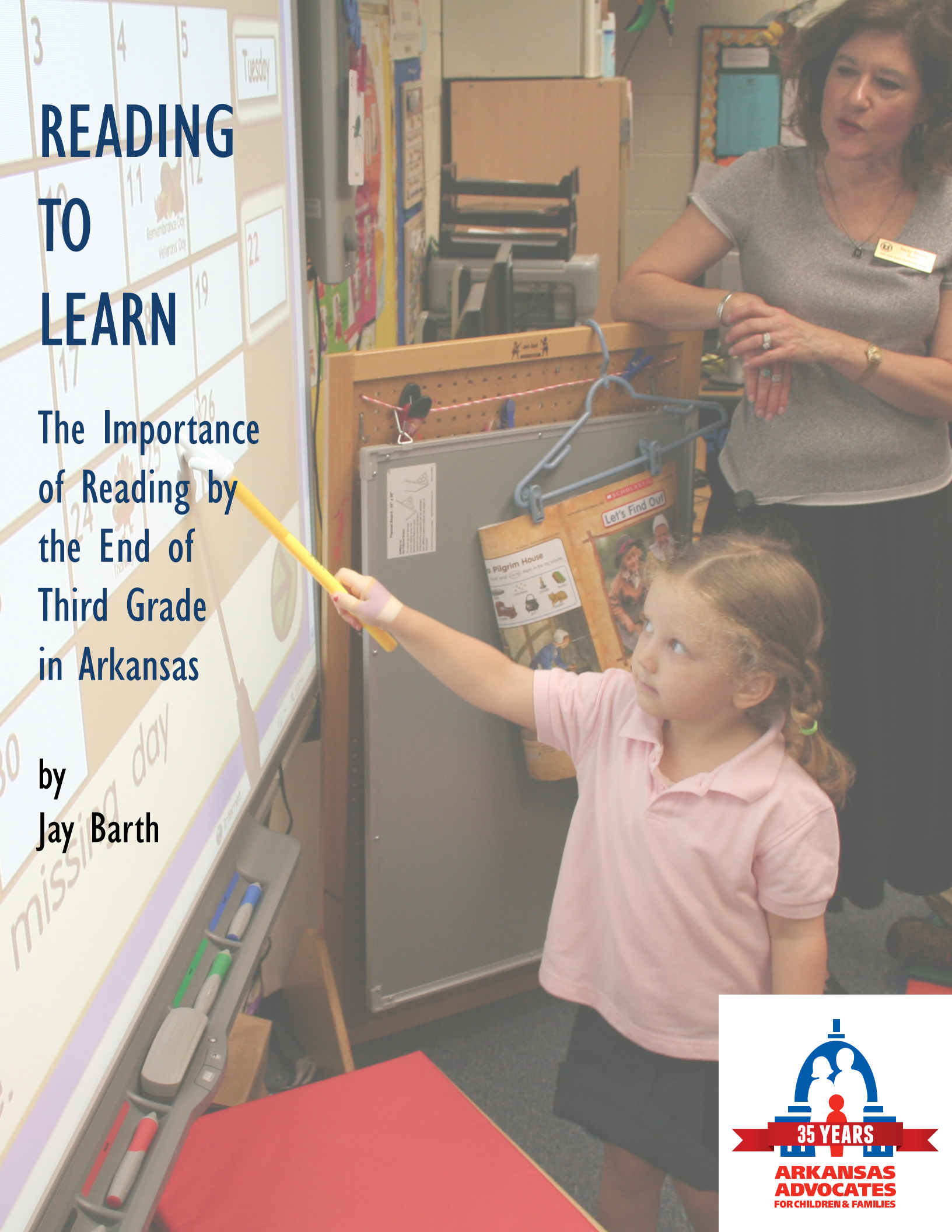

READING TO LEARN

The Importance of Reading by the End of Third Grade in Arkansas

by
Jay Barth

35 YEARS
ARKANSAS ADVOCATES
FOR CHILDREN & FAMILIES

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Report author: Jay Barth, M.E. and Ima Graves Peace Distinguished Professor of Politics and Chair of the Department of Political Science and International Relations at Hendrix College

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Arkansas Advocates
for Children and Families
Union Station, Suite 306
1400 West Markham
Little Rock, AR 72201
501-371-9678

Northwest Arkansas Office
614 east emma, suite 107
Springdale, ar 72764
479-927-9800

www.aradvocates.org
@AACF

READING TO LEARN:
The Importance of Reading by the End of Third Grade in Arkansas

Jay Barth

The evidence is clear: a young person's failure to read at grade level by the end of third grade creates a massive barrier to educational success. It is a key force in determining whether a student will go on to graduate from high school, attend and graduate from college, and achieve future success in the workforce. Not only does grade-level reading have a significant impact on a student's educational career, it has broader ramifications for their economic livelihood in an increasingly competitive economic environment.

This report looks at the importance of grade-level reading in Arkansas. More specifically, it examines key questions such as: How does Arkansas compare to other states in grade-level reading by the end of the third grade? How do students from different racial and economic backgrounds perform? What does the data tell us about the long-term ramifications of non-proficiency in Arkansas? And finally, what can we do here in Arkansas to help our students read at grade level by the end of third grade?

The Clear Importance of Grade-Level Reading

The link between proficient reading and ongoing academic success has been noted for decades. But now, we have longitudinal, or long-term, data that tracks students' educational careers and their lives after school. This provides us with a much clearer gauge of the substantial impact early reading success can have on our students. Reading proficiently by the end of third grade plays a vital role in future academic achievement, as measured by standardized tests and other indicators of educational attainment. However, it is strongly associated with a number of other positive outcomes for kids that go beyond the classroom.

