THE EFFECTIVE USE OF STATE RESOURCES AND COORDINATION OF PROGRAMS TO IMPROVE EDUCATIONAL OUTCOMES FOR CHILDREN FROM BIRTH TO AGE FIVE

ISP-2013-050 Sponsored by Rep. David Kizzia

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ACKNOWLEDGMENT

During the 2013 legislative session, Representative David Kizzia requested an interim study to determine effective strategies to ensure that all Arkansas students are reading at grade level by the end of third grade by 2020.

The following organizations provided information for the development of this report:

Arkansas Advocates for Children and Families
Arkansas Campaign for Grade-Level Reading
Arkansas Department of Human Services -
Division of Child Care and Early Childhood Education
Arkansas Head Start Collaborative Office
Arkansas Public Policy Panel
Arkansas Research Center
Arkansas State University Childhood Services
Rural Community Alliance
University of Arkansas for Medical Sciences -
Department of Family and Preventive Medicine
White River Planning and Development District

Introduction

The wisest investment Arkansas can make in its people is to provide quality pre-K. Arkansas is a poor state where almost one-third of our children live in poverty and more than 60 percent are eligible for free and reduced lunches.[1] Failing to ensure that these children are ready to learn when they start school greatly increases the risk of failing in school or not finishing school at all. If we don't insure that these children are academically successful, we will have lost almost two-thirds of our future work force. Arkansas can't afford to do that. We already have examples of losing out on economic opportunities due to the poor quality of our work force. Other states are moving forward with pre-K investments. Oklahoma is making tremendous progress, as are Georgia and Alabama. Doing nothing when others are going all-in is setting Arkansas on a path to further economic loss.

The early childhood period (birth to age 5) is a time of rapid brain development.[2] Researchers estimate that 80 percent of brain development occurs before children enter kindergarten. Early experiences are the foundation on which all later learning is built. Investing at this early point provides the most efficient and effective intervention to ensure later success in school. Pre-K not only provides for early learning, but also helps children develop the social skills they need to be successful in the classroom. It is the entry point for early treatment of developmental delays, treatment that can be less expensive and more successful than remedial efforts down the road.

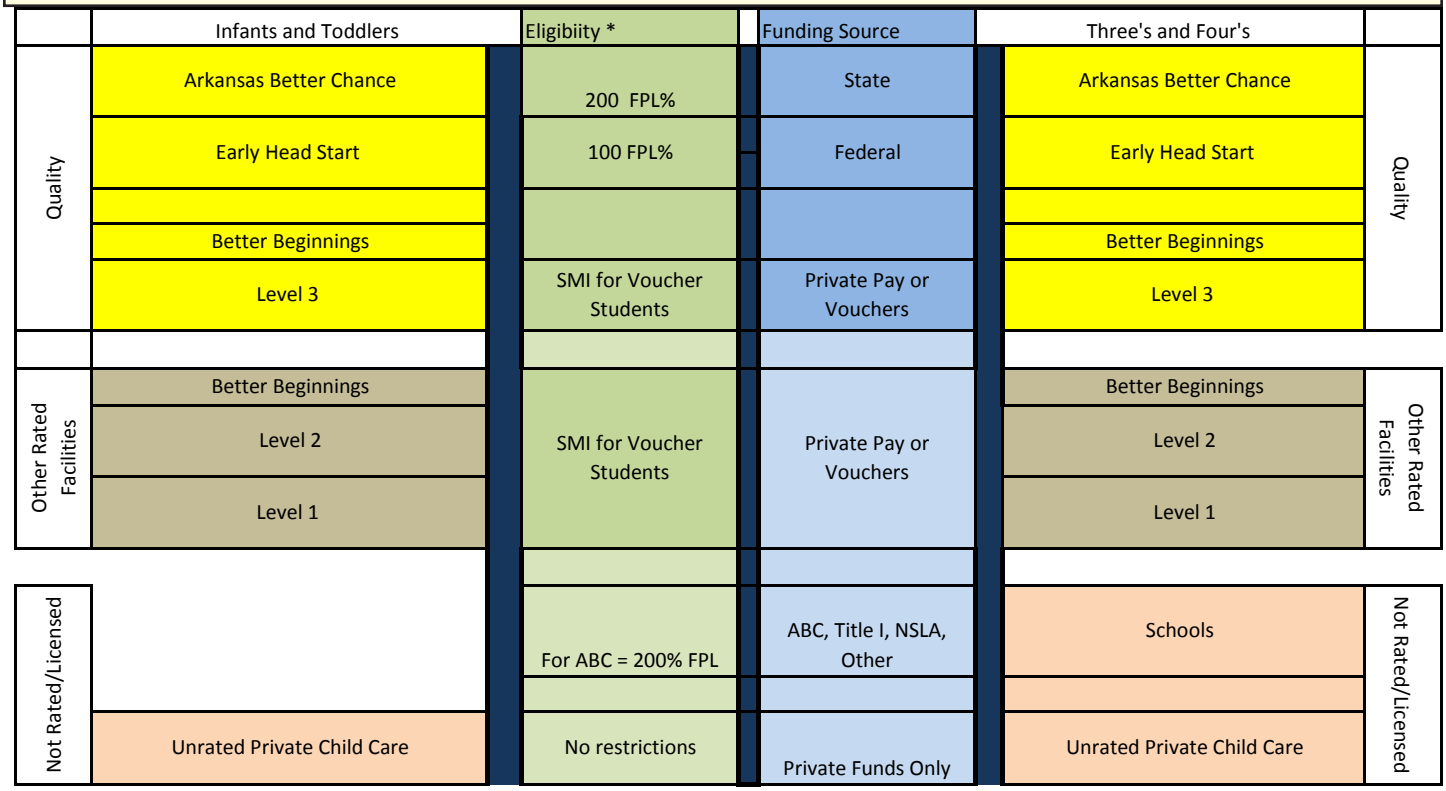
Several studies have reported on the return on investment for pre-K. James Heckman, a Nobel Prize-winning economist from the University of Chicago, has led a consortium of economists, psychologists, statisticians, and neuroscientists whose research shows that early childhood development directly influences economic, health, and social outcomes for individuals and society. Heckman's analysis of the Perry Preschool program shows a 7 to 10 percent (per year) return on investment based on increased school and career achievement as well as reduced costs in remedial education, health, and criminal justice expenditures. Other studies such as the National Institute for Early Education Research (NIEER) and the Federal Reserve Bank support these findings. In a poor state with a largely under-educated workforce, it just makes sense to invest early in our children.

SECTION 1. CHILDREN SERVED & UNMET NEEDS

The first step in determining how to move forward in early childhood education is to assess where we are. What programs are in place now? How many children are they serving? Finally, what barriers and gaps are we facing? Arkansas has two main types of early childhood programs:

- all licensed care programs meeting minimum state standards, and
- quality care programs that meet additional requirements concerning staff qualifications, teacher to child ratios, and educational curriculum.

Figure 1.



* *100% FPL for Family of Four in 2014 is $23,850*
200% FPL for Family of Four in 2014 is $47,700
SMI for a family of four is $32,342
** *Arkansas Better Beginnings Level 3 does not meet the standards of the highest quality programs in other states.*

This report focuses on quality care programs: Arkansas Better Chance (ABC), Head Start (HS), and Level 3 of the Better Beginnings (BB) program. It should be noted that Level 3 in Arkansas does not meet the standards of the highest quality programs in other states.

Arkansas Better Chance is the state-funded program of quality pre-K. To be eligible for participation in ABC, family income must be at or below 200 percent of the federal poverty level.[3] A small portion of the program's funding provides access for children meeting other eligibility criteria. The program includes some funding for home visiting services that serve younger children but the focus is on 3- and 4-year olds. That is the age group discussed in this section.

The Arkansas Better Chance program was created as Arkansas's own effort to address the need for early childhood education in the state. The program is composed of center-based, family-home-based, and two home visiting programs, HIPPY and Parents as Teachers.

In 1991, the original program was created at a funding level of $10 million. In 2003, the Arkansas legislature passed Act 49, which significantly expanded funding for the state's pre-Kindergarten program. This funding has increased from $13 million in 2004 to $111 million in 2008 as a five year funding plan that was phased in over 3 legislative sessions. Under the umbrella of Arkansas Better Chance, the original program with its eligibility criteria and original funding still exists alongside the much expanded program.

Head Start is the federally funded quality pre-K program. Three- and 4-year old children who are from families with incomes below the federal poverty guidelines are eligible for Head Start services. Children from homeless families and families receiving public assistance such as TANF or SSI are also eligible. Foster children are eligible regardless of their foster family's income.[4] Children younger than age 3 may also be served in a separate program known as Early Head Start.

Better Beginnings is a rating system for all child care programs. The funding for Better Beginnings programs can be public or private. All providers are encouraged to participate in the quality rating system and parents are urged to use the system to find quality care for their children.

On July 1, 2014, all programs that take child-care vouchers were required to participate in the Better Beginnings rating system. Centers and family homes serving 3- and 4-year olds are included below. It should be noted that, the Arkansas Better Beginnings highest level or level 3 is not comparable to quality programs in other states. There are plans to add two higher levels that have not been implemented due to the lack of funding.

The charts on the following pages show, by area, the number of 3- and 4- year old children eligible (broken down by PUMA or census area[5]) for each of these programs and the number of children enrolled in those areas. A little more than 56 percent of Arkansas 3- and 4-year olds from low-income families have access to a high-quality (including children funded through vouchers from Level 3 Better Beginnings) early childhood education program. It's easy to see in the last column of the following chart that some areas of the state have better coverage than others.

Of the eighteen census areas, counties in north central Arkansas and southeast Arkansas (highlighted in green) have met much of the need. Other areas of the state have had much less access (highlighted in orange.) Some of our most populous areas including Benton, Washington, Faulkner, Lonoke, and Saline Counties, have the most unmet need for quality early childhood programs for 3- and 4-year-olds.

In these populous areas, and in some other locations throughout the state, school districts are also meeting some of the need for pre-K programs. According to adequacy survey data, school districts serve 3,604 three year olds and 11,901 four year olds. However, some of the ABC slots listed below are for children in school-based programs.

Other children in school-based programs may be funded with federally funded vouchers and with K-12 funding programs such as Title I and NSLA, or school poverty funding (named after the National School Lunch Act) program. NSLA is the part of the state education funding package aimed at low-income students, based on the number of students in a certain district that are eligible for free and reduced price lunches. Only 57 school districts are using NSLA funds for pre-K programs. The percentage of NSLA funds used is 3.4 percent.[6] Sorting out the students in these programs by funding source is not available at this time.

Figure 2.

	Children 3-5 <200% FPL		ABC PreK Slots & percent served		HS PreK Slots & percent served		Better Beginnings Level 3 slots and percent served		
Area	N	%	N	%*	N	%*	N	%*	Tot %*
Benton County	3373	46	800	24%	373	11%	16	0.5%	35.3
Washington County	4054	62	1276	31%	267	7%	2	0.0	38.1
Baxter, Boone, Carroll, Marion, Madison, Newton & Searcy Counties	2073	71	656	32%	483	23%	0	0.0	54.9
Independence, Cleburne, Van Buren, Sharp, Izard, Stone & Fulton Counties	1228	52	789	64%	334	27%	5	0.4	91.9
Craighead , Greene, Randolph, Lawrence & Clay Counties	2917	60	1495	51%	603	21%	4	0.1	72.1
Crittenden & Mississippi Counties	2093	64	782	37%	997	48%	0	0.0	85
St. Francis, Poinsett, Phillips, Cross & Lee Counties	2142	79	771	36%	329	15%	1	0.0	51.4
White, Jackson, Prairie, Woodruff & Monroe Counties	1861	65	615	33%	405	22%	10	0.5	55.3
Pulaski County	5560	52	2978	54%	853	15%	49	0.9	69.8
Faulkner, Lonoke & Saline Counties	3426	43	669	20%	368	11%	14	0.4	30.7
Pope, Johnson, Yell, Conway & Perry Counties	2008	56	975	49%	559	28%	10	0.5	76.9
Sebastian & Crawford Counties	3841	71	1163	30%	404	11%	1	0.0	40.8
Logan, Polk, Franklin, Sevier, Howard & Scott Counties	1791	65	1185	66%	172	10%	1	0.1	75.8
Garland, Hot Spring, Clark & Montgomery Counties	2162	54	899	42%	489	23%	4	0.2	64.4
Jefferson, Grant & Arkansas Counties	1846	57	436	24%	520	28%	1	0.1	51.8
Southeast Arkansas	1531	56	809	53%	556	36%	6	0.4	89.5
South Central Arkansas	2239	75	745	33%	592	26%	0	0.0	59.7
Southwest Arkansas	2170	65	510	24%	90	4%	0	0.0	27.6
Arkansas Totals	46315	58	17553	38%	8394	18%	124	0.3	56.3
*Percent of Children in Poverty									

Southeast Arkansas is the following counties: Desha, Lincoln, Cleveland, Bradley, Drew, Ashely, and Chicot.
South Central Arkansas is the following counties: Dallas, Calhoun, Ouachita, Union, and Columbia.
Southwest Arkansas is the following counties: Pike, Hempstead, Nevada, Little River, Miller, and Lafayette.

