

Learning to Read, Reading to Learn

Why third-grade is a pivotal year for mastering literacy



Why every child should be able to read by third grade

The young children who enter your classrooms each year are eager for new knowledge and new experiences. They live in a world of words—sung, spoken, written, displayed on signs and screens, words of power and meaning that they are keen to grasp. The children’s needs are many: for safety, good food and health, affection, confidence, and all the care their families and teachers can provide. But their most important academic challenge is learning to read.

A White Paper by the Center For Public Education with the Black Council Of School Board Members, Hispanic Council Of School Board Members, National Caucus Of American Indian/Alaska Native School Board Members and Council Of Urban Boards Of Education

The research is clear: if children cannot read proficiently by the end of third grade, they face daunting hurdles to success in school and beyond. Third grade marks a pivot point in reading. In fourth grade, students begin encountering a wider variety of texts. By then, able readers have learned to extract and analyze new information and expand their vocabularies by reading (O’Brien, 2008). But struggling readers rarely catch up with their peers academically and are four times more likely to drop out of high school, lowering their earning power as adults and possibly costing society in welfare and other supports (Hernandez, 2011). Indeed, the Annie E. Casey Foundation reported in 2010 that “every student who does not complete high school costs our society an estimated \$260,000 in lost earnings, taxes, and productivity.” (Feister, 2010).

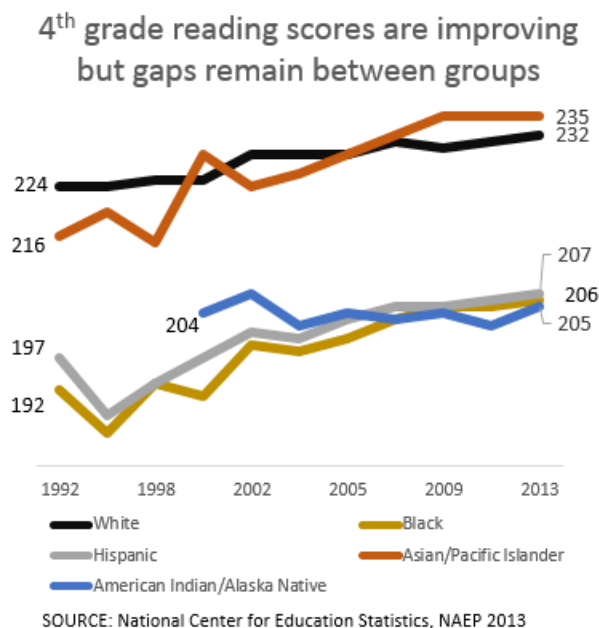
And those struggling students are disproportionately poor students and students of color. In a subsequent report, the Foundation’s analysis of reading scores on the 2011 National Assessment of Educational Progress (NAEP, commonly known as the Nation’s Report Card) found that the score gap between children from higher- and lower-income families was 29 points. For children of color, the gap—while reduced by a single point since the 2009 test—was still 25 points (Feister, 2013)

Faced with these unequal outcomes, many states are working to improve third-grade reading through assessments to pinpoint problems, interventions for struggling readers, and possible retention of third-graders who do not meet grade-level markers (Workman, 2014). At the local level, some 350 school districts—representing 16 percent of all children in U.S. public schools—have committed to actions designed to help more children from low-income families read at grade level by the end of third grade (Feister, 2013).

What makes a reader

Reading is the Open Sesame for acquiring knowledge: learn to read, and you can read to learn just about anything. But learning to read is a complex matter that begins long before a child starts school. In fact, researchers now know that the foundation for reading lies in the oral language children are exposed to and develop in the first three years of life (Hart & Risley, 1995).

The good news, almost all children can learn to read at grade level—researchers put the number at 95 percent, according to a report on reading in Connecticut schools (Carroll, 2010). In that report, researcher Judith Carroll sets out a “road map” for developing grade-level reading, beginning with the first words babies hear and speak. Carroll lists four factors in building reading ability: (1) parents who serve as their children’s first teachers; (2) access to high-quality preschool; (3) kindergarten programs that help children catch up if they missed out on preschool; and (4) skilled instruction in the first through third grades.