True reading comprehension is not just the ability to recognize words and articulate them but also the ability to understand the underlying concepts expressed by those words. Reading is both directly and indirectly connected to later educational achievement and it is critically important to a student's growth

across all subject areas. From reading and writing in the social sciences to the application of mathematical principles to real world situations, students make use of reading skills on a daily basis across their coursework. As a child moves up in grades starting at about the fourth grade, the reading skills needed to do this work well become more sophisticated. The transition from third to fourth grade marks a shift from "learning to read" to "reading to learn."[1]

Failure to achieve reading proficiency has also been linked to other factors that have an impact on academic success. Unskilled readers have low self-esteem, thus reducing their confidence in their ability to thrive academically. They are also significantly more likely to engage in behaviors that lead to disciplinary actions (and, indeed, may result in suspensions which prevent their learning). Because of these things, poor reading skills play an important indirect role in shaping educational achievement.[2]

Perhaps the most expansive study of the long-term impact of grade-level reading at the end of third grade was a longitudinal study of 26,000 Chicago Public School students beginning in 1996-97.[3] The study found a strong correlation between third and eighth grade reading scores, controlling for other factors. Third grade reading achievement had an impact that went beyond performance on future tests, however. For example, third grade reading skills are a strong predictor of a ninth grade student's GPA (positively) and number of course failures (negatively). Not surprisingly, reading at grade level at the end of the third grade is also a predictor of whether a student stays in school or drops out.

A longitudinal study of nearly 4,000 American young people born between 1979 and 1989 examined the relationship between reading proficiency and staying in school.[4] Using the National Assessment of Educational Progress (NAEP)'s categories, the study grouped readers into three groups: below-basic readers, basic level readers, and readers who are proficient as compared to the expectations of a child in their grade. The 3,975 students had their reading progress tracked by the Peabody Individual Achievement Test (PIAT) Reading Recognition subtest. Out of readers who were proficient at the third grade, almost all (96%) graduated high school. However, four times as many non-proficient students failed to graduate by the age of 19. Most troubling, nearly one in four (23%) of below-basic readers failed to obtain a high school diploma by 19 (although the researchers were unable to authoritatively determine whether the students had actually dropped out).

High school dropouts are more likely to be unemployed, spend more time in poverty, use more public assistance, and end up on death row than people who have a high school diploma.[5] According to the 2005 U.S Census, the median income of high school dropouts was $12,184 per year. High school graduates, G.E.D. holders, and those with higher credentials had a median income of $20,431. High school dropouts make $1 million less over the course of their lifetime than college graduates. The job market now requires a high school diploma, at the very least, to be competitive and dropouts are twice as likely to slip into poverty from one year to the next.[6]

Not only do individuals suffer, society also pays a high price for students who drop out. The nation loses productive workers and the added tax revenue that comes with them. A high school dropout contributes half as much in tax revenue as a high school graduate over the course of their lifetime.[7] Other social costs include paying to house prisoners, paying for healthcare for the uninsured, and providing more social services like welfare and unemployment. Four out of 10 people without high school diplomas - or an equivalent - receive some form of social welfare assistance, and these people are eight times as likely to be incarcerated over the course of their lifetime.[8] If everyone graduated from high school, the United States could save between $7.9 billion and $10.8 billion in expenditures from food stamps and housing projects.[9] If the male graduation rate increased by a mere five percent, an estimated annual savings of $4.9 billion dollars would be realized simply from decreased spending on crime costs.

Not surprisingly, reading proficiently by the end of third grade has a positive affect on college attendance. The Chicago Public Schools longitudinal study discussed previously also examined the relationship between third grade reading proficiency and college attendance and found a clear correlation between reading achievement and college enrollment.[10] Just as higher dropout rates create tremendous costs for society, fewer students going on to college limits the benefits to communities and to the country due to the loss of human capital and the accompanying tax receipts from heightened incomes.

These societal problems that we usually associate with adults often have their roots in the reading skills developed (or not) by students during their earliest school years. As a recent report on the subject concluded, "The bottom line is that if we don't get dramatically more children on track as proficient readers, the United States will lose a growing and essential proportion of its human capital to poverty, and the price will be paid not only by individual children and families, but by the entire country."[11]

Gauging Reading Proficiency—NAEP versus State Benchmark Exams

Analysts of third grade reading in the United States typically rely upon scores from the National Assessment of Educational Progress (NAEP) in evaluating the depth of the problem. NAEP, also known as "The Nation's Report Card," employs a careful sampling process to ascertain how America's students are doing and its fourth grade exam is given at the start of that school year. According to the NAEP standards, proficient fourth grade students "should be able to demonstrate an overall understanding of the text, providing inferential as well as literal information. When reading text appropriate to fourth grade, they should be able to extend the ideas in the text by making inferences, drawing conclusions, and making connections to their own experiences."[12]

The state-level examinations used in the determination of whether adequate yearly progress is being achieved under the No Child Left Behind (NCLB) education law consistently overestimate the percentage of students who are proficient. States are left with the power to develop their own tests and, uniformly, those exams are less stringent than the NAEP test, which comes closer to meeting internationally recognized educational standards. Because states are left with the power to develop their own

measures of student achievement, there is significant variance across the nation in how they stack up against NAEP in terms of proficiency. The NAEP scale equivalent score for proficiency in Mississippi—the lowest in the nation—is 163 while that in Massachusetts (the highest) is 232; these compare with a NAEP proficiency "cut score" of 238. Arkansas's state benchmark is one of the more stringent in the country, ranking eighth for fourth grade reading proficiency in terms of its NAEP scale equivalency. Still, it is fair to say that Arkansas's state tests underestimate the non-proficiency problem in terms of reading at this level.

A primary challenge in relying solely on the NAEP as Arkansas's measure of reading proficiency progress is that NAEP results are not available at the local level. Local data is needed to track the progress of local districts and is also needed by state and local officials who must formulate policies and allocate resources in response to the progress that districts are (or aren't) making toward reading proficiency goals. Regardless of the extent to which the state benchmark test overestimates reading proficiency at the local level, it's the only game in town for tracking local progress.