Access to quality care for infants and toddlers is bleak by comparison. Only Crittenden and Mississippi counties (highlighted in green) have more than 10 percent of their need met with quality early childhood programs. South Central Arkansas is not far behind with 9.5 percent of its need met. Several areas of the state including Benton, Faulkner, Lonoke, Saline counties along with southeast and southwest Arkansas, highlighted in orange, have less than one percent of their need met.

Birth to Age 3	Children Birth to 3 or Infants & Toddlers <200% FPL		ABC I/T Slots and Services & percent served		EHS PreK Slots & percent served		Better Beginnings Infant & Toddler Level 3 slots and percent served		
Area	N	%	N	%*	N	%*	N	%*	Tot %*
Benton County	4924	48	0	0%	0	0%	27	0.5	0.5
Washington County	5273	60	13	0%	48	1%	7	0.1	1.3
Baxter, Boone, Carroll, Marion, Madison, Newton & Searcy Counties	3464	69	9	0%	52	2%	0	0.0	1.8
Independence, Cleburne, Van Buren, Sharp, Izard, Stone & Fulton Counties	3380	70	54	2%	0	0%	3	0.1	1.7
Craighead , Greene, Randolph, Lawrence & Clay Counties	4548	62	174	4%	96	2%	10	0.2	6.2
Crittenden & Mississippi Counties	3210	70	3	0%	362	11%	0	0.0	11.4
St. Francis, Poinsett, Phillips, Cross & Lee Counties	2855	71	56	2%	0	0%	1	0.0	2.0
White, Jackson, Prairie, Woodruff & Monroe Counties	2617	61	30	1%	0	0%	4	0.2	1.3
Pulaski County	8632	55	8	0%	136	2%	51	0.6	2.3
Faulkner, Lonoke & Saline Counties	4631	42	6	0%	0	0%	22	0.5	0.6
Pope, Johnson, Yell, Conway & Perry Counties	2996	52	51	2%	128	4%	10	0.3	6.3
Sebastian & Crawford Counties	4857	65	58	1%	36	1%	2	0.0	2.0
Logan, Polk, Franklin, Sevier, Howard & Scott Counties	3026	75	37	1%	90	3%	3	0.1	4.3
Garland, Hot Spring, Clark & Montgomery Counties	3138	62	3	0%	56	2%	13	0.4	2.3
Jefferson, Grant & Arkansas Counties	2628	68	10	0%	20	1%	6	0.2	1.4
Southeast Arkansas	2607	70	5	0%	8	0%	7	0.3	0.8
South Central Arkansas	2073	60	18	1%	175	8%	3	0.1	9.5
Southwest Arkansas	2515	65	8	0%	0	0%	3	0.1	0.4
Arkansas Totals	67374	60	543	1%	1207	2%	172	0.3	2.9
*Percent of Children in Poverty									

Barriers to expanding access to quality pre-K programs include facilities and transportation. Facilities costs will be discussed in detail in the next section but existing facilities space available for pre-K programs is also an issue. One solution for rural areas with declining enrollment is the local school district. Some of these districts have empty classrooms that can be converted for pre-K use. In a survey from the spring of 2014 by the Arkansas Rural Ed Association, 33 mostly rural school districts reported on the availability of space for pre-K programs. All indicated their awareness of unserved pre-K children that could use programs, if the school was able to sponsor a program. Twenty-eight of the districts indicated that they have classroom space available, sometimes multiple classrooms. Several also indicated that the space would need to be remodeled before it was suitable for pre-K programs.

A separate survey of school districts in conjunction with the adequacy survey yielded these results. Fifty-six of the 239 districts in the 2013-14 school year indicated they did not have any pre-K classrooms. Other responses are indicated below:

Figure 4.

Total Classrooms Statewide	829
# of Classrooms per District	# of Districts
1	24
2	44
3	42
4	20
5-72	43
Total	238

The survey data also indicated that 32 districts have at least one or more classrooms for 3-year olds. By far, most school-based pre-K programs serve 4-year olds with 63 districts indicating they had one or more classrooms for these students. NACCRAware[7] surveyed Arkansas child care providers. Of those who responded to the question, 82 percent say they do not transport children. There are anecdotal reports that when center or school-based providers have closed and relocated in neighboring communities, parents are no longer able to transport their children to the new location. A recent example of this is the closure of the Stephens school district. The district had a pre-K program. However, when the district was split up those pre-K slots were transferred to Camden. Therefore, parents in Stephens no longer had access to affordable and quality pre-K.

SECTION 2. COST MODELS

Public Financing for Early Learning

For the past seven years, Arkansas Early Childhood Education has struggled with budget cuts. First, the ABC program has not had a cost-of-living increase in seven years. This has crippled the ability of providers to deal with cost increases for salaries, food, rent, and utilities. Some centers are closing. Second, the federally-funded Head Start program experienced cuts due to sequestration at the federal level resulting in fewer children served and the closing of some centers. Restoration of the lost Head Start funding was approved late in 2013. However, no relief for the ABC program is in sight.

According to Bureau of Legislative Research adequacy reports, K–12 education has received annual increases in all adequacy designated programs with few exceptions.[8] For the years 2008 through 2015 those increases totaled 13.84 percent. But our pre-K children have had nothing. Access is limited to any program but access to high-quality programs varies based on a child's zip code. There are no providers in reach for many of the state's rural parents and programs in more urban areas do not have the capacity to serve all the needs in the higher-populated areas of the state. In too many cases the children in programs serving 3- and 4-year-olds are not in high-quality programs.

Some key state policy recommendations from the National Institute for Early Education Research NIEER are:

- Develop new and more reliable funding streams for early learning programs that increase the total amount

of public funding available and, at the very least, produce full coverage of disadvantaged children.
- Tie federal and state subsidies for child care to quality, perhaps using tiered payments linked to state Quality Rating Systems.
- Replace tax credits with more direct subsidies or pay them in tiers linked to program quality.
- Measure the effectiveness of preschool special education spending, subjecting it to cost-effectiveness analysis. Funding for preschool special education is substantial, but the needs are also great, and additional effort to ensure effective use could have a high return.
- Increase the use of federal Title I funds for quality pre-K programs by requiring school districts to spend these funds on programs demonstrated to be effective.
- States that do not fund early education through their school funding formulas should work toward that goal or develop other dedicated funding mechanisms that are more stable than annual discretionary appropriations from general revenue.[9]

In addition to increasing the use of federal Title I funds for pre-K, Arkansas should consider using state NSLA funds for pre-k. This could be accomplished in one of two ways.

- Reduce the amount of NSLA funds distributed directly to districts for a wide variety of eligible uses and set those funds aside to be used in Needs Improvement, Focus and Priority districts for pre-K.
- Require Needs Improvement, Focus and Priority districts to use a significant specified minimum percentage of their NSLA funds for pre-k programs.

Early Learning Cost Model (IWPR and ECPR)

An early childhood education cost estimation model developed by the Institute for Women's Policy Research (IWPR) and Early Childhood Policy Research (ECPR) is shared here. The IWPR model assists in forming a per-child estimate for pre-K programs across 12 levels of quality.[10]

The estimation model is based on a study that assumes all high-quality pre-K programs should possess the characteristics that provide benefits to children and families according to IWPR's report, Meaningful Investments in Pre-K.[11] "The estimated costs range from $5.17 per child hour at the lowest-quality level, to $8.18 per child hour at the highest level," says Barbara Gault, primary author of the study. When inflated to 2015 rates (12.4 percent[12]) that is $5.81 per child hour at the lowest quality level and $9.19 at the highest level. At 1,665 hours per year (185-9 hour days), the cost for one child ranges from $ 9,673 to $ 15,301.[13]

The variables in this study included three class sizes—20, 17 and 15 children per classroom as well as four teacher qualification/pay levels ranging from a bachelor-degree-holding teacher with early childhood credentials paid at typical kindergarten teacher levels to a teacher with a CDA (Child Development Associate) credential. The annual estimates are based on a 185-day program. The hours-per-day options included in the study were a half-day with two daily sessions at three hours each; a school-day session of six hours; and a nine-hour workday session. The salaries were based on data from the National Pre-Kindergarten Study by Gilliam in 2006 and the US Department of Labor Bureau of Labor Statistics report in 2007. They included direct and indirect costs and system infrastructure cost with the exception of professional development.[14]

Better Beginnings Cost Model (UAMS)

Researchers from the UAMS Department of Family and Preventive Medicine conduct ongoing evaluation of Better Beginnings and continually estimate the financial impact of operating child care programs at different levels of quality. The analysis was to determine whether it's feasible to establish two higher quality levels of the Better Beginnings program without additional funding.

The team used a Cost Modeling Tool developed by Louise Stoney and Anne Mitchell at the Alliance for Early Childhood Finance and customized the model for Arkansas using information from the following sources:

- State occupational employment and wage estimates from the Bureau of Labor Statistics
- Arkansas Better Chance budgets
- Community-based child care director focus group
- Arkansas Division of Child Care and Early Childhood Education (DCCECE) data
- Child Care Resource and Referral staff
- Arkansas Advocates for Children and Families
- Arkansas State University (ASU) Early Childhood Services

The results of the models show that in the current market, Arkansas child care providers cannot afford to offer better quality care.

Cost Variables
Figure 5.

Expense	
Personnel Costs	**Non-Personnel**
Wages/Salary	Rent /Lease
Mandatory benefits	Utilities
Social Security	Building Insurance
Medicare	Maintenance/Repair/Cleaning
Unemployment	Telephone & Internet
Workers Compensation	Audit
Health Insurance	Fees/Permits
Reserve fund	Food & Food Prep
	Kitchen Supplies
	Education Supplies
	Education Equipment
	Office Supplies
	Office equipment
	Business Insurance
	Payroll/Contract services
	Credit card processing fees
	Advertising
	Postage
	Miscellaneous
	Consultants/Training
	Transportation

UAMS took into account the variables shown at left. NON-PERSONNEL COSTS—like rent, utilities, insurance, and educational supplies—increase some when programs provide a safer environment that stimulates learning. However, the real cost driver is PERSONNEL. In higher quality centers, more teachers have higher education in early childhood education, which drives up hourly rates. Most revenue comes from parent tuition paid at current market rate. In higher-quality centers, there are more teachers and fewer children. This means that programs collect less tuition per classroom.

Current Cost Model for Arkansas Better Chance (ABC)
The funding for the current ABC program has varying results based on the type of provider and the type of services. The cost break down follows for the reimbursement rate the ABC program provides for center-based and family-based care. Programs are reimbursed by ABC for operating 178 days of seven hours per day. This is equivalent to K-12 operations of 178 student days of a minimum of six hours instruction.

Figure 6.

2013-2014 ABC CORE MODEL for CENTERS				
Well-Qualified and Compensated Staff	Classroom Teacher		Salary	$ 30,000.00
			Range	$ 44,160.00
			Fringe	$ 7,500 to
			Range	$ 11,040.00
	Paraprofessional		Salary	$ 18,000.00
			Fringe	$ 4,500.00
Administrative Costs	$ 220.00	per child	$ 4,400.00	
Curriculum and Equipment	$ 275.00	per child	$ 5,500.00	
Parent Involvement	$ 100.00	per child	$ 2,000.00	
Transportation	$ 110.00	per child	$ 2,200.00	
Professional Development	$ 1,650.00	per staff	$ 3,300.00	
Screenings	$ 50.00	per child	$ 1,000.00	
Technology	$ 55.00	per child	$ 1,100.00	
Total ABC Funding for 20 children			$ 97,200.00	
40% Match			$ 64,800.00	
TOTAL PROGRAM COST			$ 162,000.00	
State Cost per child			$ 4,860.00	
40% Match			$ 3,240.00	
Total Cost per child			$ 8,100.00	

Figure 7.