Unfortunately, not all children have access to these advantages and some enter school already behind, due to such factors as family poverty and parents’ lack of education and engagement. Educators and researchers have observed for years that children of different backgrounds bring different—and unequal—skills with them when they begin formal schooling (Heckman, 2011). And that means some children—probably including some in your schools—are at a disadvantage when it comes to learning to read.

A large body of research underlies this observation.

What the research says about early literacy

Much of the research on early literacy grew from concern over the high numbers of students who do not complete high school and the resulting shortage of graduates qualified for jobs, college, or the armed forces (Feister, 2010). Failure to read proficiently by the end of third grade is linked to ongoing difficulties in school and failure to graduate (Feister, 2013). Recognizing that a child’s literacy begins early—not just in kindergarten and the primary grades, but in the home—researchers have identified a number of factors that affect readiness to read, and hence to learn and succeed in school and in life. Those factors include race or ethnicity, parental education and income, and access to a high-quality pre-kindergarten program.

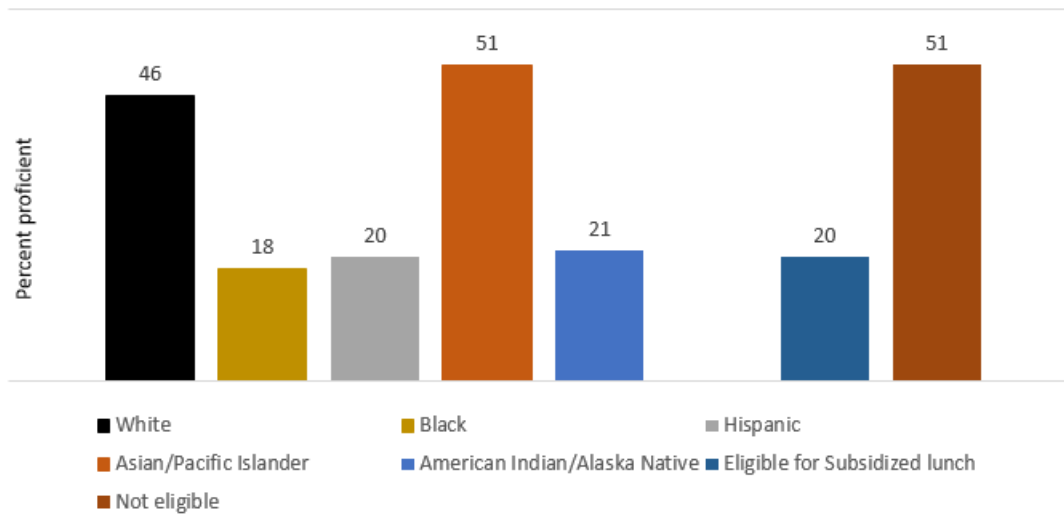
Reading-readiness and parent talk/family status. Talking and reading to children play a direct role in building their vocabularies and strengthening their early literacy skills. In their ground-breaking study of the verbal interactions of children in 42 families over a two-and-a-half-year period, Betty Hart and Todd Risley (1995) found striking differences between children in affluent families and low-income families. Poor children, they found, heard as few as 3 million words in their first three years of life, compared to 11 million words for children in wealthier families—a verbal gap that predicted a gap in academic achievement by the time children reach the age of 9 or 10 (Hart & Risley, 1995).