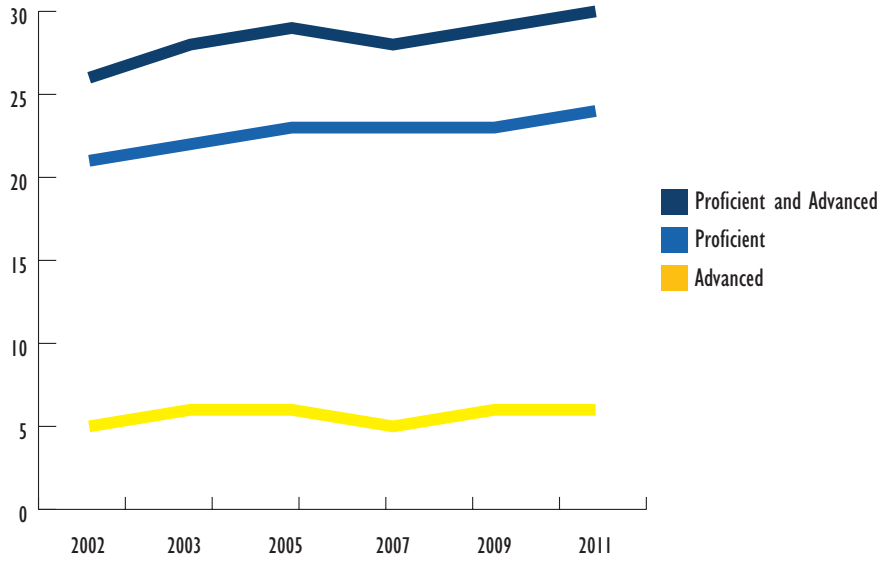
The necessity of using state benchmark data is further highlighted by the recent federal approval of the Arkansas's No Child Left Behind waiver request which changes the state's existing goal that it must reach 100 percent proficiency by 2014. There are three new measures that will be used: 1) the proficiency gap, 2) the growth gap, and 3) the graduation gap. By 2017, each of these gaps – based on the state benchmark data – must be cut in half. So for example, if a school had a proficient and advanced rate for all grades of 76 percent in 2011, the proficiency gap would be 24 percent (100 percent – 76 percent.) By 2017, they would need to reduce the gap by half, or 12 percent. Each year they would have an annual measurable objective (AMO) to meet for moving them toward the larger goal.

Each school will be held accountable for goals for all students and for a group of students called the Targeted Achievement Gap Group (TAGG). The TAGG will include all students who are economically disadvantaged (defined as receiving free or reduced-price lunch), English language learners, and those with disabilities. This designation was formed because, in many schools, the number of children who fit into one or more of those categories is often too small for the data to be reported and therefore the schools were not being held accountable for improvements for those children. No particular racial group was specifically included in the TAGG. However, 92 percent of Hispanic students, 86 percent of African American students, and 90 percent of Hawaiian Native/Pacific Island students currently fall into one of the TAGG categories.

Comparing Grade-Level Reading in Arkansas to Elsewhere in the US

Unfortunately, a large percentage of Arkansas students are not proficient in reading by the end of the third grade. Figure 1 shows the percentage of Arkansas students who are either proficient or advanced in fourth grade reading scores on the NAEP. Despite the educational investments in the state after the Lake View decisions of the last decade, seven in 10 fourth graders continue to lack this important

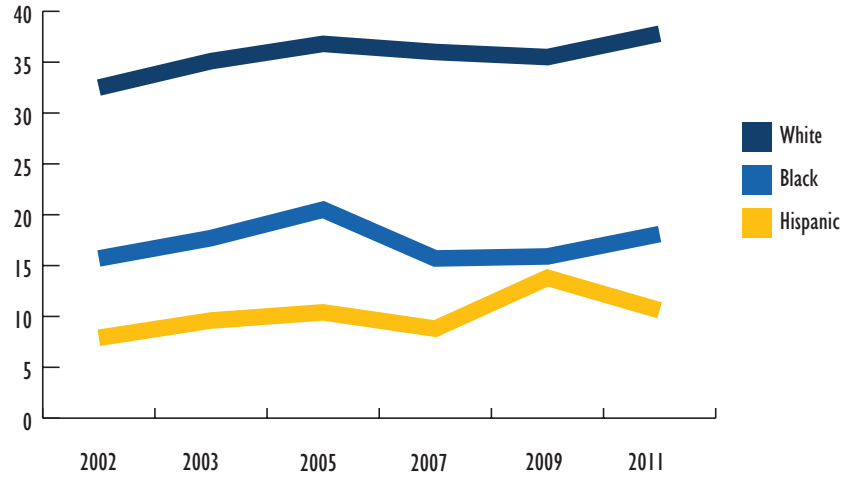
ARKANSAS FOURTH GRADE ACHIEVEMENT
Percent breakdown of NAEP classifications, 2002-2011



proficiency. That number does show some improvement over the past decade, but it clearly reflects the challenges still facing the Arkansas education system. While grade-level reading is a problem across the country, Arkansas lags behind other states in this measure. In 2009's NAEP results, 68 percent of fourth graders nationally scored below proficient in reading; 71 percent of Arkansas students did. Arkansas ranks 35th in the nation.

As with many other educational measures, Figure 2 shows a signicant a gap in reading proficiency among Arkansas students across racial and ethnic lines.[13] In 2011, 38 percent of Arkansas's white students were proficient on the NAEP exam while just over one in 10 African-American students did so. Latino/a students also are challenged when it comes to reading proficiency, with under 20 percent of all fourth-graders showing success in this category.

PERCENT OF ARKANSAS STUDENT SUBGROUPS SCORING PROFICIENT OR ABOVE
4th grade reading NAEP scores, 2002-2011



The School Readiness-Achievement Gap Connection

Children must be ready to succeed when they get to school (cognitively, socially, emotionally, and physically) before they can learn. The gap begins at birth for children who are born with low birth-weights, born prematurely, or those who are affected by prenatal exposure to toxic substances. Differences in children's resources and opportunities for physical, linguistic, cognitive, social, emotional, and behavioral development between birth and kindergarten can exacerbate the readiness gap. This gap becomes an achievement gap when children enter school, and it persists over the student's school experience.

Source: Early Warning!: Why reading by the end of the third grade matters. (2010). Baltimore, MD: The Annie E. Casey Foundation

Scores on the Arkansas state benchmark tests paint a much more favorable picture of the extent to which Arkansas's children are reading at a proficient level. Based on 2012 data, 82% of Arkansas 3rd graders are reading at proficiency, compared to less than 30% of 4th graders on the NAEP exam. It also paints a much more favorable picture of minority achievement with 61% of black students and 71% of Hispanic students scoring at proficient or above on the state benchmark exam, compared to 10% and 20%, respectively, on the NAEP.

