Turning the Page: Refocusing Massachusetts for Reading Success

Strategies for improving children's language and literacy development, birth to age 9

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A Ballgame Inside Every Book?

On a blustery summer day at Fenway Park, 40,000 fans watch a towering pop-up fall in a strange spiral as three Detroit Tigers dance below, gloves opened, attempting to catch it. The windblown ball drops to the ground near second base, prompting two 10-year-olds seated in the bleachers to react. One of them, Nathan, cheers and jumps up in delight. Several rows away, 10-year old Isabella sits down dejectedly and sighs. Unlike Nathan, she knows the Red Sox batter is automatically out via the Infield Fly Rule—and she's bothered that the Red Sox rally appears over.

It's been going this way since the group arrived at the ballpark three hours earlier—same play, different reactions.

In the third inning, the announcer informed the crowd that the Red Sox hit was ruled to have gone just to the left of Pesky's Pole. Isabella joined the fans who cheered for the home run. Nathan didn't get what all the fuss was about. Then in the sixth, when fans loudly applauded a Tigers relief pitcher—long a local favorite when he played for Boston—Isabella smiled and clapped as Nathan sat quietly, unaware of why the opposing pitcher was given such a warm reception from the Boston fans. As the complexities of the competition continued to appear, Isabella felt her pulse quicken. She enjoyed each play, but also ran through scenarios of what might happen next. Nathan, meanwhile, felt his interest wane. A chaperone seated nearby tried to keep Nathan engaged by giving him key information at relevant moments, jogging his memory about a player who was recently in the news, and explaining some of baseball's odd plays and rulings.

Isabella came to the ballpark with her baseball facts in order. She has been a fan since kindergarten and by the third grade was using a scorecard to record the action. She peers through binoculars to try and catch the signals coming from the dugout and checks the bullpen to see who is warming up. Her dad has mentored her along and will have watched this game on TV. When they talk after the game, they'll probably have different impressions of what went on and different thoughts about the way the Sox played.

Nathan and Isabella both stayed through to the end of ninth inning, but they walked out onto Landsdowne Street having had very different experiences because of what they "brought" to Fenway, their background knowledge about baseball and understanding of baseball vocabulary.

What does watching baseball have to do with reading?

When someone goes to watch a baseball game, it's much the same as picking up a book to read. The value of each experience varies from person to person, even though the plays on the field and the words on the page don't differ. The Fenway experience will be superficial or deep, broad or specific, depending upon your prior experiences and whom you sit with in the stands. Everyone gets something from having gone to the ballpark, just as all readers get something from having read the book, but the novice is at a disadvantage from the first inning or the first page.

The people around can help support the experience, whether it is watching an unfamiliar game or reading a book with difficult language or unknown subject matter. Just as the chaperone helped Nathan stay attached to what was happening on the field, an inexperienced reader benefits from having someone next to him, elaborating on what is going on in the text and discussing new words and concepts encountered. Isabella and her dad share a love of baseball, and she plays in the local little league; she brought with her years of accumulated knowledge and interest in the game. This influenced what she attended to, how motivated she was to stay for all nine innings, and her excitement about returning to the park again soon.

What children bring to the reading experience and what kinds of supports we provide greatly determine what they will get out of it. Without relevant background knowledge and vocabulary or someone there to support them, the Nathans in our communities probably won't be in any big hurry to go back to Fenway, or to grab another book from the shelf and dive in.

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Advisory Committee

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Dr. Nonie K. Lesaux is Marie and Max Kargman Associate Professor in Human Development and Urban Education Advancement at the Harvard Graduate School of Education. She leads a research program that focuses on increasing opportunities to learn for students from diverse linguistic, cultural, and economic backgrounds, a growing population in today's classrooms. From 2002–2006, Lesaux was the Senior Research Associate of the National Literacy Panel on Language Minority Children and Youth. In 2007, Lesaux was named one of five WT Grant scholars, earning a $350,000 five-year award from the WT Grant Foundation in support of her research on English-language learners in urban public schools. In 2009, she was a recipient of the Presidential Early Career Award for Scientists and Engineers, the highest honor given by the United States government to young professionals beginning their independent research careers. Her studies on reading and vocabulary development, as well as instructional strategies to prevent reading difficulties, have implications for practitioners, researchers, and policymakers. This research is supported by grants from several organizations, including the Institute of Education Sciences, Eunice Kennedy Shriver National Institute of Child Health and Human Development, the William and Flora Hewlett Foundation, and the Council of the Great City schools. A native of Canada, Lesaux earned her doctorate in educational psychology and special education from the University of British Columbia.

Cover photo credits: bottom right, Reach Out and Read National Center; top right, ReadBoston; middle, Trisha Estabrooks & Graeme McElheran.