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Reading proficiency and race/ethnicity. The gap in achievement between students of different racial or ethnic backgrounds may be narrowing, but according to the National Assessment of Educational Progress, it remains a serious challenge. Results from the NAEP’s 2013 assessment of fourth-grade reading tell the story:

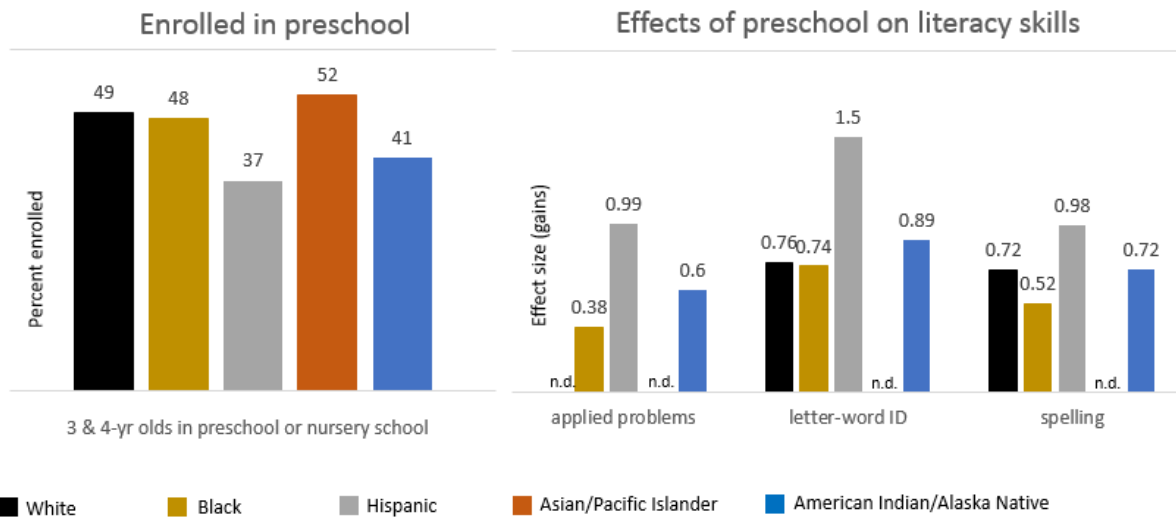
- All student groups have made gains since the early 1990s, and the achievement gap between white and black students has narrowed by some 6 points since then. Still, gaps remain (see chart, page 2).
- 46 percent of white fourth-graders and 51 percent of Asian/Pacific Islander fourth-graders read at or above the level NAEP defines as proficient.
- Only 18 percent of black students and 20 percent of Hispanic students read at or above the proficient level.

4th graders who score at proficient or better by race and family income, 2013



SOURCE: National Center for Education Statistics, NAEP 2013

Hispanic & American Indian children gain the most from high-quality preschool but are the least likely to be enrolled.



SOURCES: Annie E. Casey Foundation, 2015; Cannon & Karoly, RAND, 2007, Data from Gormley, 2005.

Reading proficiency and family income. Again, the NAEP data reveal proficiency gaps, in this case between students from moderate and high-income homes and those from low-income homes, as measured by eligibility for free and reduced-price lunch. According to an Annie E. Casey Foundation analysis of 2013 NAEP data, a full 80 percent of low-income fourth-graders scored below the proficient reading level, compared to 49 percent of those from wealthier families (Kids Count Data Center, 2014). And, as the foundation reported elsewhere, the low-income children who struggle with reading are disproportionately children of color (Feister, 2013).

Pre-k and achievement. Children who attend pre-kindergarten programs do better in kindergarten. This outcome holds true for children of all racial groups, but the impact is greatest for children of color, children from low-income families, and English language learners. As the Center for Public Education (CPE) previously reported, pre-k programs have both short- and long-term benefits (Gayl, 2008). A longitudinal study of the High/Scope Perry Preschool Project, for example, found that, at age 5, virtually half (49 percent) of students who attended pre-k programs went on to read at the basic level or higher by the time they were 14, compared with only 15 percent of those who did not have the benefit of pre-k (Gayl, 2008). The same study showed continuing pre-k advantages in such realms as high school graduation, home ownership, and earnings. Advantages show up in short-term studies as well. In Tulsa, Oklahoma, CPE reported, children who attended pre-k showed test score gains in such pre-reading skills as letter-word identification and spelling.