PERCENTAGE OF 3RD GRADE STUDENTS AT OR ABOVE "PROFICIENT"
According to state benchmark data, 2011

82% of White students

71% of Hispanic students

61% of Black students

70% of economically-disadvantaged students

Causes of Early Reading Challenges

A good deal of research in recent years has begun to clarify why our children don't read proficiently. This research can help guide the policy responses necessary to solve this vitally important educational challenge.

The Early Warning Report identified a number of factors that undermine grade-level reading proficiency, and nearly all of them disproportionately impact low-income children:

- Children born with low birth-weights, with congenital health problems, or those affected by prenatal exposure to toxic substance;
- Health problems that interfere with learning, such as chronic asthma, poor hearing, vision, and dental issues, etc.;
- The lack of early interactions that foster linguistic development;
- The lack of social and emotional skills needed to function in a school before they reach school age;
- The lack of access to high-quality early childhood and prekindergarten programs that prepare kids for school;
- Attending low-performing schools or schools that are not ready to teach to high standards;
- Missing instructional time because of chronic absenteeism;
- Losing ground during the summer months;
- Being distracted by childhood hunger and food insecurity, housing insecurity, and family mobility;
- The prospects for school success are disrupted by family-related stressors, such as family violence, parental depression, or abuse and neglect.

While a comprehensive discussion of each of these causes is beyond the scope of this brief, several are worth noting.

The reading proficiency challenges facing some children actually begin before they are born. A variety of developmental problems, particularly related to brain functioning and behavioral issues (such as ADHD), are tied to being a low birth-weight baby.[14] Maternal substance use and abuse during pregnancy leads to cognitive developmental limitations for youngsters. A growing body of research shows that in utero exposure to drugs, alcohol, and the substances in cigarettes are tied to detrimental health outcomes that interfere with learning, including reading development.[15] These prenatal health challenges—low birth-weights and exposure to toxic substances—are, of course, themselves tied to the economic and educational backgrounds of the parents.

High-quality early childhood education has proven to be the most promising strategy for helping less-advantaged children start school with the same potential for learning as their more-advantaged peers. While not a cure-all for every challenge that a child encounters on the pathway to school, early childhood education does help level the playing field – including reading preparation – before those limitations become an expansive barrier to children's learning success.[16] For example, an analysis of the South Carolina Early Education Program found that participation in early childhood education increased a child's average vocabulary score by 10 percent and the average print-awareness score by 42 percent compared to similarly-situated students who did not go through the program.[17] Therefore, a child's inability to access high-quality pre-K opportunities serves as a key barrier to third grade reading proficiency in the United States.

Of the many early education programs found in the United States, several different models of pre-kindergarten programs have proven to be effective. While each of these programs is distinctive, they share some critical components that make them effective. Most significantly, the highest-quality programs require a B.A. from its teachers and have a staff/child ratio of no more than 1:10.[18] Additionally, the best pre-K systems in the country have comprehensive early learning standards, and also provide vision, hearing, and health screening, plus support services, to catch physical problems that could hinder children's learning or make chronic absenteeism from school more likely. Too many American youngsters lack access to these important services as they prepare themselves for school. Importantly, it is the children of low-income families who are most in need of these opportunities who are least likely to have them because of their cost.[19]

Of course, it is not formalized early childhood education alone that promotes preparation for school. Parents and other family members can also serve as crucial actors in preparing young people for reading proficiency. Unfortunately, many parents, particularly low-income parents, lack the time, skills, and information to be effective purveyors of the tools needed for children's linguistic development early in life.[20] It is crucial that in-home reading and story-telling be a part of the life experience of youngsters from the time of their birth so that they develop the vocabulary and cognitive skills necessary to become a proficient reader by the end of third grade.

A variety of forces limit certain parents' ability to play this important teaching role for many American children. First, many working parents simply lack the time needed to read to children in a relaxed setting. Second, many parents lack literacy skills themselves or lack access to books and other reading materials to aid in reading to children. Finally, many parents simply do not know what an important force they can be in shaping their children's preparation for school, particularly in terms of reading. All of these limitations, of course, are most likely to be faced by lower-income parents.[21] Children from wealthier families have heard, on average, 30 million more words by age 3 than have their low-income peers.[22]

Once school begins for children, it is vitally important that students attend school regularly to gain access to the learning opportunities found there. One little-known fact is that many students become chronically absent from school even in the earliest of grades. About one in 10 first-graders miss at least

10 percent of the school year (the definition of chronic absenteeism); poor record-keeping may actually underestimate this problem.[23] Such chronic absenteeism has been shown to have significant ramifications for all student achievement, including reading proficiency. This is particularly the case for students from low-income households who, because of health challenges facing children or parents or because of transportation issues, are most likely to be chronically absent. The negative consequences of missing instructional time persist across time (by ninth grade, a student missing 20 percent or more of total class days is a better predictor of dropping out than eighth-grade test scores).[24]

After young people begin school there is a big difference in the amount of learning children from different income groups lose during summers. Children from wealthier families actually make gains during the summer months, applying the skills they have learned during the school year to the numerous and varied experiences provided to them during the summer.[25]

While lower-income children learn at the same rate as their wealthier peers during the school year, summer learning loss means that, across time, major gaps grow across economic lines. This is true even in the earliest years as students are learning to read; lower-income children lose as much as two months of reading achievement during the summer months. This delays significantly these students' progress in reading proficiency and creates gaps between richer and poorer students that grow exponentially over time. For instance, an analysis of Baltimore students found that, by the end of fifth grade, low-income students read at a level almost three grades below the middle-class students in their class. Almost all of this gap is created by summer reading loss.[26]

The above discussion highlights a number of the key challenges students face in gaining reading proficiency by the time they should be "reading to learn." It should provide a starting point to help guide the policy decisions that Arkansas will have to make as the state puts enhancing reading proficiency by the end of third grade at the top of its educational policy agenda.