2013-2014 ABC CORE MODEL for LICENSED FAMILY HOMES				
Well-Qualified and Compensated Staff	Family Home Teacher		Salary	$ 30,640.00
			Fringe	$ 7,660.00
Administrative Costs	$ 220.00	per child	$ 2,200.00	
Curriculum and Equipment	$ 275.00	per child	$ 2,750.00	
Parent Involvement	$ 100.00	per child	$ 1,000.00	
Transportation	$ 110.00	per child	$ 1,100.00	
Professional Development	$ 2,200.00	per staff	$ 2,200.00	
Screenings	$ 50.00	per child	$ 500.00	
Technology	$ 55.00	per child	$ 550.00	
Total ABC Funding for 10 children			$ 48,600.00	
40% Match			$ 32,400.00	
TOTAL PROGRAM COST			$ 81,000.00	
State Cost per child			$ 4,860.00	
40% Match			$ 3,240.00	
Total Cost per child			$ 8,100.00	

Providers must balance the financial gap between what families can reasonably afford and the actual cost of quality care and education. Families, especially lower-income families, are over-burdened with child care expenses. Infant care in Northwest Arkansas already exceeds in-state enrollment at the University of Arkansas.[15] In short, strategically improving quality care and early childhood education requires community investments. The Helen Walton Children's Enrichment Center has requested funding over the last seven years for improved wages and subsidies to retain educated, trained, and experienced teaching staff in Northwest Arkansas, resulting in a 62 percent decrease in turnover, while the average center continues to experience a 400 percent annual turnover[16]. The Endeavor Foundation is doing similar work and providing supports to Northwest Arkansas providers.

There are concerns about continuing to use the ABC models that were developed in 2008. Costs have increased by 12.4 percent since this was developed.[17] Assuming the models accurately reflected true costs at that time, they should have been increased by more than $1,000 per child by FY2014-2015.

Comparison with state funding for K-12 is warranted. The teacher salary, including benefits, used for the K-12 calculation is $63,130. Salaries for center-based staff in a quality environment for the ABC program are $55,200 on the upper end of the range. Also, K-12 funding does not cover facilities costs (rent or debt service payments). ABC funding must cover these costs. The following chart shows a comparison of state K-12 funding to ABC funding.

Figure 8.

2014-15 Per Student	Funding
State Foundation K-12 Funding - based on avg. class size of 20.8.	$6,521
ABC Cost Model – based on avg. class size of 10.	$8,100
ABC Actual Payment (required match not included)	$4,860
State Foundation K-12 Funding (if class size were 10)	$10,460

To summarize, Arkansas pays an equivalent rate of $10,460 for K-12 students. That rate does not cover facilities costs for school districts. For 3- and 4-year-old students, Arkansas pays providers, $4,860. That amount must cover their rent or mortgage costs.

ABC Cost Model and Match Comparison between School-based Centers and Community-based Centers

Program evaluators at the University of Arkansas for Medical Sciences analyzed costs from the 2013-2014 fiscal year to help the state determine whether funding strategies need to be updated for ABC providers. UAMS staff identified substantial differences between school-based and community-based ABC programs. These differences should be addressed by updating the ABC funding formula. Thirteen directors of ABC programs were invited to help us verify or change the base model. Nine directors agreed to participate. Three operated within school districts and six operated within community-based child care programs. Programs were located in different state regions, represented urban and rural areas, and served between 30 and 180 children through ABC. All community-based programs provided care to additional children whose families paid tuition privately or with Child Care Development Fund (CCDF) assistance. Directors were asked to report their ABC expenses in the past year in each category shown in Figure 9:

Figure 9: Categories of Expense

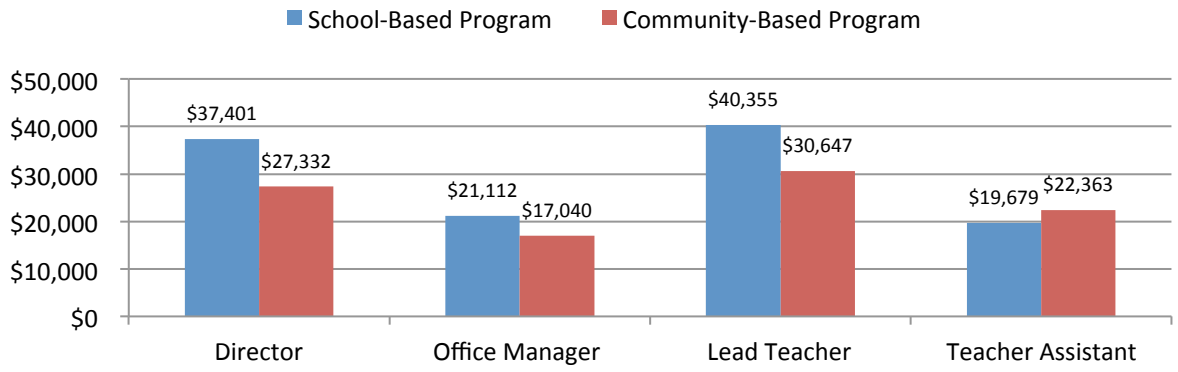
Personnel Costs	Non-Personnel	
Wages/Salary	Rent /Lease	Education Supplies
Mandatory benefits	Utilities	Education Equipment
Social Security	Building Insurance	Office Supplies
Medicare	Maintenance/Repair/Cleaning	Office Equipment
Unemployment	Telephone & Internet	Business Insurance
Workers Compensation	Audit	Payroll/Contract services
Health Insurance	Fees/Permits	Credit card processing fees
Reserve Fund	Food & Food Prep	Advertising
	Kitchen Supplies	Postage
	Consultants/Training	Miscellaneous
	Transportation	

The study also considered whether any expenses were not addressed. Additional expenses were grouped into the miscellaneous category. The project also includes an analysis of the items and amounts each program used to meet ABC's requirement of a 40 percent match.The Arkansas Better Chance Program requires that 40 percent of funding for ABC programs come from local sources.[18]

After interviews were complete, for each budget item, a mean cost for district programs and a mean cost for community-based programs was calculated. Results presented below demonstrate that the two types of programs operate differently. Calculations presented in figures and tables are based on one ABC classroom with 20 children. This would mean at least one degreed teacher and an aide. School-based programs report higher personnel

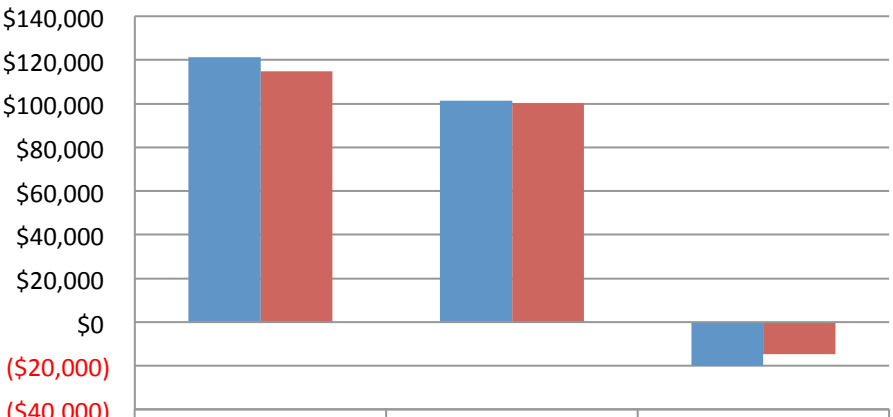
costs than community-based programs. As shown in Figure 10, directors in community-based programs report salaries that are 73 percent of those in school-based settings. Similarly, lead teachers in community-based programs are reported to earn 76 percent of the salaries of teachers in school-based settings. Furthermore, directors in school-based programs reported making contributions to their employees' retirement and healthcare plans at greater rates than those in community-based settings; none of the community-based settings reported contributing to retirement and only 25 percent reported making any contribution to healthcare plans.

Figure 10: ABC Personnel Cost Comparison: School- and Community-Based Programs



Cost models computed using actual costs for school-based and community-based programs show providers in both settings with an expense/revenue ratio that documents operating at a negative profit margin (see Figure 11). Community-based programs report higher non-personnel costs; it would appear that they compensate by providing employees with less in salary and benefits. Programs operating in school districts have less flexibility in terms of employee compensation and benefits, expenses which are covered, in part, by fewer non-personnel costs.

Figure 11: ABC Expenses, Revenue, and Profit Margins: School- and Community-Based Programs



	Expenses	Revenue	Profit Margin
School-Based Program	$121,315	$101,284	($20,031)
Community-Based Program	$114,827	$100,274	($14,553)

As shown in Figure 10, school-based programs pay significantly less in non-personnel expenses than community-based programs and, as a result report a much higher percentage (71 percent) of in-kind contributions to meet match requirements than was reported by community-based programs (52 percent).

Figure 12:. ABC Match Comparison: School- and Community-Based Program

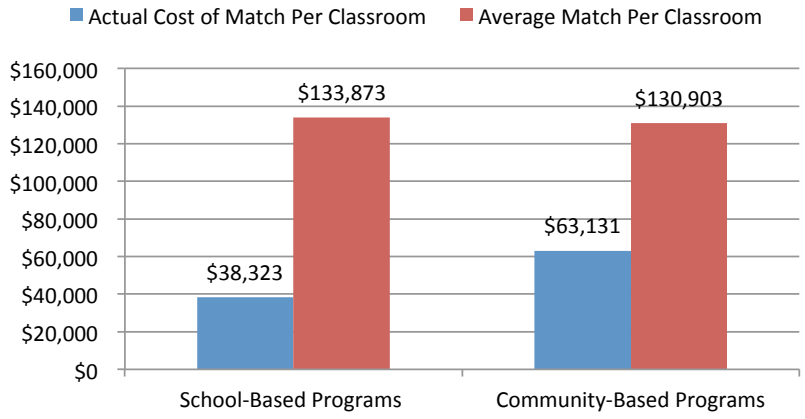
Match Items	School-Based Programs	Community-Based Programs
Non-Personnel Expenses		
Annual Costs per Classroom		
Rent/Mortgage	$0*	$3462
Building Utilities	$1,170	$1817
Building Insurance	$400	$1089
Building Maintenance/Cleaning	$425	$815
Annual Costs per Child		
Food & Food Prep	$359	$480
Kitchen Supplies	$0*	$283
Educational Supplies & Equipment	$210	$113
Office Supplies & Equipment	$8	$19
Insurance (liability, accident, etc.)	$0*	$31.50
Payroll/Contract services	$0*	$8
Credit/debit card processing fees	$0*	$0.67
Advertising	$0*	$9
Misc. (incl. parent Involvement & screening)	$32	$40
Consultants/Training (incl. certifications)	$35	$63.50
Transportation	$6	$243
Annual Operating Costs		
Telephone/Internet	$2133	$1224
Audit	$0*	$3566
Fees/Permit	$50	$315
Personnel Expenses		
Director Salary	$21145	$25030
In-Kind Match Amounts		
Nutrition reimbursement	100%=$15871	100%=$14896
Cost of therapy/specialized instruction	$550/child=$3630	$550/child=$660
Professional development	$1650/teacher=$3300	$1650/teacher=$3300
Developmental screening	$50/child=$1000	$50/child=$1000
Transportation	$979/child=$19580	$979/child=$19580
ACTUAL COST PER CLASSROOM**	**$38,323**	**$63,131**
AVERAGE MATCH PER CLASSROOM	**$133,873**	**$130,903**
PERCENT IN-KIND MATCH	**71%**	**52%**

*All programs report no cost; **Calculated with 20 children per class

*All programs report no cost; **Calculated with 20 children per class

For both settings, the cost of ABC per child exceeds the $4,860 that programs receive per student (school-based programs per child cost equal $6,250; community-based programs per child cost equal $5,741). While the cost per student with match (40 percent) is $6,804 per student, and both types of programs do not exceed that amount, it is clear that match that is claimed in school-based programs is more likely to be in-kind and not represent an actual expense to the provider, while the match claimed for community-based programs is more likely to be at an actual cost to the program (see Figure 13).