Income, race, and access to pre-k programs. Despite the considerable benefits of an early start in school, poor children are far less likely to be enrolled in pre-k programs than children from wealthier families. In 2013, nearly two-thirds of low-income three- and four-year olds were not in preschool, compared to half of their more affluent peers (Kids Count Data Center, 2013). Children of color fare somewhat better but are still less likely to attend preschool: 63 percent of Hispanic and 52 percent of African American three- and four-year-olds were not enrolled in preschool, compared to 51 percent of white children (Kids Count Data Center, 2015).

Why it matters

Because reading is the gateway skill to further learning, children who cannot read proficiently seldom catch up academically and often fail to graduate on time from high school or drop out altogether. In fact, a national study correlating dropout rates with reading ability, poverty, and race or ethnicity among third-graders found that struggling readers accounted for about a third of the students studied but represented more than three-fifths of those who eventually dropped out or failed to graduate on time (Hernandez, 2011).

In his study of some 4,000 students who were not proficient readers in third grade, Hunter College researcher Donald Hernandez found that one out of six failed to graduate from high school on time—four times the rate for proficient readers (2011). Low family income and neighborhood poverty compounded the situation, as did ethnicity:

- 26 percent of children who were poor for at least a year and did not read proficiently failed to graduate.
- 32 percent of those children did not graduate if they had spent more than half their childhood in poverty.
- 35 percent failed to graduate if they also lived in poor neighborhoods.
- 31 percent of low-income African-American students and 33 percent of low-income Hispanic students who did not read proficiently by the end of third grade failed to graduate—about twice as many as similar white children.

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The implications for individual students are very real in terms of higher unemployment and lower wages as adults. According to a CPE 2014 report on the importance of reading for information, wages go up as literacy levels rise (Duchouquette, Loschert & Barth, 2014):

- Fully 42 percent of adults who read prose at the below-basic level on a 2003 National Assessment of Adult Literacy had household incomes of less than \$20,000.
- Only 5 percent of proficient prose readers had comparably low incomes.
- At the other end of the scale, 75 percent of proficient prose readers had household incomes of \$60,000 or more, compared to only 7 percent of below-basic readers.

Literacy is multi-faceted. While American students hold their own on international comparisons when it comes to reading novels, drama, and other literature, they are less successful at reading for information, which is the kind of literacy needed to be successful in college, careers and life in general. On the 2011 Progress in International Reading Literacy Study (PIRLS), CPE reports, U.S. fourth-graders ranked second on reading literature but fifth in reading for information, a skill they will need daily in both college and career (Duchouquette, Loschert & Barth, 2014).

In addition to fewer job options and lower earning potential, adults who cannot read well enough to understand a newspaper article, for instance, face other disadvantages as well. They are more likely to suffer poor health, less likely to vote, and less likely to promote reading readiness in their children through such activities as reading to them or playing rhyming games (Duchouquette, Loschert & Barth, 2014).

Basic fairness suggests that schools and families should do all they can to ensure that children have the reading skills they need for success in school and in life. But it's not just a matter of fairness: promoting equity can also promote economic efficiency, according to Nobel Laureate James Heckman, a professor of economics at the University of Chicago.

"Inequality in early childhood experiences and learning produces inequality in ability, achievement, health, and adult success," he writes, and investing in early childhood education for disadvantaged children results in a 7 to 10 percent annual return on investment (Heckman, 2011).

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*James Heckman
Nobel Laureate*

One clear area of saving focuses on reducing the number of students placed in special education. A recent study from North Carolina, for example, found that at-risk children who attended high-quality preschools were significantly less likely to need special education services in third grade (Muschkin, Ladd & Dodge, 2015). Experience bears this out. In a survey by the Ohio School Boards Association, 21 percent of respondents named fewer special education placements as preschool's greatest benefit (Dervarics, 2009).

The Ohio survey found that preschool has even greater payoffs: 55 percent of respondents named reducing the achievement gap as the greatest benefit, and 32 percent named reducing the need to retain students in primary grades—a significant savings in itself, given average per-pupil expenditures of more than \$10,000 (2008 figures from the National Center for Education Statistics).