Executive Summary

Many are applauding Massachusetts' reading scores on national and state tests, yet substandard performance is prevalent in the suburbs and the cities. Forty-three percent of our third graders (two-thirds from low-income backgrounds and one-third not low-income) do not read at grade level. These children deserve our serious attention. The costs of reading failure are high; the majority of this large group will go on to experience significant academic difficulties, jeopardizing individual potential, and also compromising our society's vitality. At the same time, meeting "proficiency" on state or national tests does not guarantee success in college or the workforce, as proven by both the rates of incoming freshmen who need remediation, and the underpreparedness of new college graduates for the literacy demands in the workplace.[1] With the goal of improving third-grade reading statewide, and for all children, we undertook a study of external and in-school barriers to reading achievement. Our findings call for a major, comprehensive refocusing of our efforts to create strong readers in the Commonwealth; we must do more, and we can do better.

To refocus Massachusetts on reading success, we should direct our efforts toward improving the quality of infants' and children's language and reading environments across the many settings in which they are growing up, playing and studying. Why focus on quality? A decade into this 21st century, science has never been as clear and convincing about the long-term effects of the quality of a child's early environment and experiences on his brain architecture.[2] These lay the foundation for important outcomes, including children's reading and academic achievement, and are also related to how well a child will be able to think; every new competency is built upon competencies that came before.[3] Similarly, science has never been as clear and convincing about how dependent reading skill is upon high-quality environments and experiences. Becoming a skilled reader—one with strong language skills, well-developed knowledge about the world, and critical thinking skills—is a process that begins at birth and continues through to adulthood.

Given today's sophisticated science of language, reading, and child development, we could capitalize more on what we know. So in pursuit of better reading outcomes, we need to take a more scientific and a more preventive approach. We need to alter our course, and this involves revisiting some basic assumptions and practices. First, we need to think more broadly about reading itself, which means much more than deciphering words on a page. We also need to commit to identifying the struggler, long before that child takes the third-grade reading test. In addition, we need to think more broadly about who can promote children's reading development, and then support them to do so. This means educating and supporting adults in classrooms and homes, and also adults working in early education and care settings and other parts of communities. Finally, we need to rethink our indicators of success. Currently, many programs and supports are using "reach"—the number of children and/or families served—as the indicator of success. Instead, we need to become more strongly committed to using impact on children's outcomes as the indicator, which necessarily demands high-quality programs and supports.

Massachusetts at a Glance[A]

480,422 children ages 0-5
70% of young children in early education or care settings
1 million school-age children
149 home languages
1 in 6 children comes from a multilingual home
310 school districts
1,846 schools
70,396 teachers

The recommendations we present are rooted in several sources and lines of study. We drew on the findings from the most current and salient research, including seminal national reports, policy reports, regulations, state guidelines and standards, and relevant national and state-level data. We also undertook research in 15 communities, cities and towns, to get a sense of trends and a snapshot of services and programs that promote children's language and reading development and provide support for those who are struggling to read in Massachusetts. An Advisory Committee comprised of individuals with significant knowledge in education policy and practice offered key insights and helped shape the study design and recommendations in important ways.

Our analysis of the collective efforts in the Commonwealth to promote children's reading revealed a vast quantity of programs and supports. Many of these are designed to effectively support reading, but suffer from low-quality implementation, while others lack sufficient intensity to encourage the lasting behavior changes in children and/or adults that will lead to reading success.

As we have learned from so many other efforts to promote children's health and well-being, to have an impact across the state and boost all children's reading requires a multi-pronged approach. In many cases this is not about new resources, but about reallocating resources—doing a better job of what we are already doing. In other cases, we need a new approach. And, building off of prior learnings, much of this is not about mechanical solutions. At the core of this comprehensive plan are intensive capacity-building efforts—increasing adults' and children's competencies related to assessing, supporting and promoting children's language and reading development, from birth to age 9.

This report features five recommendations for producing measurable success in children's reading outcomes. These recommendations are outlined below and described in detail in the following pages.

1. Program Design and Impact: Reallocate funds and alter policy to ensure programs are delivered with sufficient intensity, effectively.
2. Assessments of Children and Settings: Conduct early and ongoing assessment of children's language and reading and of the quality of services and supports.
3. Professional Education: Increase adults' capacity to assess and support children's language and reading development.
4. Curriculum: Bring language-rich, rigorous and engaging reading curricula into early education and care settings, as well as PK-3 classrooms.
5. Partnerships with Families: Expand and strengthen work with families across learning settings and within communities.