Figure 13. Match: School- and Community-Based Programs



The analysis demonstrates the challenge of making ends meet in an ABC program with the current funding and match formula. If funding is not increased, programs will need to make further cuts to educational supplies and equipment, professional development, building maintenance, and teacher raises. If

this trend continues, the quality of ABC programs and its positive outcomes for children at risk will decline. Correcting the problem would require that funding be increased for district- and community-based programs. The proportion of funding for community-based programs should be higher because they must spend more money to make their 40 percent match than district-based programs.[19]

Facilities Costs

In developing early education facility policies, bridging the gap between the cost of quality facilities and the revenue available to deliver early care and education services is a critical challenge. The National Institute for Early Education (NIEER) reports constructing, or acquiring and substantially rehabilitating, one building costs between $10,000 and $30,000 per child.[20]

Public programs mostly provided through school districts have few if any facility costs. Several districts have converted former elementary buildings that have been replaced by new facilities to pre-K centers. Examples include Springdale and Little Rock. Other districts are providing one or two classrooms in existing elementary school buildings to house pre-k programs. In a survey conducted by the Arkansas Rural Ed Association, with 34 districts responding, only two school districts indicated that they did not have additional space for pre-K programs.[21]

For programs that are not school-based, facilities costs are another story. Some have space for no-costs or minimal costs provided through a nonprofit such as a church. Other programs lease or rent space at market rates. Few have stand-alone mortgaged facilities owned by the pre-K program.

Other states have taken measures to resolve some of the issues related to facilities financing. Examples are listed below.

- Illinois, in partnership with the nonprofit Illinois Facilities Fund (IFF), pioneered the debt service support model in 1992. Through a pilot Child Care Facility Development Program, the state made a one-time commitment to service 100 percent of the debt to retire a 10-year tax-exempt bond issued on behalf of seven nonprofit agencies serving low-income children. With IFF's assistance, each agency constructed or renovated a center.[22]
- Connecticut has a School Readiness Loan Program. Connecticut used tax-exempt bonds and secured bond insurance to guarantee the lowest interest rates available. The state issued 30-year bonds that permitted a long amortization period, meaning the state's modest $2.5 million annual debt service appropriation resulted in the immediate construction of a significant number of facility projects. Low monthly payments mean providers can shoulder a share of the debt, and in turn, their debt payments allow the state's investment to support more projects.[23]
- Another measure taken by Connecticut to support school construction included space for early childhood classrooms. The Connecticut School Construction Program includes a five percent bonus on the proportion of the costs attributable to early childhood classrooms. The bonus is in addition to the state's routine school construction grants.[24]

NIEER has these policy recommendations regarding facilities for state pre-K and early childhood:

- Incorporate facilities policy into the state's overall approach to expanding and improving the early care and education system.
- Explicitly incorporate facilities policy into the Quality Rating Systems to encourage early childhood programs to aspire toward facilities that exceed regulatory minimums.
- Reflect policy in state licensing concerning how facilities can promote a child's emotional and cognitive development. States should also ensure that inspectors appropriately interpret and consistently enforce existing and revised requirements.

Private versus Public Pre-K

The cost pressures in Arkansas are beginning to drive private providers out of business. Seven years without a cost of living increase has stretched many of these family businesses and some larger business groups to the breaking point.

Information provided by DCCECE indicates the following information for ABC provider closures occurring during the program year.

Figure 14: ABC Provider Closings 2011-2014

Agency	Location	Slots
2013-14		
Parkway Daycare and Learning Center	Russellville	20
2012-13		
Sunrise Academy	Joiner	15
United Methodist AR Cares	Little Rock	17
Centers for Youth and Families	Little Rock	18
2011-12		
Child Development, Inc.	Russellville	388
Cossatot Community College/UA	DeQueen	38

According to DCCECE, the first four agencies listed indicated financial reasons for closure although ABC was not the only funding source (2012-14). Child Development, Inc. was a Head Start agency which received ARRA funding (American Recovery and Reinvestment Act – part of the 2009 federal stimulus package) and did not make the budget adjustment when ARRA funding was exhausted which may have caused the financial issues leading to closure. Cossatot Community College requested to close the college's program during the program year and did not indicate financial reasons.[25]

There are mixed opinions on housing publicly funded prekindergarten in school buildings rather than in community-based settings. One concern is the economic impact school-based programs will have on the enrollment in community-based programs. The financial viability of infant and toddler care offered in community-based centers often depends on internal cost sharing with preschool programs because infant toddler programs are more expensive to staff. If the use of school-based programs results in reduced preschool enrollments at community-based centers, it would drive up the cost of infant and toddler care. A further challenge school-based programs must address is the need for care beyond typical elementary schools hours. Publicly funded prekindergarten programs often operate part-day (6 hours or less). However, most children need some form of child care for the remainder of the parent's work day, which can involve a difficult transition for children and costly transportation to a different site.[26]

SECTION 3. STAFFING AND CAPACITY

Status of the Workforce

The Arkansas early childhood education workforce is diverse in terms of educational qualifications, professional development opportunities, and availability in rural areas of the state. The following chart shows the number of early childhood educators with each level of credential in Arkansas.

Figure 15: Early Childhood Educator Credentials

Progression of Credentials[27]	# of Current Educators	% of the Early Childhood Educator Workforce
GED	21,537	77.9%
CDA	1,786	6.5%
Associate's Degree	1,318	4.8%
Bachelor's Degree	2,335	8.5%
Master's Degree	626	2.3%
Doctorate Degree	23	0.1%

As shown in Fig. 15, nearly 80 percent of the Arkansas early childhood education workforce has no specialized training in early childhood education. The Arkansas Better

Chance Program requires one teacher with a Bachelor's degree per 20 students or for every two classrooms. Efforts are currently underway to improve qualifications as part of the Arkansas childcare licensing system. Proposed rules state that a child care center director should have one of the following:

- A Bachelor's degree in Early Childhood Education, Child Development or related field
- An Associate's degree in Early Childhood Education, Child Development or related field and six years of experience
- Eight years of experience in early childhood education and completion of one of the following within two years of employment—a child development associate credential, birth-to-pre-k credential or director's credential or the equivalent.

Traveling Arkansas Professional Pathways (TAPP)

Beginning in 1999, Arkansas began the development and implementation of a comprehensive professional development system called the Traveling Arkansas Professional Pathways in order to increase the professional capacity of its early childhood workforce through a coordinated system of education, training, and related activities. The TAPP System includes three main components that jointly work to ensure the delivery of high-quality professional development opportunities through career pathways that meet the diverse needs of early childhood professionals.

1. Arkansas Key Content Areas and Core Competencies—a workforce knowledge and competency framework which describes professional standards across a continuum of what early care and education professionals should know and understand in order to provide high-quality experiences for children.
2. The TAPP Map serves as a "roadmap" that provides the progression of equivalent training hours, degrees, and competency levels.
3. The TAPP Registry serves to ensure quality, continuity, and accessibility of training opportunities. The Registry has three components: the Practitioner Registry, the Trainer Registry and the Training Registry.

Workforce Knowledge and Competency Framework

To further guide professional development for its workers that addresses different levels of knowledge and experience, Arkansas has developed a Workforce Knowledge and Competency Framework, known as the Arkansas Key Content Areas and Core Competencies, that delineates a continuum of early childhood educator competencies.

In 2009, the system was simplified and updated to eight Key Content Areas with three levels of professional competencies: foundation, intermediate, and advanced. This framework is currently in use as an integral part of the TAPP System. The eight Key Content Areas are:

1. child growth and development
2. learning environment and curriculum
3. positive interactions and guidance
4. family and community
5. child observation and assessment
6. health, safety, and nutrition
7. professional development and leadership
8. program planning and management

The competency levels and expected commensurate levels of education, professional development, and corresponding staff roles are as follows:

- Foundation Competencies: assistant teachers with a high school diploma, GED, or degree unrelated to child development and limited experience with professional development. These individuals have limited re-

sponsibility for planning children's learning experiences.

- Intermediate Competencies: lead teachers, assistant directors, and team members with a CDA credential, one-year technical certificate in early childhood education or related area, or an associate's degree in early childhood education or related field. These individuals are expected to have work experience or professional preparation (preferably with extended field experience) sufficient to plan and implement curriculum and learning environments and support as assistant teachers within the classroom.
- Advanced Competencies: lead teachers, educational coordinators, curriculum supervisors, site directors, owners, agency/central office staff, and early childhood educators who hold a bachelor's degree or higher in a field appropriate to job responsibilities and ages of children served. These individuals are expected to have work experience or professional preparation (preferably with extended field experience) sufficient to develop, implement, monitor, and evaluate policies and procedures based on current research and best practices/evidence-based practice; and for providing modeling and supervision for other staff).

TAPP Map

In order to better align professional standards and career pathways, Arkansas has developed the TAPP Map, which assists early childhood professionals in navigating the progression of credentials and degrees that are aligned to the state's workforce knowledge and competency framework. The TAPP Map describes the eight levels of professional development based on training and education and is organized according to the three competency levels of the framework:

1) Foundation Competency Level

- Foundation 1: Registered 15 clock hours including orientation
- Foundation 2: Registered 30 clock hours
- Foundation 3: Registered 45 clock hours or 3 semester hours

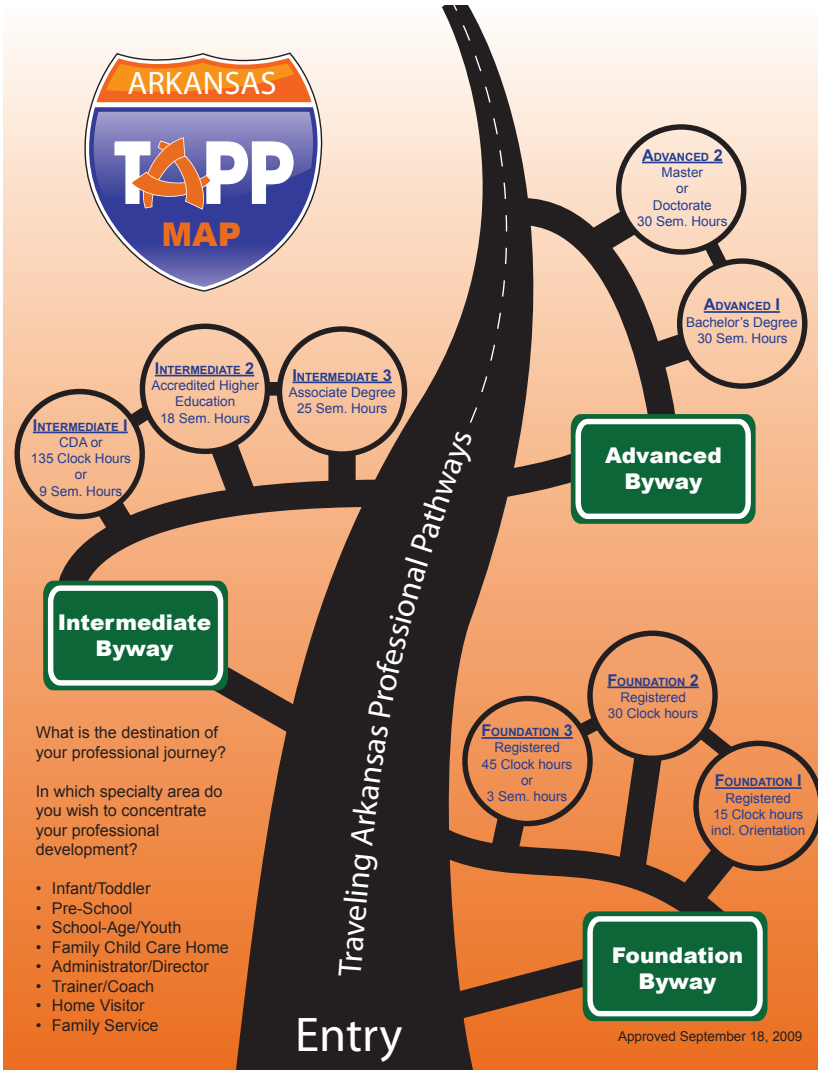
2) Intermediate Competency Level

- Intermediate 1: CDA or 135 clock hours or 9 semester hours in early childhood education/child development
- Intermediate 2: Accredited higher education 18 semester hours in early childhood education/child development
- Intermediate 3: Associate degree or 25 semester hours in early childhood education/child development

3) Advanced Competency Level

- Advanced 1: Bachelor's degree in early childhood education/child development or 30 semester hours in early childhood education/child development
- Advanced 2: Master's or doctorate degree in early childhood education/child development or 30 semester hours in early childhood education/child development

Figure 16: TAPP Map[28]



Areas for Improvement

Innovative Higher Education Training and Professional Development.