Long-Term Implications for Arkansas

Arkansas students' lack of proficiency in literacy skills by the end of the third grade has long term impacts on our state. One important educational reform in Arkansas over the past decade has been the development of a longitudinal tracking system that follows students across their academic lives, even if they change school districts.[27] While the tracking of educational information remains relatively new, we have now reached a point where it is possible to assess the impacts of students' early academic lives, including whether they are or are not proficient in reading by third grade, on the levels of achievement and later behaviors.

A special analysis conducted for this report focused on the first group of students in the state's longitudinal tracking system, the group of third graders in 2004-05. As shown in Table 1, this group was

TABLE 1	TOTAL IN EACH CATEGORY	% IN EACH CATEGORY
ADVANCED	4,783	17.2
PROFICIENT	9,489	34.0
BASIC	7,754	27.8
BELOW BASIC	5,487	21.0

RELATIONSHIP BETWEEN GRADE 3 LITERACY AND GRADE 8 LITERACY
Arkansas third graders, 2004-2005

TABLE II		GRADE 3 LITERACY SCORES				TOTAL
		BELOW BASIC	BASIC	PROFICIENT	ADVANCED	
GRADE 8 LITERACY SCORES	BELOW BASIC	1,116 20.6%	115 1.5%	20 .2%	2 .0%	1253 4.6%
	BASIC	2,590 47.9%	1,803 23.9%	495 5.3%	37 .8%	4,925 18.3%
	PROFICIENT	1,601 29.6%	4,682 62.1%	5,045 54.3%	1,102 23.3%	12,430 46.1%
	ADVANCED	103 1.9%	934 12.4%	3,732 40.2%	3,582 75.8%	8,351 31.0%
TOTAL		5,410 100.0%	7,534 100.0%	9,292 100.0%	4,723 100.0%	26,959 100.0%

composed of a large portion of the students who were not reading proficiently in third grade, using the state benchmark examination for literacy as our gauge. Just under half of the state's third graders (48.8 percent) who took this examination were either in the basic or below basic categories. As noted earlier, this is likely a somewhat generous measure of proficiency as compared to the NAEP results.

As previous studies have done, we can also now see the long-term ramifications of Arkansas students failing to "learn to read" as time came for them to "read to learn." Table 2 shows the relationship between third grade reading proficiency as determined by the state benchmark exam and eighth

RELATIONSHIP BETWEEN GRADE 3 LITERACY AND GRADE 8 MATH
Arkansas third graders, 2004-2005

TABLE III		GRADE 3 LITERACY SCORES				TOTAL
		BELOW BASIC	BASIC	PROFICIENT	ADVANCED	
GRADE 8 MATH SCORES	BELOW BASIC	2,924 54.0%	1,618 21.5%	581 6.3%	46 1.0%	5,169 19.2%
	BASIC	1,194 22.1%	1,769 23.5%	1,150 12.4%	173 3.7%	4,286 15.9%
	PROFICIENT	1,187 21.9%	3,508 46.6%	4,982 53.6%	1,694 35.9%	11,371 42.2%
	ADVANCED	106 2.0%	639 8.5%	2,580 27.8%	2,810 59.5%	6,135 22.8%
TOTAL		5,411 100.0%	7,534 100.0%	9,293 100.0%	4,723 100.0%	26,961 100.0%

grade reading proficiency and show a highly significant relationship. This shows that the vast majority (68.5%) of students who were below basic in the third grade remained non-proficient (basic/below basic) in their literacy scores five years later. The data does show considerable success in shifting "basic" readers to the "proficiency" level five years later, but the lingering limitations of early reading challenges show themselves across the board.

Importantly, the relationship between third grade reading and eighth grade math scores (shown in Table 3) is a strong one, indicating that early reading skills do not just correlate with later skills in that area but transcend the curriculum as students use reading skills to learn other subject areas. The majority of students who are non-proficient in reading in third grade are non-proficient in mathematics five years later.

An analysis of the relationship between early reading success and later academic outcomes shows highly significant correlations between third and eight grade literacy scores and between third grade literacy scores and eighth grade math scores among Arkansas's students. In short, early reading proficiency has a big impact on shaping later success in the classroom.

Not surprisingly, the challenges faced by non-proficient (basic/below basic) readers go beyond test performance in school. First, non-proficient readers are decidedly more likely to have school disciplinary and attendance issues years later. While proficient/advanced reading students in third grade had, on average, 1.95 disciplinary incidents of varying severities during ninth grade, low achievers had 2.53 such incidents. In ninth grade, those students who were at the basic or below basic reading level are also significantly more likely to be absent from school. On average, proficient and advanced students missed an average of 8.24 school days per year while lower-achieving third grade readers missed 11.47 days six years later.

These disciplinary and absenteeism numbers are crucially important because of their strong correlation with a student dropping out before graduation. Indeed, a separate analysis of Arkansas data has showed that low attendance and being suspended from school are two of the strongest determinants of whether a student drops out of school.[28] While we will not be able to gauge third grade reading non-proficiency's direct impact on dropout rates and college attendance until the new longitudinal tracking system ages several more years, all signs point toward a continuation of the negative impacts we've seen so far.

What Can Arkansas Do to Enhance Reading Proficiency?

What steps can Arkansas take to ensure that more of our students are reading proficiently at that key point? The Annie E. Casey Foundation's *Early Warning!* report provides a comprehensive policy framework of nearly 30 strategies that Arkansas should use as a starting point for an assessment of policies it should pursue as part of a grade-level reading strategy (See Exhibit 1).

Until that assessment is completed, several strategies would appear to stand out as deserving immediate consideration in Arkansas, including: improving school readiness by enhancing prenatal health care; broadening access to Arkansas's excellent pre-K programs; promoting parental involvement by empowering parents to be better teachers of reading in the home; taking steps to reduce chronic absenteeism by students; and creating high-quality opportunities for students to continue to learn during the summer months when so many students fall behind.

Improving School Readiness through Prenatal Care

Arkansas has made significant strides in recent decades to improve prenatal care, but clear challenges remain. As of 2009, nearly one in four mothers still received no prenatal care, below the 83.9 percent national average.[29] A particular challenge is the unavailability of such services in the most remote parts of the state. In rural Arkansas, innovations such as telemedicine have begun to be employed but have not solved the challenges of accessibility.