As the Annie E. Casey Foundation put it, low-income children who cannot read proficiently by the end of third grade today are "all too likely to become our nation's lowest income, least skilled, least productive, and most costly citizens tomorrow."

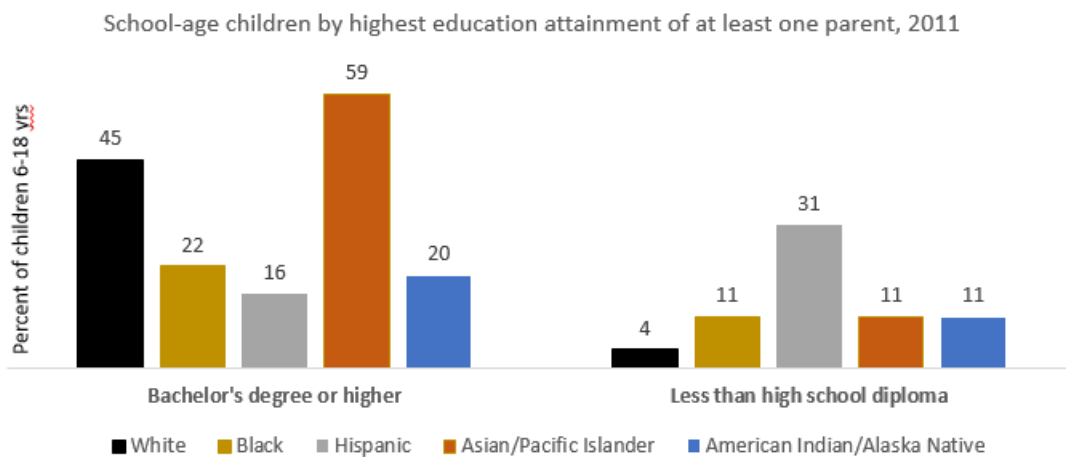
Barriers to literacy

School readiness begins at birth, but children have no say in the kind of family or life they are born into. Parents' level of education can make a difference in a child's readiness for school, as can other factors, such as family makeup and income. Most important of all, however, economist Heckman argues, is the quality of parenting the child receives (Heckman, 2011). "An economically advantaged child exposed to low-quality parenting," he writes, "is more disadvantaged than an economically disadvantaged child exposed to high-quality parenting" (page 33).

The parent talk factor. Both the quality and the quantity of verbal interaction between parent and child are major factors in developing literacy skills and reading readiness. Hart and Risley observed a number of what they called "quality features" in this regard (Mabry, 1997). Diverse vocabulary and sentence formation are among them, as are initiating conversation, prompting response, and listening actively to the child. Tone of

voice and commands make a difference as well: too many imperatives and prohibitions can actually decrease a child’s accomplishments. Other research has found that asking questions, reading books together, and discussing events can also boost a child’s readiness for reading (Campaign for Grade-Level Reading, n.d.). And again, disparities show up across racial and ethnic lines. A study of parent involvement and early literature found that young African American and Hispanic children had access to fewer educational resources and less cognitive stimulation at home than did their white peers (Lin, 2003).

Black, Hispanic & American Indian children are less likely to have college-educated parents



SOURCE: National Center for Education Statistics, 2012

The parent education factor. Children whose parents were more highly educated earned higher NAEP reading scores, but fewer minority students had college-educated parents. Among white children, 45 percent had at least one parent with a bachelor’s degree or higher, twice as many as African-American children (22 percent) and three times as many as Hispanic students (16 percent). Conversely, the parents of nearly a third of Hispanic children did not complete high school (National Center for Education Statistics, 2012).

The family/community engagement factor. Students in preschool and the early elementary grades learn anywhere and anytime, not just at home and in school. Libraries, recreational facilities, museums, and other community-based organizations share with families and schools some of the responsibility for children’s learning and development. The Harvard Family Research Project has linked student achievement to early learning experiences at home and in the community and to meaningful engagement of families in schools and other community organizations (Harvard Family Research Project, 2014). There is evidence, however, that schools serving large numbers of poor students and students of color have historically been least successful in engaging the community (McAlister, 2013).