Of equally critical importance is the alignment of the professional standards to the professional development content provided to early childhood professionals and/or students. Given the significant role of multiple institutions and organizations in providing professional development to Arkansas's early care and education practitioners, it is important to ensure that the content of all professional development opportunities is aligned with the Arkansas Key Content Areas and Core Competencies. It is critical to develop and enforce policies around the transfer of credentials, courses, credits, degrees, etc. from one program to another without loss of credits—in order to fully establish career pathways and build capacity to meet required professional standards.

Arkansas needs to increase the number of postsecondary institutions and professional development providers with programs that are aligned to the Workforce Knowledge and Competency Framework. This will increase the number of early childhood educators who receive credentials from postsecondary institutions and professional development providers with programs that are aligned to the Workforce Knowledge and Competency Framework.

Currently, we have 11 two-year and six four-year institutions with aligned training programs. There are also 25 contract training programs that are aligned. As a result the state now has 6,128 Early Childhood Educators credentialed by an "aligned" institution or provider.[29]

The Arkansas Course Transfer System (ACTS) streamlines the process for early childhood practitioners to move along the career ladder to higher credentials by increasing their ability to transfer credit from one postsecondary institution to another.[30] Another program in the state that supports early childhood professional development is the Credit When Its Due (CWID) program. The CWID program is a partnership between the Arkansas Association of Two Year Colleges (AATYC), Arkansas Department of Higher Education (ADHE), and the Arkansas Research Center (ARC). The CWID program retroactively awards an associate's degree to students who began at a two-year college and transferred to a four-year college, but did not receive a bachelor's degree (but have enough credits for an associate's degree).[31]

Arkansas recognizes that learning experiences include a variety of methodologies and offers a wide range of types of training opportunities including university/college courses, workshops, conferences, technical assistance, mentoring and coaching supports, and online models of professional development. Through these diverse training modalities, Arkansas seeks to address the different learning styles and needs of its early care and education workforce as well as reach as many providers as possible, particularly those in rural communities.

Currently in the Arkansas professional development system approaches such as mentoring, coaching, and consultation are embedded in various training projects, and the state has been building and promoting a culture of Relationship-Based Professional Development (RBPD) for more than 10 years[32]. These supports are meant to help early care and education professionals cultivate their skills across a range of competencies through individualized, ongoing feedback and reflective practice with another professional.

An example of RBPD in Arkansas is the Project PLAY that provides teachers (and families) with early childhood mental health consultation (ECMHC) services regarding children's challenging behavior and mental health. During 2012–2013, Project PLAY partnered with a total of 31 child care centers and 145 teachers. ECMHC program consultants made 679 site visits to provide consultation services, and conducted 90 trainings for continuing education credits.[33] Innovative solutions are being developed to address issues of access and efficiency. For example, MyTeachingPartner is a cutting-edge program that essentially employs coaching practices through web-mediated remote consultation and video libraries of effective teaching practices.[34]

The Need for Better Data.
The TAPP registry is a strong first step in understanding the qualifications and quality of various providers. However not all providers participate in the registry and others do not have accurate or updated data entry for their staff. Connections between the early childhood education and K-12, higher education, and workforce data need to be strengthened and included as part of the State Longitudinal Data System.

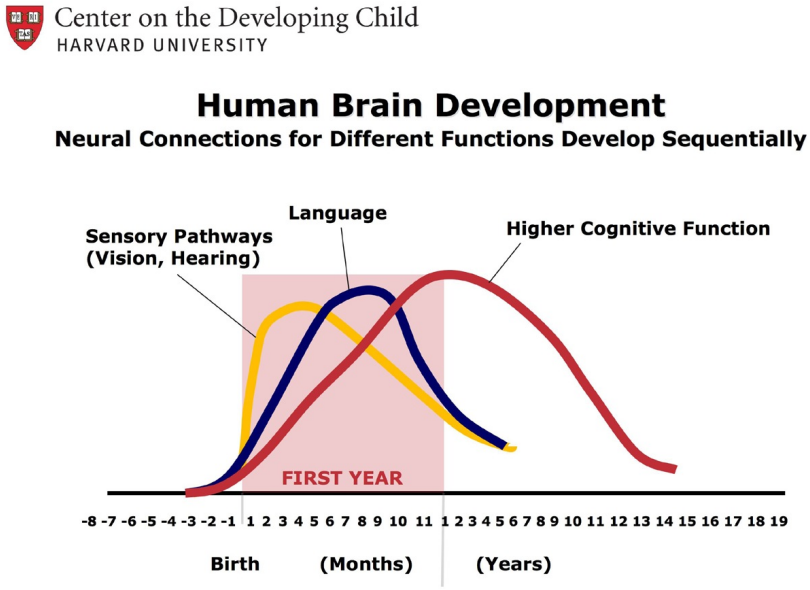
The information gained through this expansion will provide state leadership and early childhood stakeholders with more complete information on the educational levels of staff working in licensed child care facilities; promote the assignment of unique identifiers (FERPA compliant) for early childhood practitioners; foster understanding of the educational qualifications, credentials, and degrees of the of the early childhood workforce; recognize trainer qualifications as a means for approving training that is aligned to the workforce knowledge and competencies; and increase the state's ability to more accurately identify and target training needs throughout the state. The state believes that expansion of the TAPP registry database will provide the data needed to publicly report aggregated data on the status of the early childhood workforce, including education level and retention. However, the state must first conduct a workforce study in order to obtain baseline data.

SECTION 4: RETURN ON INVESTMENT FOR EARLY CHILDHOOD EDUCATION

Research in Support of Early Childhood Education
Over the past 15 years, new research developments have dramatically changed the way we think about early childhood education. The early childhood period (birth to age 5) is a time of rapid brain development.[35] Researchers estimate that 80 percent of brain development occurs before children enter kindergarten. For this reason, early experiences are the foundation on which all later learning is built. Investing at this early point provides the most efficient and effective intervention to ensure later success in school. Pre-K not only provides for early learning, but also helps children develop the social skills they need to be successful in the classroom. It is the entry point for early treatment of developmental delays, treatment that can be less expensive and more successful than remedial efforts down the road. Several studies have shown that there is a significant return on investment for pre-k. Other studies such as the National Institute for Early Education Research (NIEER) and the Federal Reserve Bank support these findings.

Early childhood experiences play a large role in determining how brain connections or "wiring" are formed. Babies start to understand the link between words and their meanings as early as the age of 6 months. This sets the stage for language development and later reading. The chart below[36] shows when these brain connections actually happen. Brain development related to vision and hearing and language peaks before a child celebrates her first birthday. The connections related to higher cognitive function (e.g., memory, comprehension, and problem solving) peak a little later, but still well before a child begins pre-K.[37]

*Figure 17: Human Brain Develomen*t

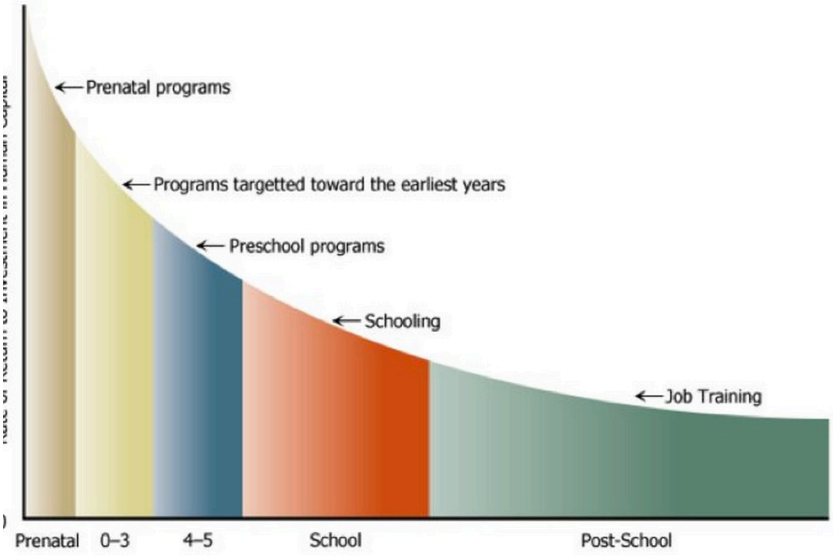


James Heckman, a Nobel Prize winning economist from the University of Chicago, has led a consortium of economists, psychologists, statisticians, and neuroscientists whose research shows that early childhood development directly influences economic, health and social outcomes for individuals and society. They have found that 1) early childhood development drives success

in school and life, and 2) investing in early childhood education for at-risk children is an effective strategy for reducing social costs. They believe the best way to reduce deficits and strengthen the economy is to make significant investments in early childhood education.

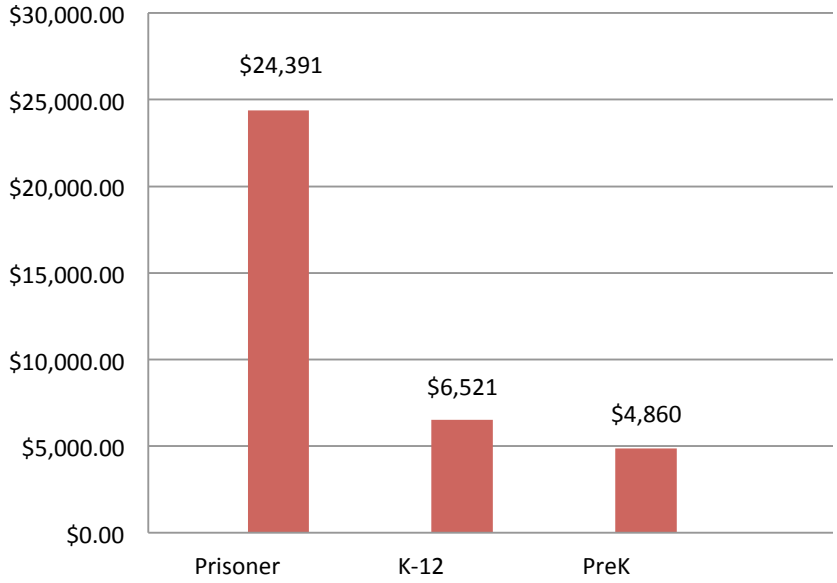
Heckman's analysis of the Perry Preschool program shows a 7 percent to 10 percent per year return on investment based on increased school and career achievement as well as reduced costs in remedial education, health, and criminal justice expenditures. By the time they reach age 20, adults who attended the Chicago Child-Parent Center's half-day public preschool programs were estimated to be more likely to have finished high school, and were less likely to have been held back, need remedial help, or have been arrested. The estimated return on investment was $7 for every one dollar invested. Further, Heckman's research has found that the younger the age at which education investments are made, the greater the return. Figure 18 shows that the return is greatest between the ages of 0 and 3, when the brains of young children are developing the fastest, and decreases through preschool, K-12 education, and post high school.

Figure 18.