The Antenatal and Neonatal Guidelines, Education, and Learning System (ANGELS) program at the University of Arkansas for Medical Sciences (UAMS) is helping women with high-risk pregnancies access critical prenatal care by using video conferencing to diagnose and treat them. STAR-Health, a grant-funded program sponsored by the Arkansas Minority Health Commission, began work in 2009 in three Delta counties. It uses community health workers—community members who are trained to help educate mothers about prenatal care and in parenting skills—in those challenged counties to address maternal health needs.[30]

While these are innovative steps, large numbers of Arkansas mothers—disproportionately young and African-American—lack prenatal health assistance. Younger mothers and minority mothers are the least likely to receive sufficient prenatal care. Arkansas has more teen mothers than most other states; despite improvement in recent years, the percentage of births to teens in Arkansas remained 45 percent above the national average in 2009.[31]

Insufficient prenatal care is a significant cause of low birth-weight babies in Arkansas. Between 2002 and 2009, the percentage of low birth-weight babies grew from 8.6 to 8.9 percent of all births in Arkansas.[32] Each of these babies faces special developmental challenges that link to cognitive and behavioral problems that may inhibit the gaining of reading skills.

Too many Arkansas babies also are subjected to toxic substances during their mothers' pregnancies. For example, a recent survey of Arkansas women found that approximately one-third of them smoked in the three months before pregnancy and two-thirds continued to smoke during the pregnancy.[33] In 2011, Arkansas's Medicaid program was expanded to provide substance abuse treatment for pregnant women; this has the promise of improving the outcomes for the children of those women. During upcoming battles over Medicaid reform, it will be crucial to protect these and similar programs that are

of such importance to many Arkansas children. During recent legislative sessions there have also been efforts to cut off health access, including prenatal care, to undocumented individuals.

There is an enormous amount of work to be done in the area of prenatal health care in Arkansas. The Natural Wonders Partnership Council (NWPC) works to improve children's health in Arkansas through collaborative, cross-sector solutions; one of that group's focus areas is prenatal health and teen pregnancy. While these advocates generally think of themselves as operating in the health care arena, their work also ties directly to the enhancement of grade level reading in Arkansas.

Improving School Readiness by Expanding Early Childhood Education

Over the last decade, Arkansas has made a major investment in early childhood education for 3- and 4-year-olds. This investment has begun to pay off by leveling the playing field for children from different economic, racial, and ethnic groups as they start school, getting more students on the path to effective reading.

Although the Arkansas Supreme Court stated that pre-kindergarten education was not required by the state constitution in the 2002 Lake View decision, the state has continued to wisely put resources into the Arkansas Better Chance (ABC) for School Success Program (in existence since 1991). In tandem with federal funding for Head Start, this state funding ensures that many e- and 4-year-old children whose families' incomes are below 200% of the federal poverty line have access to quality early childhood education. According to a new study by Arkansas Advocates for Children and Families, over three-fourths of 4-year-old children below 200% of the poverty line have access to a quality pre-k program, compared to less than half of 3-year-old children. The biggest gap in quality early childhood education for children ages birth up to age 3. Existing programs serve less than five percent of low-income children.

ABC is one of the strongest pre-kindergarten systems in the country, meeting most of the key standards identified for high-quality early education programs and showing a strong commitment to accessibility. The National Institute for Early Education Research (NIEER)'s "The State of Preschool 2010" yearbook ranked Arkansas ninth in the nation in access for 4-year-olds, seventh in access for 3-year-olds, and eighth in resources for pre-kindergarten programming.[34] Additionally, Arkansas meets nine of NIEER's 10 quality benchmarks. The single benchmark Arkansas has failed to meet is for teacher degrees; NIEER's standards require a bachelor's degree for all pre-kindergarten teachers. Arkansas requires a B.A. or B.S. for teachers in a single classroom site, but only an associate's degree for multiple classroom sites (although other analyses find that most pre-kindergarten teachers in Arkansas do indeed hold a bachelor's degree).[35]

In 2007, NIEER evaluated Arkansas's ABC Program using a sample of youngsters representative of the state's overall demographic percentages. In addition to major benefits in math scores, the researchers found that compared to the control group, the ABC Program increased children's vocabulary scores by 31 percent and print awareness by 116 percent.[36] These are exactly the results that improve later reading proficiency.

While Arkansas has made significant strides in improving the quality of its preschool since the inception of ABC in 1991, there clearly remains important work to be done if the state is to use the power of early childhood education to create proficient readers. First, many young people who are eligible for the program do not enjoy its benefits because of state budget limitations, the lack of local providers able to serve them, or because some families simply choose not to take advantage of the program. Second, while many families up to 200 percent of poverty are eligible for free access to the program subject to state budget constraints, this leaves many working-poor families without an ability to cover the cost if they can get their child into an ABC program. Finally, it is crucial that Arkansas' policy makers continue to address issues related to enhancing teacher qualifications and continue the ratcheting up of standards with a particular focus on reading preparation.

Parental Engagement and Library Programs

Even if all eligible young people in Arkansas were taking part in ABC, we know that vibrant readers are developed as a result of what happens in their homes from the time of birth. At present, too little reading and story-telling is taking place in young Arkansans' homes.

Home visiting programs such as the Home Instruction Program for Parents of Preschool Youngsters (HIPPY) can give parents the tools to become better reading teachers for their children has its roots in Arkansas. HIPPY aims to increase the variety of intellectual experiences of pre-school children in the home. HIPPY staff, generally members of community organizations, come into the home to train parents in methods of developing their children's school readiness. Parents are given age-appropriate materials and lessons. Language skills are developed through reading and question and answer sessions.

Evaluations have shown that children from HIPPY homes outperform children from non-HIPPY homes academically and are better behaved in school. A study of HIPPY in Arkansas showed significant differences between former HIPPY students and a control group of students who received no HIPPY instruction. Specifically, HIPPY students scored better in reading, language arts, and mathematics in grades three through six and had lower rates of suspension (Bradley and Gilkey 2002). The modest program fee includes all the materials and training organizations needed to start a HIPPY program.