The attendance factor. As important as parent and community support are, if children are not in school, their achievement suffers. One in 10 students in kindergarten and first grade miss nearly a month of school each year, according to a 2014 report from Attendance Works and the Campaign for Grade-Level Reading. And chronic absence correlates with reading difficulties in the later grades—especially among low-income children, who are four times more likely to be chronically absent. Children who miss a great deal of school gain fewer literacy skills: the negative impact of chronic absence is 75 percent greater for low-income students in kindergarten than for more affluent children, and 40 percent greater in first grade (Attendance Works and Campaign for Grade-Level Reading, 2014). Minority children are also disproportionately affected. In California’s Oakland Unified School District, for example, more than 25 percent of chronically absent students during the 2010-11 school year were African American and 15 percent were Hispanic; approximately 7 percent were white (Race Matters Institute, 2013).

The summer factor. Over summer vacation, children tend to forget at least some of what they have learned at school and that learning loss can be especially troubling for poor students. In a study of Baltimore students, Karl Alexander and his colleagues found that what happens over the summer can widen the achievement gap between social groups and have lasting consequences for school completion and college attendance. Using reading scores to track students in 20 elementary schools over grades one through nine, the study concluded that achievement gains mainly reflected school-year learning and that a 116-point achievement gap between high- and low-SES students could be traced mainly to summer learning loss. By high school, 62 percent of the high-SES students were enrolled in a college prep program, compared to only 13 percent of the low-SES students (Alexander, Entwisle & Olson, 2007). Their findings were borne out by Duke University’s Harris Cooper, who told the National Summer Learning Association that poor students lose reading and spelling skills over summer vacation but that summer learning programs can have a positive effect (National Summer Learning Association, n.d.).

Reading test scores in Baltimore elementary schools, by SES level

<i>Reading Comprehension Score Gains, Years 1-9</i>	Low SES	High SES	Gap
<i>Initial test score, Fall, 1st grade</i>	269.88	310.30	40.42
<i>Winter gain (5 winters)</i>	188.20	180.58	-7.62
<i>Summer gain (4 summers)</i>	-1.85	74.63	76.48
<i>Gain over years 6-9</i>	60.44	67.21	6.77
<i>Test score, end of year 9</i>	516.67	632.72	116.05

Poor children experience more summer learning loss than their wealthier peers, but targeted summer learning programs can make a difference.

SOURCE: Alexander, K.L., Entwisle, D.R., and Olson, L.S. (2007). Lasting consequences of the summer learning gap. *American Sociological Review* (72), April, 167-80.

The teacher factor. What teachers know about reading instruction, how they focus their teaching, and how much time their classes spend on reading can all affect students' reading skills. Effective practices include a focus on phonics and integrated language arts activities—vocabulary, discussion and explaining what is read (Ryan, 2010). Unfortunately, in their study of trends in professional development, Ruth Chung Wei and her colleagues found a sharp decline in the amount of funding for professional development in reading instruction and an accompanying decline in the intensity of such professional development (Wei, Darling-Hammond & Adamson, 2010).

What school boards should know

The research points to a series of issues school board members should understand. Some factors that affect students' reading proficiency are outside the school's realm—family and neighborhood poverty, for example, and parents' level of education. But schools and districts can have an impact on other important factors:

Access to high-quality pre-kindergarten. Fewer than half (48 percent) of poor children are ready for school at age five, compared to 75 percent of children from more affluent families, but school readiness improves with preschool attendance. In fact, preschool is one of the strongest factors in making disadvantaged children school-ready and can boost their achievement—especially when there is an integrated pre-k-to-third-grade approach, such as the Title I-funded Child-Parent Center Program in Chicago. The effects can be long-term: a follow-up study of poor children who had taken part in the Abecedarian Project, where they received health care, social services, and early learning support, found they were four times more likely to earn a college degree than were similar children (Feister, 2010/2013/2015).

