Start preschools, operating either part- or full-day, provide a range of services, including early childhood education, nutrition and health services, and parent education and involvement.

**Long-Term Effects.** Follow-up data were collected in several studies from participants at ages three through six, 10 through 16, and 18 through 30. Compared to individuals in the control group, participants had:

- higher IQ scores
- mixed achievement test scores
- fewer instances of repeating a grade
- higher frequency of immunizations and other positive health behaviors.

Sources: See Appendix E for full citations.

FDRP: Honig, & Lally, (1982); and Lally, et al. (1988).

IHDP: Infant Health and Development Project (IHDP), (1990); McCormick et al. (1991); Ramey et al. (1992); McCormick, et al. (1993); Brooks-Gunn, J., McCarton, C. M., Casey, P. H., McCormick, M. C., Bauer, C. R., Bernbaum, J. C., Tyson, J., Swanson, M., Bennett, F. C., Scott, D. T., Tonascia, J. & Meinert, C. L. (1994); Brooks-Gunn, J., McCormick, M. C., Shapiro, S., Benasich, A. A. & Black, G. (1994); McCarton, et al. (1997); and Hill et al. (2003).

ETP: Gray & Klaus (1970); Gray & Ramsey (1982); and Gray et al. (1982).

Head Start: Currie, J. & Thomas, D. (1995); Currie, J. & Thomas, D. (1999); Aughinbaugh, A. (2001); Garces, et al. (2002); and Abbott-Shim et al. (2003).

## Attachment B

The weight of the evidence from key studies of preschool programs serving at-risk children indicates these programs can produce long-term effects on IQ scores, student achievement test scores, grade repetition, special education placement, high school graduation, and delinquency. Of course, the results appear to depend on the quality of the preschool program and other services provided. Even though most of the large-scale programs served children part day for one school year at age four (in contrast to some model programs which served children full day for multiple school years, and provided other services as well), the results of studies of large-scale programs appear to be consistent with those of experiments evaluating more intensive model programs.

In general, there appears to be some variation in the long-term effects of preschool for children from low-income families. Barnett has speculated that perhaps the best predictor of the size of program effects may be the size of the gap between the program and (initially) the home as learning environments, rather than whether a child is a member of a particular group. One possible exception to this general rule is gender. Experimental studies of model programs (including Abecedarian, Perry Preschool, and the Early Training Project) found larger effects on achievement test scores for low-income girls than boys, though the differences were not statistically significant. Two of these studies (Perry Preschool and Early Training Project) found that graduation rates were higher for girls than for boys. But results of the quasi-experimental studies of model programs are less consistent with this finding, and none of the large-scale studies which explicitly tested for gender differences found any.

One point that experts frequently note is that to produce good results, the pre-K program must be of good quality. Therefore, a key question for any state's pre-K effort is: What is the quality of the program?

### **JLARC REVIEW AND RESEARCH METHODS**

Using the study mandate as a guide, the primary focus of this report is upon addressing the manner of VPI's implementation, the quality of the program and its impact in helping at-risk students attain school-readiness and positive future educational outcomes, the application of "universal" preschool in other states and its suitability for Virginia, and options for potentially expanding VPI.

The primary research methods included a review of the research literature on at-risk preschool and universal preschool; interviews with DOE staff and other experts; an assessment of VPI program requirements in light of national standards; observations of classrooms in a subset of school divisions; surveys of kindergarten

## Attachment C

### Status of Recommendations from 2007 JLARC report *Virginia Preschool Initiative (VPI): Current Implementation and Potential Changes*

JLARC Recommendation	Status of Recommendation
<p>1. The Virginia Department of Education should conduct a longitudinal study of students who completed the Virginia Preschool Initiative (VPI) and other preschool programs to determine how these students perform on Standards of Learning (SOL) tests throughout school. The first such study should report on the performance of VPI graduates on the 2010-11 third grade SOL tests.</p>	<p>This recommendation was largely addressed by the Virginia Early Childhood Foundation study, <i>Predicting On-Time Promotion to and Literacy Achievement in Eighth Grade in Relation to Public Prekindergarten in Virginia</i>. This study was presented at the June 11<sup>th</sup> meeting of the Joint Subcommittee on the Virginia Preschool Initiative.</p>
<p>2. The General Assembly may wish to provide the resources needed to enable the Department of Education to (1) facilitate information sharing across local Virginia Preschool Initiative programs about how the programs are being implemented, and (2) keep local program coordinators well-informed of program updates or changes.</p>	<p>The General Assembly has not provided resources for this purpose. However, the Department of Education (DOE) provides information and updates electronically to local programs on a monthly basis. DOE also offers technical assistance to VPI administrators and staff through the use of webinars.</p>



## Attachment C

JLARC Recommendation	Status of Recommendation
<p>3. The General Assembly may wish to increase the State's capacity to facilitate classroom observations of local Virginia Preschool Initiative programs and the provision of technical assistance and mentoring to help programs improve. The State should also develop a formal method for tracking the results of classroom observations, and it should adopt a particular instrument(s) to use for conducting observations.</p>	<p>The General Assembly has not provided resources for this purpose. Prior to FY 2012, DOE conducted site visits and classroom observations at local VPI programs with the assistance of three contract staff. The Department eliminated funding for this purpose in FY 2012 as part of agency budget cuts. Currently, a DOE staff member uses desk audits to monitor local programs and provide technical assistance.</p> <p>Local VPI programs are able to obtain technical assistance and mentoring through Virginia's Star Quality Initiative (VSQI). The VSQI is a voluntary program offered through local Smart Beginnings early childhood coalitions. Participating programs are rated on factors related to preschool quality, and the VSQI provides participants with technical assistance and mentoring to improve quality. Forty-three VPI program sites voluntarily participated in VSQI during the 2014-2015 school year.</p>
<p>4. The General Assembly may wish to direct the Secretary of Education's Office and the Department of Education to develop a proposed professional development plan for the State to support the Virginia Preschool Initiative program.</p>	<p>The General Assembly has not provided direction in this area. However, in FY 2015 Virginia's Children's Cabinet and the Commonwealth Council on Childhood Success developed recommendations for statewide professional development and career advancement plans for early childhood educators. The Council also assessed the capacity and effectiveness of the state's higher education institutions to support the professional development of early childhood educators. A link to the Council's annual report detailing its recommendations is below:</p> <p><a href="http://www.ltgov.virginia.gov/docs/CCCS_June12015Report.pdf">http://www.ltgov.virginia.gov/docs/CCCS_June12015Report.pdf</a></p>