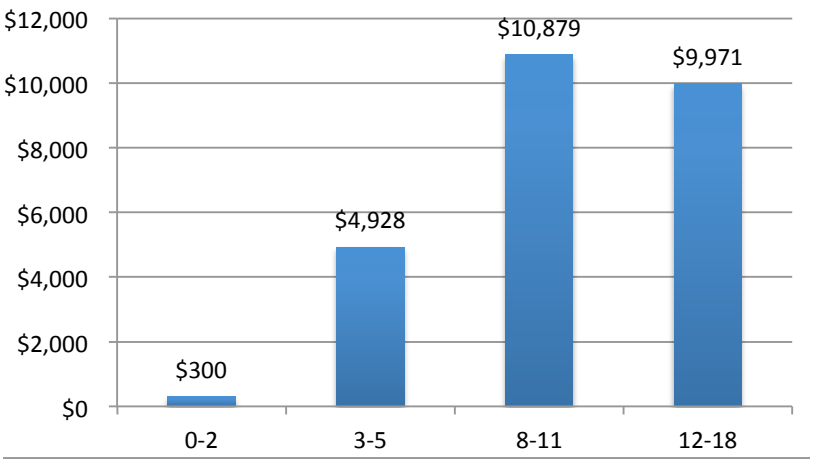
Investing in early childhood education to increase high school graduation rates would boost Arkansas's economy. A five percent increase in male high school graduation rates is estimated to save Arkansas $53 million in annual incarceration costs and crime-related expenditures. If that same five percent not only graduated but also went on to college at the same rate as typical male high school graduates, their average earnings would accrue an additional $25 million annually. If just one year's high school dropouts could be converted to high school graduates, Arkansas households would have an additional $2.7 billion in accumulated wealth over the lifetime of the students from the graduating class.[38]

Figure 19: Cost per program per year



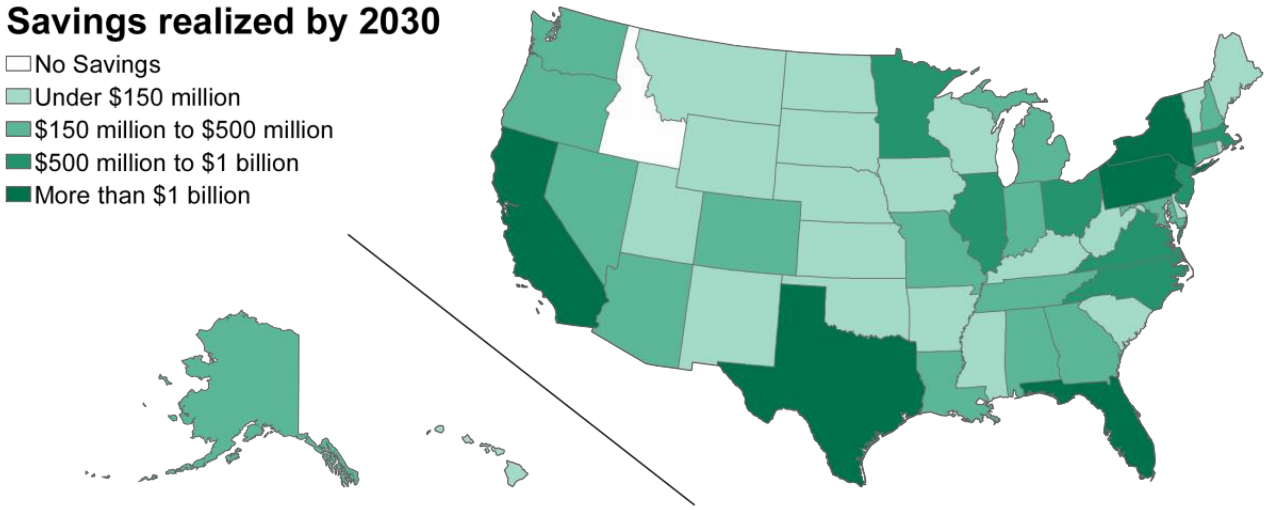
Data on local, state, and federal government investments in education, however, show that the United States spends the least amount per child when the return is the highest (See Figure 20 on next page). The per capita expenditure on education and early care is just $300 for children from birth to age 2. For children ages 3 to 5, the per capita expenditures are $4,928, reflecting increased investments in pre-K in recent years. However, this is less than half of the $10,879 per capita spent on children ages 6 to 11.[39]

Figure 20: Per capita expenditures on education, by age



The National Institute for Early Education Research (NIEER) projected savings to all states who invest in full-time preschool for all children under 200 percent of the Federal Poverty Level. See Figure 21 below. The quality of preschool was assumed to be on par with New Jersey's Abbot pre-K program. Within 20 years, Arkansas would save $25 million just based on less grade retention and lower special education costs.[40] This estimate is conservative. It does not include the potential for ongoing federal funding, and it does not consider additional benefits, such as less incarceration and less use of public assistance. In a poor state with a largely under-educated workforce, investing early in our children is a strong strategy for building a strong workforce.

Figure 21: Savings Projection as a result of investment in Pre-K



Using School Funding Formulas to Support Pre-K

In general, states have funded pre-K in three ways: 1) grant programs that are subject to annual appropriations, 2) supplements to the federal Head Start program, and 3) school funding formulas. This last option provides per-pupil funding as part of a state's overall public education budget and allocates state resources to school districts based on established calculations that account for district needs and children's risk factors. Fourteen states provide pre-K funding through state funding formulas, but they take different approaches to this financing strategy.

- Directly Applying the K-12 Formula – Some states fund early education at the same per-pupil rate as K-12, without adjusting it to reflect the actual cost of providing pre-K.
- Weighting the K-12 Formula – Other states account for the high per-pupil costs of quality pre-K programs by giving more "weight" to pre-K children than K-12 students in determining allocations. Oklahoma funds both full- and half-day programs, weighting pre-K per child allocations at 130 percent and 70 per cent of the K-12 rate, respectively.

- Funding Pre-K Through Categorical Aid - In some states, foundation aid may not specifically designate pre-K funding, but the formula can include other resources for that purpose. Maryland provides categorical aid based on the number of low-income students, and one required use of those funds is to provide pre-K for all low-income four year olds.
- Capping Pre-K Allocations - Some states cap the number of children to be served in or the amount of formula funding to be spent on pre-K in a given year. In Kansas, the funding is provided to districts through a weighted formula, but the state's board of education annually determines the total amount of funding available for pre-K.

The following should be taken into account when contemplating using a school funding formula approach for pre-K:

- Ensure the Funding Formula Reflects the True Cost of High-Quality Pre-K – In 2008, New Jersey passed a law that set differentiated pre-K allocations per child, based on the setting where the care is provided. These rates were based on an analysis of actual expenditures conducted by the state department of education. The allocations included in the 2008 act were $11,506 for public schools and $12,934 for licensed child care programs.
- Encourage or Require School Districts to Partner with Community-Based Providers – Head Start, child care centers, faith-based organizations, and other non-school settings that can meet quality standards should be engaged to deliver state pre-K and should be included in each district's planning process.
- Phase in Formula Funding for Pre-K Programs – Embedding pre-K into a school funding formula without a well thought-out plan may strain a state's fiscal capacity. States should add districts or programs to the formula gradually. Policymakers can establish grants for new pre-K efforts before transferring them to the formula, allowing time for these programs to demonstrate their capacity to meet quality standards and for the state to secure sufficient funds in the formula. States can offer formula funding to more districts over time, beginning with those serving the most at-risk populations or those with the most existing capacity. [41]

SECTION 5. PROGRAM MODELS AND EVALUATIONS

To evaluate programs, it is necessary to know how standards apply to the program. In these discussions several types of standards are referenced.

- NIEER Pre-K policy standards
- Early Childhood Learning Standards
- Tiered Quality Rating and Improvement System (TQRIS)

NIEER Pre-K policy standards

In addition to the standards developed by the National Institute for Early Education Research (NIEER) for pre-K programs, NIEER also provides an annual compilation of state reports indicating how the states rank in meeting the standards. NIEER reports on 10 critical areas related to quality. States are credited with meeting each standard when state policy meets or exceeds the related benchmark standard. No state's prekindergarten policies should be considered satisfactory unless at least all 10 benchmarks are met.[42]

Of the 10 standards used to gauge the quality of state-funded preschool programs, four involve teacher credentials and training. Class size and staff-child ratios are also emphasized in the Quality Standards Checklist, targeting class sizes of 20 children at the most with no more than 10 children per staff member. State early learning standards should cover all areas identified as fundamental by the National Education Goals Panel—children's physical well-being and motor development, social/emotional development, approaches toward learning, language development, and cognition and general knowledge. Other areas that states are evaluated on include the comprehensive services that preschool education programs should be expected to offer. Programs should pro-

vide at least one meal; vision, hearing, and health screenings and referrals; and other support services, such as parent education, parent conferences and/or home visits, or referrals for such services.

These are policy standards used in the NIEER rating. A state with good policies may have some programs that fail to comply with these policies; conversely, a state with weak policies may have many programs that exceed state minimum standards. It is necessary to have a way to ensure that individual pre-K programs meet those standards. Therefore, programs should require, at a minimum, that all sites are visited for program quality at least once every five years to enforce standards and ensure high-quality education in state-funded preschool programs.[43]

F***igure 22: NIEER Standard***

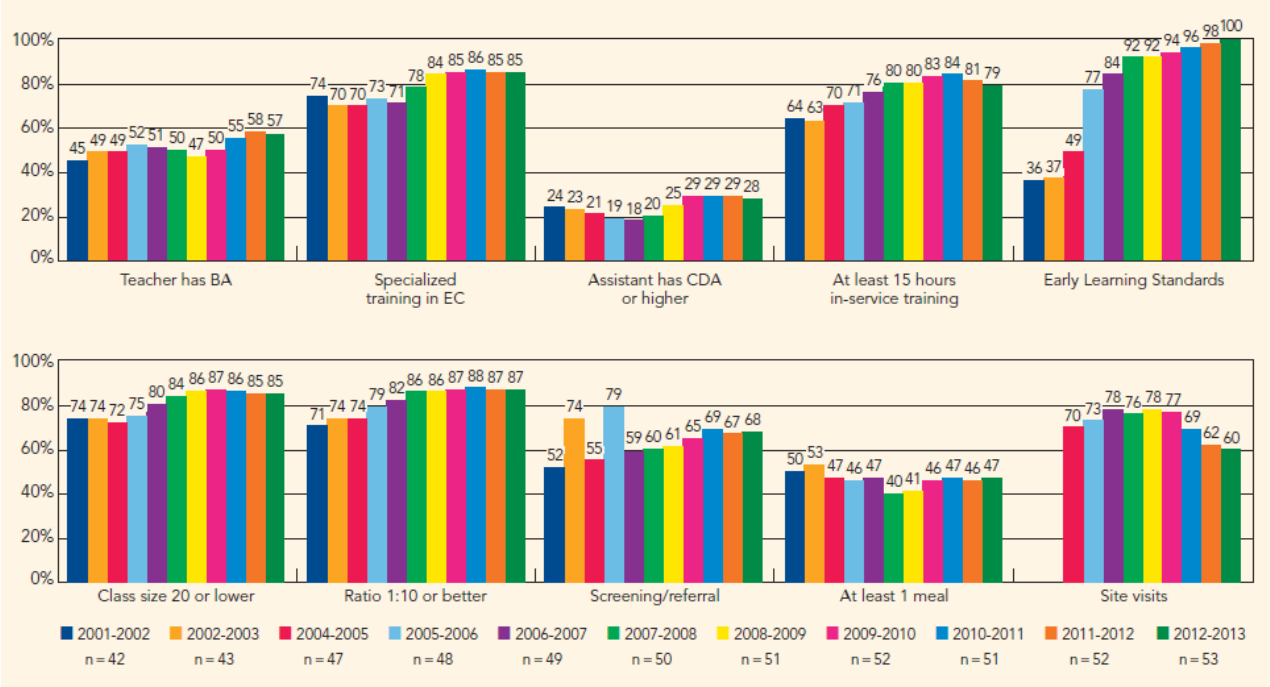
Policy Standard		Description
1	Early learning standards	National Education Goals Panel content areas covered by state learning
2	Teacher degree	Lead teacher must have a BA, at minimum
3	Teacher specialized training	Lead teacher must have specialized training in a pre-K area
4	Assistant teacher degree	Assistant teacher must have a CDA or equivalent, at minimum
5	Teacher in-service	Teacher must receive at least 15 hours/year of in-service
6	Maximum class size	Maximum number of children per classroom must be 20 or fewer
7	Staff-child ratio	Lowest acceptable ratio of staff to children in classroom is 1:10 or better
8	Screening/referral and support services	Screenings and referrals for vision, hearing, and health must be required;
9	Meals	At least one meal must be required daily
10	Monitoring	Site visits must be used to demonstrate ongoing adherence to state program standards

Figure 23 displays the percentage of programs meeting each of the quality standards from 2001-2002 through 2012-2013. Only five state programs met all 10 benchmarks: Alabama, Alaska, North Carolina, Rhode Island, and one Louisiana program (NSECD). Seven states had programs that met nine of 10 benchmarks—Arkansas, Kentucky, Minnesota, New Jersey (Abbott pre-K only), Oklahoma, Tennessee, and Washington. Another eight states met eight benchmarks.