Schools serving low-income children can produce successful readers by 3rd grade. Here are the key ingredients:

- *High-quality pre-K*
- *More time in and after school*
- *Ongoing professional development for teachers*
- *Effective family outreach*
- *Strong community partnerships*

Time in school. The more children are chronically absent in pre-k, kindergarten, and first grade, the more they need help with reading by the end of second grade (Attendance Works, 2014). School interventions can make a real difference, however. The group recommends that schools and districts make sure parents know the value of good attendance and help families overcome problems with transportation, health concerns, and other barriers to attendance. Parents who feel connected to the schools, trust the teachers, and believe the schools are safe will be more engaged in improving their children's attendance.

Time in grade. If children have not established basic reading skills by the end of third grade, it might seem logical to hold them back a year and, in fact, that has been a common, though controversial practice. But Harvard's Martin West reports that students who are held back a year face lower achievement and worse social-emotional outcomes than similar students who are promoted, and they are more likely to drop out of

school (West, 2012). In the early grades, however, the outcome can change when intensive remediation accompanies retention. Bottom line, West says, retention is no substitute for a comprehensive strategy to reduce the number of struggling readers, along with appropriate interventions for retained students.

Extended learning opportunities. Young children spend easily two or three times fewer waking hours in school than out of school. Much of their learning takes place in those out-of-school hours—and, over summer vacation, they stand to lose some of what they have learned in school (Alexander, Entwisle & Olson, 2007). Recognizing this lost opportunity, groups like the National Education Association recommend extended learning opportunities such as before- and after-school programs, summer school, Saturday academies, and an extended school year. A study of preschool children conducted by Kenneth Robin and others for the National Institute for Early Education Research (NIEER) shows the value of extra learning time (Robin, Frede & Barnett, 2006). “Children who attended an extended-day, extended year preschool program,” they write, “experienced greater improvement in test scores compared to peers who attended half day programs.”

To advance or hold back?

Will holding struggling readers back in third grade help them become proficient readers? Many state policymakers appear to think so. The Education Commission of the States reports that 36 states have adopted policies aimed at improving third-grade reading:

- 16 of those states, plus the District of Columbia, require retaining students who don't meet grade-level expectations in reading but allow exceptions in certain cases (students who receive special education services, for example, or English-language learners).
- Three more states (Colorado, Oklahoma, and West Virginia) allow retention but don't require it
- 14 of the 16 states that require retention, plus the three that allow it, also require specific interventions, such as academic improvement programs, assignment to different teachers, individual or group tutoring, involvement of a reading specialist, and supplemental instruction, during school or in the summer (Workman, 2014).

Coupled with appropriate interventions, retention can help struggling students, but it can be a double-edged sword:

- Retention is expensive. A Brookings researcher has estimated that, based on an average per-pupil expenditure of \$10,700, the direct cost of retaining 2.3 percent of the 50 million U.S. students adds up to \$12 billion each year (West, 2012). And that doesn't include extra help for students: add the cost of any interventions your district provides students who are held back to the district's current annual per-pupil expenditure to estimate what retention costs your schools.
- Retention disproportionately affects minorities. In the 2009-10 school year, the U.S. Department of Education's Office of Civil Rights found, retention rates for African American and Hispanic students were 4.2 percent and 2.8 percent, respectively, but only 1.5 percent for white students (West, 2012).
- Retention increases the risk of dropping out. Of the 13.3 percent of 16- through 24-year-olds who repeated one or more grades by 1995, approximately one-quarter had dropped out by 1995, compared to only about 10 percent of the young adults who were never held back in school (National Center for Education Statistics, 1995).