HIPPY is one of seven home visiting models that provide early childhood health and/or educational services for our youngest, most at-risk children. Other models include the Nurse-Family Partnership, Parents as Teachers (PAT), Health Families America, Following Baby Back Home, Early Head Start, and Early Steps for School Success. They are all part of the Arkansas Home Visiting Network. Arkansas was awarded two federal grants in 2011 to help develop, expand, and evaluate home visiting services in the state. Although the federal grants are expected to expand the reach of the Arkansas Home Visiting Network in 2012 to include 2,275 more families at 29 new and 26 expanded sites, they are expected to still only meet a fraction of the state's need for quality home visiting programs.

We know also that homes need a variety of books to keep youngsters excited about reading. Because of young persons' changing interests across time, accessibility to good libraries is crucial, especially for working families for whom buying books is often difficult.

Unfortunately, compared to libraries elsewhere in the United States, Arkansas's library system is decidedly challenged. In 1999, the state carried out a comprehensive study of Arkansas's public libraries.[37] The findings were not encouraging. While the consultants who carried out the study noted unevenness in the quality of libraries around Arkansas, they concluded that Arkansas's libraries were dramatically underfunded as compared to other states, including others in the region. Specifically, the total support for Arkansas's public libraries was approximately one-half of the national average (52.6%). Only three states ranked below Arkansas in terms of per capita expenditures on libraries. More recent data indicates things have only gotten worse for Arkansas's libraries; the state now ranks only above Mississippi in per capita expenditures on public libraries and is now below half of the national average.[38]

Since the completion of this analysis, there is evidence that the gap between high-quality libraries (mostly in urban and suburban areas) and poorly-resourced libraries has grown in the state because of the difficulty for many library districts in persuading local voters to raise the millage for libraries and the poor tax base for property taxes in rural areas (nearly four in five dollars spent on libraries in Arkansas comes from local taxes). A greater investment in libraries is crucial for children to have access to books that enliven a love of reading at an early age.

Reducing Absenteeism

In 2004-05, seven percent of Arkansas's third graders were chronically absent, missing more than one-tenth of the 178 school days.[39] As noted earlier, this percentage likely underestimates the absenteeism rates. While the percentage of chronically absent third-graders was only slightly above the national average, Arkansans in that grade miss an average of 7.75 days per year, double the national average for that grade.[40]

A variety of factors drive chronic absenteeism. One analyst has categorized them as discretion (parents' simply not prioritizing attendance), aversion (aspects of the school environment that push children away), and logistical challenges in getting children to and from school.[41] The most common logistical challenges are family instability, a variety of factors tied to socioeconomic status (ranging from homelessness to less-obvious realities of being poor in America), and illness (especially asthma).[42] In terms of discretion, research has shown that parental engagement on the issue is vital to highlight the importance of students attending school regularly. A recent pilot project in New York City's schools has shown real promise in this regard.[43] Arkansas should use its longitudinal tracking system to reach out to parents to highlight the dangers of chronic absenteeism as soon as the pattern begins to show itself. That same tracking system can identify patterns across schools. Looking at individual schools where chronic absenteeism is common may well identify problems with the school environment (bullying, etc.) that are pushing children away.

While public policy decisions can positively affect all of these components of absenteeism created by logistical problems, taking steps to improve student health in Arkansas can have the most immediate impact on limiting chronic absenteeism. Several school-based asthma treatment programs around the

country have been effective at reducing student absenteeism in highly asthmatic students.[44] Indeed, a series of intensive interventions have effectively brought the level of absences down to the same level as students without asthma. In contrast, schools in Arkansas have done very little to combat asthma in a deliberate, organized fashion.

A second key area of preventable absences is oral health issue. While still behind most states in regard to student oral health, Arkansas has been making strides toward reversing this trend. In 2003, the Arkansas General Assembly passed Act 1216, which made oral-health education mandatory in Arkansas schools. Moreover, in the 2011 legislative session, dental hygienists and pediatricians were empowered to carry out some basic preventative oral health care for young people without dentists. Still, there is only one school-based dental clinic in the state. In keeping with recent trends of integrating oral-health education in school curricula, Arkansas should consider systematically integrating oral-health services into schools.

Similarly, Arkansas schools must continue to make advances in mental health care for children. Some schools have in-house mental health providers while others contract with outside providers to come into the school and provide care. Improving the provision of school-based mental health services is part of the ongoing System of Care effort being carried out in Arkansas.[45] This effort is working to ensure that mental health services for children are family-centered and youth-driven and are provided in the least restrictive setting.

Finally, Arkansas scores poorly in the number of students utilizing the Early and Periodic Screening, Diagnosis, and Training (EPSDT) Medicaid benefit. Rates of utilization of this vaccination and screening program are 38 percent, the worst in the United States.[46] Other states have undertaken strategies that have shown significant increases in use of the program. A similar program in Arkansas would likely have a positive impact on school attendance in the earliest grades through making use of existing federal resources.

In an effort to address these and other children's health issues that affect learning, Arkansas has expanded the implementation of Coordinated School Health efforts in schools across the state over the past several years. Coordinated School Health is a Centers for Disease Control approach that has been recognized nationally as model partnership structure. It is currently being utilized in schools across the state. Coordinated School Health is designed to help young people grow into healthy and productive adults by focusing on the physical, emotional, social, and educational development of children in kindergarten through grade 12. This approach, which is administered jointly by the Department of Education and the Department of Health, is an effort to help schools leverage community health resources to meet the needs of their students. Supporting and expanding the Coordinated School Health model to all schools in the state can be the vehicle for addressing an array of health issues facing students today.

Finally, with support from the 2009 tobacco tax increase promoted by Governor Mike Beebe, nine of the districts with Coordinated School Health models have created school-based health centers (SBHCs). The centers provide preventive medical care and other services inside the school building. Considering the positive outcomes resulting from SBHCs in other states and areas of great need in student health in Arkansas, the potential impact of SBHCs in the state could be significant and could serve as a home to many of the services proposed in this section, including asthma, dental care, and especially mental health services.

Arkansas has begun to take steps toward improving the health of students and faculty in schools, although the programs are not comprehensive in nature and most students in the state lack access to them. Embracing proven coordinated school health practices can help ensure children are receiving needed health services and health education so that absenteeism is not a barrier to their development as students.