Arkansas does not meet the standard for teacher degree. Nearly 60 percent of states do meet the NIEER standard that pre-K teachers have BA degrees. Arkansas policy requires a BA per every three classrooms (usually designated as lead teacher) with two-year or AA degrees for all other teachers.[44] The lead teacher in a public school must hold a standard Arkansas teacher license with P–4 certification.

The lead teacher in a nonpublic-school-based program must have a minimum of a bachelor's degree in early childhood education or child development. For all programs with multiple classrooms at a single location, the teacher of the second classroom shall hold, at a minimum, an associate degree in early childhood education or early childhood development. State policy does allow programs to hire staff under an approved staff qualifications plan, while they are completing coursework to obtain minimum credentialing.

Figure 23: Percent of State Pre-K Programs Meeting NIEER Benchmarks 2002-2013



Source: NIEER 2013 Yearbook

Early Childhood Learning Standards.

In addition to meeting certain policy standards, the NIEER says that states should have comprehensive early learning standards covering all areas identified as fundamental by the National Education Goals Panel.[45] These standards are comparable to K-12 standards like the former Arkansas Curriculum Frameworks or its replacement the Common Core State Standards. They set the goals for what children should learn. Arkansas's current Early Childhood Education Framework Handbook for Three and Four Year Old Children[46] was most recently revised in 2004. See the website for the complete handbook. The following elements are addressed in the framework document:

- Environment – physical and social-emotional
- Diversity
- Family
- Strategies that support learning

One goal of DCCECE has been to update the standards to ensure they are aligned with current kindergarten standards so that there is no disconnect in preparing children to be successful in the K-12 setting. It was announced July 10, 2014, that the Arkansas Department of Human Services Division of Child Care and Early Childhood Education will receive a $1 million grant from the W.K. Kellogg Foundation to redesign the birth-to-five standards and identify a new kindergarten entry-assessment tool.

Tiered Quality Rating Improvement System (TQRIS)

In addition to the Arkansas Better Chance program for quality pre-K programs, Arkansas encourages all other child care providers to participate in the Better Beginnings program. In July 2014, Better Beginnings participation was required for all programs using vouchers. Better Beginnings is Arkansas's Tiered Quality Rating Improvement System for family child care homes, center-based care, and school-age care for programs offered before and after school, as well as during the summer. It is an evaluation methodology that rates programs as one-star, two-star, or three-star based on their status in the system. The standards are based on caregiver training,

business practices, facility requirements, parent engagement, and the availability of developmental programs and physical activities for the children. This is separate and in addition to the state's child care licensing and monitoring for minimum compliance requirements.

Arkansas has a nearly 20 year history of conducting Environment Rating Scale (ERS) assessments for the purpose of program improvement. Arkansas was the first state to use the Environment Rating Scales for high stakes assessments in its then Quality Accreditation program and the Arkansas Better Chance program. Arkansas State University Childhood Services (ASU CHS) conducts program evaluations through a contract with DCCECE. ASU CHS conducts ERS assessments in accordance with the guidelines and regulations of the Better Beginnings and Arkansas Better Chance programs. ASU CHS works to improve each provider's understanding of and participation in the assessment process. ERS Summary Reports are provided following each environmental assessment to validate program growth and achievement and to assist each program in making systematic changes to improve the daily experience that children and teachers share in an early childhood setting.

Longitudinal Research Studies
Independent evaluations of the Arkansas Better Chance program are based on outcomes for students. Two studies have been conducted and key findings are provided here.

Arkansas Research Center
The study released in 2013, reports that in Arkansas, the gap between economically-disadvantaged students and their more affluent peers is apparent as soon as children enter kindergarten. The instrument used to measure development at kindergarten entry in Arkansas is the Qualls Early Learning Inventory (QELI)—more specifically the General Knowledge subtest is used to rate children for these purposes as developed or not developed. For students with no known pre-K experience, 70 percent from higher income families entered kindergarten with a rating of developed, while only 41 percent of economically disadvantaged students were developed. ABC improves the percentage of children entering kindergarten developed; 50 percent of economically disadvantaged students that attended ABC were developed—nearly 10 percent more students than those with no known pre-K experience.

A gap remains between economically-disadvantaged and higher-income peers entering kindergarten even with ABC support. While 50 percent of ABC students were considered developed, 64 percent of higher-income students were considered developed. ABC does reduce the size of the gap. The gap for disadvantaged no-known pre-school students is 30 percent. ABC cut that difference by more than half (14%). [47]

NIEER at Rutgers University
The National Institute for Early Education Research (NIEER) at Rutgers University conducted a longitudinal study of the Arkansas Better Chance (ABC) prekindergarten program to estimate the effects of state-funded pre-K in Arkansas on children's language, mathematics, and literacy skills through fourth grade.

Positive effects were found at the end of first and second grade for language, math, and literacy, and at the end of third grade for literacy. These effects are more pronounced when factoring in only children who did not attend another preschool program in the comparison group. When children who attended a preschool program other than the ABC initiative are included the differences are smaller.

One explanation for estimated effects falling off at the end of third grade is provided by another important finding from this study: children who attended ABC were less likely to be retained in grade. This is a key indication that schools are expending extra effort to help those most behind catch up, which disproportionately helps children who did not attend the ABC program. While effective, these efforts are expensive, and may include extra teacher time in the classroom, remedial programs, and even special education. These efforts may gradually reduce the test score advantages for ABC children in later years, but at a substantial cost. According to the

report's authors, the finding that children who attended ABC pre-K were less likely to have been retained by the end of third grade than those who did not attend any pre-K deserves attention.[48]

This study began in 2005 before the large expansion of the ABC program from 2005 to 2008.

Fade-out

Fade-out is the idea that while students who participate in pre-K start kindergarten at an advanced level compared to students who don't attend pre-K, the advantage fades-out by the fourth grade. The 2012 National Head Start Impact Study is the chief source of this idea.[49] The following are bulleted points of more in-depth studies that refute the supporters of the fade-out theory.

The fadeout myth is based on selective research. Critics argue that gains made through pre-K disappear by third grade. But even these critics agree low-income pre-K kids start kindergarten ahead of their peers.[50]

These results don't account for the benefits throughout school years and adult life. Disadvantaged children who receive quality early childhood education are more likely to persist in school, enjoy better career outcomes, higher wages and healthier lifestyles. These findings can be found in analysis of the Perry Preschool Project and Abecedarian in the United States, as well as the British Cohort Study in Great Britain, all of which are randomized control studies with longitudinal data that spans for 35 years or more.[51]

While Perry Preschool and Abecedarian projects were small demonstration projects, the Chicago Child-Parent Center (CPC) project also has provided evidence that large-scale federally funded projects may also produce long-term positive effects. Low-income children from urban areas who completed one or two preschool years in the program required less special education and grade retention, had higher high school completion rates, and had fewer arrests at age 20.[52]

Nobel Laureate Economist James Heckman found that the social and emotional skills learned through early childhood education were the major drivers of success in school, career, and life among the Perry treatment group, who far outperform the control group in adult outcomes. Heckman also finds that "Head Start graduates tend to be more persistent in their education, more inclined to healthy behaviors, and less inclined to be involved in criminal activity."[53]

The same report cited by critics also reported that improvements in kindergarten test scores had other outcomes such as higher lifetime earnings, more likely college attendance, retirement savings, home ownership, and residence in a better neighborhood. One study referenced within the Head Start Research report noted that Head Start kids completed more years of school, had less self-reported misconduct at age 15, fewer felony arrests, and fewer property crime arrests than those who received direct instruction.[54]

Potential flaws in the 2012 National Head Start Impact Study have been noted. On the topic of fadeout, the Impact Study was flawed because many in the control group were allowed to attend other preschool programs, including Head Start programs in other locations. The parity may well develop because the study compares children with similar experiences.[55]

Evaluators of early model preschool programs have followed participants into adulthood and offer evidence that high quality child care has long-term benefits. For instance, the randomly assigned treatment group participating in the High/Scope Perry Preschool Project in the sixties has experienced fewer arrests and higher incomes with less use of public assistance than the control group.[56]

Another model program with a randomized evaluation, the Carolina Abecedarian Project, provided full-day, year-round care to children believed to be at risk for developmental delays from birth to age 5. Following these

children into adulthood, researchers found that participants in the preschool treatment group were more likely to have sustained better math and reading abilities and to have completed college. They were also less likely to have repeated a grade, to have required special education, or to have become teenage parents.[57]

Next Steps
Future plans are to develop strategies to assess and evaluate program outcomes for participating children based on years in programs, program size, program provider (public school, private), and staff qualifications. Making finer distinctions in the outcomes should permit more targeted policy adjustments if necessary. This will also allow policy makers to identify which programs [not people or students] have the most successful models for replication.

SECTION 6: UNDERSERVED POPULATIONS

With its comparatively high level of poverty among children under 5, Arkansas's resources to meet the needs of low-income children are insufficient. Another complicating factor is that 44 percent[58] of the state's youngest children live in areas of the state classified as rural with substantial service delivery challenges in many of the more isolated rural areas. The following chart shows the number and percentage of children from low-income families in the state.

Figure 24: Children from Low-Income Families by Age[59]

	Number of Children from Low-Income Families in the State	Children from Low-Income Families as a Percentage of all Children in the State
Infants under age 1	22,815	60%
Toddlers ages 1-2	46,372	60%
Preschoolers ages 3-Kindergarten Entry	68,943	57%
Total children Birth to Kindergarten Entry from Low-Income Families	139,396	59%

According to the Annie E. Casey Foundation only two states have higher percentages of children living in low-income households—New Mexico at 60 percent and Mississippi at 63 percent.[60] When these low-income children have additional needs, the ability of current early childhood education programs to meet increased levels of need is strained. Underserved low-income children may have physical or developmental disabilities, live in unstable homes, or in homes where English is not spoken. They have needs for more resources than even other low-income peers, yet they often have less access to programs and providers that can meet their needs. The discussion below provides an examination of some population groups with high needs for educational resources and opportunities.

Figure 25: Special Populations of Children

	Number of Children from Birth to Kindergarten entry	Percentage of Children from Birth to Kindergarten entry
Disabilities or Developmental Delays	16,415	7%
English Language Learners	24,808	10%
Migrant	1,476	0.06%
Homeless	7,918	3%
Foster Care	1,553	0.06%
Births to Teen Parents[3]	4,845	0.051%

Note: Birth to Teen Parents represents only birth to age one.

The table below represents participation by all low-income children (High Needs). Some children may participate in multiple Early Learning and Developmental programs. Children participating in programs that are part of the Individuals with Disabilities Education Act (IDEA) typically have experienced development delays.

Figure 26: Participation of Children with High Needs in Different Types of Early Learning and Developmental Programs, by Age[62]

Program Name	Number of Children with High Needs Participating in the Program			
	Birth to 1	Age 1 to 2	Age 3 to Kindergarten Entry	Total
Arkansas Better Chance	92	902	23,300	24,294
Early Head Start and Head Start	562	1,329	10,034	11,925
IDEA Part C and Part B Sect. 619	382	2,748	10,331	13,461
Title I of ESEA	0	0	7,356	7,356
DHS-Child Care D F Program	4,329	5,287	4,010	13,626
ABC-Funded Home Visiting	N/A	N/A	4,165	4,165
MIECHV Funded Programs	436	176	560	1,172

Children with Physical and Developmental Disabilities

Children with physical or developmental needs or both have more limited choices for child care facilities and programs that can meet their needs.

Child health screenings for all children are an important tool in recognizing needs early when interventions can be most successful. They indicate when specialized programs and services are needed to ensure the best outcome for a child. More than half of the low-income children under age 6 in North Carolina and Massachusetts received a developmental screening, compared to 18 percent in Mississippi and North Dakota.[63] Nationally, seven percent of higher-income and 15 percent of low-income children identified as having developmental delays never received any services.[64]

Arkansas ranked 36th nationally, with 25 percent receiving developmental screening. A total of 49,089 children under age 6 (25 percent) have received screening(s).[65]

The table here shows the number of children with various disabilities that are enrolled in preschool programs.

Figure 27: Children with Disabilities Enrolled in ABC Programs

Disability	# Enrolled in ABC program[66]
Attention Deficit and related disorders	2
Asthma and related disorders	3
Autism and related disorders	30
Developmental Delays and related disorders	850
Unspecified Multiple Disabilities	4011
Emotional Disabilities and related disorders	35
Epilepsy and related disorders	15
Hearing and related disorders	1
Learning disabilities and related disorders	62
Other impairments	68
Speech and language and related disorders	1124
Visual impairments and related disorders	13

These programs provide early intervention/early childhood services to children in Arkansas.