Teacher capacity. In the face of state and district cutbacks in resources allocated for professional development, it is challenging to build teacher capacity. Wei and her colleagues suggest renewed focus on induction and mentoring programs for beginning teachers and opportunities for collaborative work for all teachers (Wei, Darling-Hammond & Adamson, 2010). Also important, of course, is hiring certified teachers who have strong backgrounds in education and training. At the preschool level, CPE reports, many states require specialized training in pre-k or preschool, and many also call for at least 15 hours of in-service training (Gayl, 2008).

Family and community engagement. There's broad agreement—and strong research to back it up—that family engagement is linked to student success. Parental beliefs, attitudes, values, and child-rearing practices all play a part in school readiness, according to the Harvard Family Research Project, as does home-school communication (2014). CPE also finds that partnerships between parents and schools that are focused on academics can have a significant impact on student achievement (Dervarics & O'Brien, 2011). Partnerships that involve community groups and local government agencies—health and social services, for example—can strengthen the result. A 2012 joint report by the Center for American Progress, the Coalition for Community Schools and the Institute for Educational Leadership concludes that students who attend schools that have strong school-community partnerships outperform students in other schools on such measures as test scores and graduation rates (Blank, Jacobson & Melaville, 2012).

What school districts can do

What strategies can school districts employ to ensure students read proficiently by the end of third grade? Research and real-world experience suggest a number of promising policies and practices:

- To get a handle on attendance, look beyond average daily attendance figures, which can mask chronic absenteeism among a small number of children. In Chicago and Baltimore, regular attendance at school-based preschool and kindergarten was found to boost children's literacy skills—with low-income children making the biggest gains (Bruner, Discher & Chang, 2011). A good data system will enable teachers and guidance counselors to flag chronically absent children so they can follow up with families.
- To give all children a head start on learning—especially disadvantaged children—invest in full-day preschool and kindergarten. Results from a NIEER study of a low-income urban district led to the conclusion that young children who lag in literacy skills can develop skills that approach national norms if they attend good, full-day preschools (Robin, Frede & Barnett, 2006).
- To engage parents in their children's literacy, reach out to them about ways they can help build skills through reading, talking, and playing games with their children. Florida's Palm Beach County Schools encourage parent engagement through a number of initiatives, including home visiting, mini-libraries at family gathering spots set up by the district, and enlisting local pediatric offices to promote early literacy.

- To strengthen teachers' skills, make research-based reading instruction a primary focus of professional development. In the classroom, NAEP recommends that elementary school texts be equally divided between literary reading and reading for information. An Education Commission of the States review of effective reading instruction reports that San Diego City elementary students benefitted most from a teacher's focus on higher-level meaning of texts through questioning and discussion. Also effective was writing instruction (Ryan, 2010).
- To make sure retention helps, provide struggling readers with opportunities for intensive remediation. Florida requires that summer reading programs be available for students who are held back; the students must also be assigned to high-performing teachers, have individual academic improvement plans, and spend 90 minutes daily in research-based reading instruction. The most reliable analysis to date on the effects of Florida's retention policy on student achievement show students who were held back experiencing a marked increase in reading and math test performance compared to peers who had matriculated (West, 2012). Whether these short-term gains (the study looked at test performance of students two years after they had been retained) holds true over the long-term remains to be seen.
- To maintain a focus on what matters most, adopt research-based early reading instruction and assess reading skills early and regularly. Aligned curriculum and assessment, foster a sense of continuity and smooth the transition from pre-k to kindergarten and on to the early grades. Jennifer Dubin of the American Federation of Teachers reported (2008) that reading results for economically disadvantaged third-graders in Richmond, Virginia, matched those of their state's counterparts once the city's schools began focusing on research-based reading programs in elementary schools.

Yes, all this is costly, but economic analyses show real cost-benefits. Giving children a strong early start on literacy provides significant savings to federal, state, and local governments—not only reducing the need for special education, but also increasing the likelihood of healthier lifestyles, lowering the crime rate, and reducing overall social costs (Heckman, 2011). Every \$1 invested in pre-k programs, CPE has reported, can return a ten-fold savings to society. As economist Heckman observed (2011), it is more cost-effective to prevent achievement gaps than to remediate them down the road.

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