Reducing Summer Learning Loss through High-Quality Summer Programs

For low-achieving students, summer reading programs provide the opportunity to catch up to peers. A few weeks of intensive lessons with individual attention not only increases proficiency, but can also lead to increases in positive attitudes about schooling and self-esteem, especially when parents are involved in the programs. Borman and Dowling evaluated summer programs in Baltimore using an experimental field trial. After two successive summer sessions, they found that the treatment group scored .5 standard deviations better than the control group on standardized tests.[47] These effective programs are also relatively inexpensive. The cost of the Baltimore program was estimated at $815 per student, for instance. An Austin, Texas-based program—Summer Opportunity to Accelerate (SOAR)—has shown similar success, costing barely $500 per student for an intensive 19-day program.[48]

While a variety of summer programs of varied quality exist in the state of Arkansas, there is no statewide initiative for summer learning in Arkansas. Following on recommendations developed by the 2008 Governor's Task Force on Best Practices for After-school and Summer Programs, the Department of Human Services, the Department of Education, the Arkansas Out of School Network (AOSN), and local service providers have worked together to establish quality standards, licensing requirements, professional development trainings, and evaluation methods needed to operate quality programs in the state of Arkansas in recent years.

In the 2011 session of the General Assembly, legislators passed the Positive Youth Development Grant Program Act. The bill aims to expand the availability of positive youth development programs to children ages five through 19 and establishes a grant program to support positive youth development efforts – including high-quality summer programming – in the state. At present, the rules and regulations for the grant program are being developed. That said, no funding stream for the program has been identified. This is the next priority for advocates of expanded out-of-school opportunities for young kids. Summer programs aimed at undermining summer learning loss would be a great investment for the state of Arkansas as it works to ensure higher rates of grade-level reading in its students.

Conclusion

As with many aspects of educational transformation, there is no single answer to solving the grade level reading crisis in Arkansas. A variety of responses, involving the work of both parents and policymakers, are crucial to reduce the percentage of students who are non-proficient in reading at the end of the third grade. This report presents some of those key next steps.

While it is prudent to help children become proficient in reading by the end of the third grade so that they can use those skills to progress across subject areas, it is also important to recognize that we cannot simply give up on those students who fail to reach proficiency by that time. Focused work with students who have reading challenges at that stage can get them back on the path to educational achievement. Indeed, in the Chicago longitudinal study that emphasized the importance of third grade reading proficiency there was strong evidence that formerly non-proficient students who caught up by the ninth grade were are just as likely to graduate from high school and move on to college as their peers who had been proficient six years earlier.[49] Such "catch up" efforts, however, require a tremendous amount of person power and, unfortunately, too often fail to work. We are all better off if young people learn to read by this crucial moment in their educational careers.

Appendix

A Policy Framework for Improving Grade Level Reading
Adapted from *Early Warnings! Why Reading by End of the Third Grade Matters, a* report by the Annie E. Casey Foundation.

Develop an aligned and coherent system of early care and education that coordinates what happens from birth through the 3rd grade.

- Consistent, aligned expectations for healthy child development, including social-emotional and cognitive development, from birth to 3rd grade that link early childhood, child care, pre-k, child care and K-3 education.
- Appropriate, comparable instruments for measuring results from birth to age 8 based on common standards for early childhood programs and practitioners.
- Content rich, developmentally appropriate curricula linked to standards and assessments.
- The structures needed to collect and analyze data, making it possible to track children's progress toward results from birth to through 3rd grade, individualize teaching strategies, and intervene when needed.
- Aligned professional development system, with sufficient compensation, to ensure a well trained and qualified workforce in birth to age 5 services and in pre-k through 3rd grade.
- High quality resources, networks, supports, and programming that children need to stay on track between birth and 3rd grade.
- Seamless transitions between each stage on the child development and education continuum so that experience at each stage (age birth to 3, birth to 5, pre-k, and K-3) builds on each other and help lay groundwork for stages to come.
- Encouragement for reading embedded in agencies and institutions that serve children.
- Flexible funding, linked to common quality standards, that allows children to get the supports they need for school readiness and help them become strong readers.
- Universal access to, and greater use of, high quality programs for child care, early learning, school readiness, pre-k, K-3, after-school, and summer programs.
- Access to high quality, affordable, and comprehensive health care (including preventive, acute, emergency, and chronic care) for physical, mental, and oral health for families with infants and young children. (note: this should prenatal care as well)
- Establish medical homes and primary care practices that focus broadly on healthy development.

Encourage and enable parents, families, and caregivers to play their indispensible roles in promoting good outcomes for their children, including helping parents cultivate the joy of learning, understand

the importance of reading, find and mobilize the help they need for their children from education and medical professionals, helping them to read, etc.

Strategies that transform low performing schools into high quality teaching and learning environments in which all students are present, engaged, and educated to high standards. While holding students, teachers, schools to higher standards, we also need to ensure access to the resources that afford every child the opportunity to learn:

- Adequate school funding;
- Qualified, experienced teachers for all students, especially the students who need them most;
- Extra supports for English language learners to help them master the language and content;
- Facilities that are safe, healthy, inviting, welcoming, and conducive to teaching and learning;
- Technology to support learning and assessment in the classroom and online;
- Hands on, literacy rich activities that make learning in and outside the classroom fun;

Practical and scalable solutions that respond to problem of chronic absenteeism.

- Ensure access to preventative care, especially as children enter school;
- Offer high quality education that responds to the diverse learning styles/needs of students;
- Engage parents and their families in their child's education;
- Educate parents about the importance of attendance;
- Encourage families to help each other attend school;
- Offer incentives for excellent attendance;
- Conduct early outreach to families with poor attendance, and if appropriate, case management to address social, medical, and economic needs; and
- Coordinate public agency and, if needed, legal response to families in crisis.

Expand access to quality afterschool and summer programs.

- Academic content that complements curricular standards and is taught by at least one experienced, trained teacher per classroom
- Academic classes that are limited to 15 students, with at least 2 adults
- Group learning, complimented by individual supports
- Fun, hands-on activities that are used to teach concepts that are grounded in real world context.

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35 YEARS
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