Figure 28: Programs in Arkansas Providing Early Intervention/Early Childhood Services to Children with Disabilities

Program[67]	Program Year	Birth through Age 2	Age 3 through Age 5
First Connections	SFY-2014 thru Nov. 1, 2014	1,378	N/A
Child Health Management Services (CHMS)	SFY-2014	3,232	2,120
Developmental Day Treatment Clinic Services (DDTCS)[68]	SFY-2014	3,949	3,302

First Connections is a DHS program that serves families with children birth to thirty-six months who:

- Have a developmental delay in one or more areas of development. This delay must be 25 percent or more of their chronological age.
- Have a medical diagnosis that has a high probability of resulting in a developmental delay.

Child Health Management Services (CHMS) provide:

- Full medical multidiscipline diagnosis, evaluation, and treatment of developmental delays in Medicaid recipients
- Diagnostic, screening, evaluation, preventive, therapeutic, palliative, or rehabilitative services, including early intervention day treatment services.[68]

Developmental Day Treatment Clinic Services (DDTCS) serves infants and toddlers with chronic medical conditions.

English Language Learners

English Language Learners are currently being served through several types of programs. About 10 percent or almost 24,800 of the state's children from birth to kindergarten entry are English language learners[69]. The majority of English language learners are Latino but other groups have some significant numbers as well, e.g., Marshallese, Vietnamese, and Hmong. Generally speaking the Marshallese and Hmong are located in northwest Arkansas and a large percentage of the non-English speaking Vietnamese are located in the Fort Smith area.

Certain areas of the state with large populations of English language learners need more capacity to serve non-English speaking families. Conversely, areas of the state with just one or two non-English speaking families may have fewer resources to assist with interpretation and education. Making the needs even more difficult to address are relatively high rates of poverty among the families of English language learners.

Washington County has the highest population of Latino Children under 5 living in poverty with 1,884.[70] Washington is followed by Benton, Sebastian, and Pulaski Counties. In fact, these four counties are home to over 55 percent of the state's low-income[71] Latino children under age 5.

The five counties with the highest rate of Latino children under 5 living in poverty as a percentage of all children under 5 living in poverty are Sevier (De Queen) 62.3 percent, Yell (Booneville) 59.5 percent, Carroll (Eureka Springs) 47.4 percent, Benton (Bentonville) 44.8 percent, and Washington (Springdale) 40.2 percent. The rate for the state as a whole is 17.8 percent.[72]

Figure 29: Enrollment in ABC Programs by Primary Language

Child's Primary Language	# Enrolled in ABC program
Spanish	4594
Languages Other than English	327

Recent studies point out the value of high-quality pre-K programs for English Language Learners. In 2009, Claudia Galindo reported on the education disadvantages of English language learners (ELL). She noted that at kindergarten entry, ELL students have significantly lower scores than their peers. The differences decline over time but remain through grade five. She concludes that interventions to improve language for minority students should begin with preschool education. She also stresses the need to invest in highly-effective pre-K programs and highly-effective staff for such programs.[73]

Maggie Severns of New America Foundation published a study [74] in 2012 reviewing Illinois strategies for early learning for ELL students. Illinois changed their state law to include state-funded pre-K in public school effort to help ELL students. Now teachers must have English as Second Language credentials. Teacher training programs and pre-K training programs are adjusting to the new requirements. The new measures also call for pre-K providers to receive financial support for the resources for ELL students. Longitudinal outcomes are to be tracked and funding for evaluation studies is to be established. Finally the law seeks to improve alignment between pre-K and K-12.

Disadvantageous Home Environments

Young teen parents are faced with a multitude of challenges in caring for themselves. The additional responsibility of caring for a young child may be beyond their capacity. Foster children also face long odds. Separation weakens family bonds and even short-term stints in foster care can be disruptive to a child's learning trajectory. It is also true that foster care can provide respites from troubled home settings that may be beneficial to a child. Migrant or homeless families also are not able to provide a stable home environment that is most conducive to learning. Some children may fall into more than one group of these classifications.

Figure 30: Disadvantageous Home Environment Populations and Enrollment in ABC Programs

Children Born to Teens[75]	Birth to Age One	% of Children 0 to K
Total Teen Births for one year	4,845	5.1%
Estimated Children Born to Teens 0-5	24,225	5.1%

Foster Children	Birth to Kindergarten Entry	% of Children 0 to K
Children who are in Foster Care[76]	1,553	0.06%
Foster children in ABC program	305	

Homeless Children	Birth to Five	% of Children 0 to K
Children who are Homeless[77]	3,442	
Homeless Children In ABC program	189	

Migrant Children	Birth to Five	% of Children 0 to K
Children who are Migrant estimates based on ADE data [78]	1295[79]	
Migrant Children in ABC Program	41	
Children Age 1-5 who Moved from different County within state[80]		3.3%
Children Age 1-5 who Moved		3.3%

There are no officially housed pre-school programs provided by the Arkansas Migrant Education Program (ARMEP); however, ARMEP provides limited services and resources to preschool children and their families. In 2012-2013, 394 preschool children were served by ARMEP in districts across the state. The large majority of the supports were services such as materials, supplies, books, informational packets, transportation, nutrition, limited health services, and referrals to other service providers.

The South Arkansas Migrant Education Cooperative located in Hope, AR provides some instructional services to 3- and 4-year-old preschool age students. A preschool advocate provides instructional services in the child's home approximately four times per year. Preschool children are included in summer home visits completed in each project school district. In the 2012-2013 program year, 56 migrant children received these instructional services.[81]

Figure 31: 2013 Preschool Migrant children served by the Migrant Service Educational Cooperative

Migrant Education Cooperative	Children Served
Boston Mountain, West Fork, AR	49
Northeast Arkansas, Bald Knob, AR	205
Western Arkansas , Branch, AR	36
South Arkansas, Hope, AR	104

Home Visiting Programs to Support Underserved Families

Home visiting programs meet needs for children who are not in center-based programs. There are several varieties of home visiting programs, each targeting different client needs and different age groups. These programs are a valuable resource for addressing needs for underserved children.

Figure 32: Participation of Children with High Needs in Different Types of Early Learning and Developmental Programs, by age[82]

Type of Early Learning Program	Infants under age 1	Toddlers ages 1 through 2	Pre-schoolers ages three until kindergarten entry	Total
ABC-funded Home Visiting programs	N/A	N/A	4,165	4,165
Maternal, Infant, and Early Childhood Home Visiting (MIECHV)	436	176	560	1,122

Conversely, 90.4 percent of Arkansas families with children birth to three did not receive a new parent home visit. [83]

SUMMARY AND RECOMMENDATIONS

Access. Arkansas early childhood education programs (including Arkansas Better Chance, Head Start and children supported through vouchers in Level 3 of the Better Beginnings program) serve about 56 percent of eligible 3- and 4-year olds. Some areas of the state have more needs for additional child care slots than others. Of the 18 census areas, southwest Arkansas has much less access for its children. Populous areas such as Benton, Washington, Faulkner, Lonoke, and Saline Counties also have much unmet need. Only 2.9 percent of our eligible children from birth through age two are served by ABC, Head Start or through vouchers to Level 3 Better Beginnings programs. In addition to limitations in the number of funded slots available, concerns about availability of facilities and transportation also limit the ability to serve all of the eligible children in families at 200 percent of the federal poverty level.

Funding Needs. The ABC program is Arkansas's quality pre-K program for 3- and 4-year-olds. It funds providers at 60 percent of a cost model developed in 2008. The program currently funds $4,860 per student each year for both center-based and licensed family homes. This amount must cover rent or lease for the facilities as well. The 40 percent of necessary funding required as match is ostensibly to come from the providers themselves. If state K-12 foundation funding were scaled to provide staff for class sizes of 10 students as is required in pre-K, foundation funding would equal $10,460 per student. K-12 facilities are funded separately in addition to the

foundation amount. Standards should be increased to require a bachelor's level teacher in each classroom, but there is no funding for that increased cost.The last funding increase for the program was in 2008. In the ensuing seven years, there has been no increase for ABC, not even a cost of living increase. During that time, K-12 adequacy-designated programs were increased by 13.84 percent. There is even less state assistance available for infants and toddlers.

Staffing. The Arkansas early childhood education workforce is diverse in terms of educational qualifications, professional development opportunities, and availability in rural areas of the state. To improve in quality, programs must increase the education levels of their staff, reduce class size, and improve professional development. ABC requires one teacher with a Bachelor's degree per twenty students or for every two classrooms. Proposed rules state that a child care center director should have a Bachelor's degree or lower credential with more experience.

Arkansas has a system called the Traveling Arkansas Professional Pathways (TAPP) that consists of the Arkansas Key Content Areas and Competencies, a "roadmap" or structure to show progression in training and competencies, and a registry tracking practitioners, trainers, and available training. Efforts are underway to provide new options for working early childhood teachers to increase their credentials and training.

Funding Models and Return on Investment. Several studies have reported on the return on investment for pre-K. James Heckman, a Nobel prize winning economist from the University of Chicago, has led a consortium of specialists whose research shows that early childhood development directly influences economic, health and social outcomes for individuals and society. Heckman's analysis of the Perry Preschool program shows a 7 percent to 10 percent per year return on investment based on increased school and career achievement as well as reduced costs in remedial education, health, and criminal justice expenditures. Other studies such as the National Institute for Early Education Research (NIEER) and the Federal Reserve Bank support these findings. Some states fund pre-k through their K-12 formula. Of those that do, some weight the formula for higher costs of threes and fours. Oklahoma weights their K-12 formula at 130 percent of the K-12 rate for full day programs.

Evaluation of Early Childhood Education. NIEER has developed pre-k policy standards. Of the 10 standards used to gauge the quality of state-funded preschool programs, four involve teacher credentials and training. Class size and staff-child ratios are also emphasized in the Quality Standards Checklist, targeting class sizes of 20 children at the most with no more than 10 children per staff member. Arkansas ranks high, meeting 9 of the 10 standards. Arkansas does not meet the standard for teacher degree. Five states meet all 10 benchmarks.

One goal of DCCECE has been to update the standards for the education program in pre-k to ensure they are aligned with current kindergarten standards so that there is no disconnect in preparing children to be successful in the K-12 setting. It was announced July 10, 2014 that the Arkansas Department of Human Services Division of Child Care and Early Childhood Education will receive a $1 million grant from the W.K. Kellogg Foundation to redesign the birth-to-5 standards and identify a new kindergarten entry-assessment tool.

Arkansas has a Tiered Quality Rating System to evaluate all non-ABC child-care providers. Currently the programs have three levels. Arkansas's highest level-Level 3 is not equivalent to the highest level programs in other states.

There have been two longitudinal studies of the Arkansas Better Chance program. The study by the Arkansas Research Center found that for students with no known pre-k experience, 70 percent from higher-income families entered kindergarten with a rating of developed, while only 41 percent of economically disadvantaged students were developed. ABC improves the percentage of children entering kindergarten at the developed level. Half of

economically disadvantaged students that attended ABC were developed, nearly 10 percent more students than those with no known pre-K.

Underserved Populations. With its comparatively high level of poverty among children under five, Arkansas's resources to meet the needs of low-income children is difficult. Additional concerns include substantial service delivery challenges in many of the more isolated rural areas. When low-income children have special needs, the ability of current early childhood education programs to meet increased levels of need is strained. Underserved low-income children may have physical or developmental disabilities, live in unstable homes, or in homes where English is not spoken. They have needs for more resources than even other low-income peers, yet they often have less access to programs and providers that can meet their needs.

Recommendations.

- Arkansas should invest in its future workforce through early childhood education.
- Additional funding is needed to sustain the current Arkansas Better Chance program at its current level of service. It would take $14 million to equal the Consumer Price Index since the last funding increase.
- To expand the reach of the Arkansas Better Chance program, additional need must be met for eligible 3- and 4-year-olds at the current eligibility requirement of 200 percent of the federal poverty level.
- Programs to expand access to children beyond the 200 percent of FPL, should be considered after funding current slots and funding access at the current eligibility level.
- Other licensed child care providers, including those serving infants and toddlers, need funding and incentives to improve quality by reducing class sizes and raising credentials required for care-givers.

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