This is not about sounding an alarm; it is about ringing the bell louder, so that our policymakers, philanthropists, educators, medical professionals, business and community leaders, parents, and caregivers take note. While there are committed and hard-working people devoting every day to helping children become proficient readers, the end result still falls far short; often our efforts to improve outcomes do not translate into reading success. Yet Massachusetts is rich with intellectual capital, including more universities and colleges per capita than any state in the nation, it is steeped in a history of public education for all its children, and it is small enough geographically to be amenable to statewide initiatives to promote reading proficiency. Capitalizing on these attributes, we can make key changes that will improve our children's health and well-being, elevate the bar for children at every reading level, and make a difference to our knowledge-based economy and to our society. We must pull our *at-risk* readers along and we must push *all* readers forward. It is time to turn the page.

Increase the quality of children's language and reading environments across the many settings in which they are growing up, from birth to age 9

Program design & implementation for impact	Ongoing assessments of children & settings	Redefined adult capacity-building models	Language-rich, rigorous, & engaging curricula	Partnerships with families focused on language & learning

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Building language over lunch: Capitalizing on small moments with small kids

A couple sat at a table in a restaurant eating lunch, while a buzzing bee repeatedly flew into the closed window next to them. From the next table a small boy came toddling over. He extended a sticky finger, pointed, and said: "Look! A fly!"

It's a seemingly casual moment, but one worth pausing at. How the adults around this toddler respond will either build his language or keep his vocabulary and knowledge base where it is. This is not to propose that lunch be constantly disrupted by long conversations that are dictated by the child's needs at all costs—for either table of patrons—only that the small moments filled with extra bits of language can make a difference for the child's language growth and knowledge base in the long run.

Option A: The couple sitting at the table explains the insect is a bee, not a fly. They ask the child if he were ever stung by a bee and talk about the importance of bees for pollinating flowers. The mother, from the adjacent table, adds that the bee is doing his best to get out of the restaurant and return to the hive and the flowers, and then asks the boy how he thinks the bee got inside.

Option B: The adult couple says hello to the little boy and smiles sweetly at him. The mother says to the boy, "No, it's not a fly, it's a bee. Why don't you come back and sit down and eat your lunch?"

Different adults in the same scenario will take different approaches. Neither response is right or wrong in every instance, but if representative of a general pattern of adult-child interactions, the reactions will shape how the child will respond when, as a kindergartner, he hears his teacher read a book about bees. With more understanding of bees, there is more learned from the next bee experience. To build on knowledge and encourage curiosity for more knowledge, we need to feed our children with ideas and words and elaborative language, all along the way.

Intensive early support beyond the school day: A promising design

The halls of the Healey School in Somerville are still busy long after classes officially let out for the day, and large groups of younger students are a critical mass. Almost one quarter of the kindergarten, first-, and second-grade students stay after school for ACE It! classes, a four-day-a-week K-8 program with literacy at its core. Teacher-taught ACE It! classes are extensions of the curricular content studied in class and are designed in an active and engaging way to give extra help where it's needed. In addition, young students who have not met the state standards or mastered grade-level literacy material by year's end are offered a free, 5-week, 46-hour summer school program also taught by the Healey teachers and linked to the school curriculum.

"We have a basic assumption that you front-load services for at-risk kids before, during, and after the school day to prevent failure now rather than remediate later. Going to classes [after school and in the summer] does not have the same negative impact at this early age—enrichment and remediation feel the same," explains Principal Mike Sabin.

Playing with Words: Early Educator training on language acquisition

It is free-play time at the Malden Early Education and Learning Program, and preschool teacher Doreen Anzalone and several children are sitting on the floor, playing with blocks and pushing toy cars. "Do you think we should all build a garage? When cars are broken, they need a place to go to be fixed," Anzalone explains. "Matthew's car has a broken tire. If we build a garage, he could bring his car over. Matthew would be so happy if he had a place to go to fix the tire."

Anzalone's tone is warm and gentle, reflective of the personality traits that drew her to early education and care in 1986, a few years after she graduated from high school. In a simple, playful interchange Anzalone was helping children develop the vocabulary and oral language skills that are the building blocks of literacy. Her words reflect what she learned about language acquisition in young children while studying for the BA degree from UMass/Boston that she earned in 2009. She returned to school with support from the Building Careers and Early Childhood Educators Scholarship programs and from a director who provides staff with the flexibility they need to attend classes.

"My education helps me bring play into the classroom, and children learn best through play," Anzalone says. "It was very hard to go back to school and to balance my home life, working full-time, school, but I saw that there was a light at the end of the tunnel. I knew it was going to make me a better teacher in the classroom, and that's really what I was striving for."

A Developing Reader's Journey to Third Grade

A reader's typical milestones

6 months

Imitates speech e.g., "na-na, ga-ga."

Enjoys books with simple pictures.

Talk, talk, talk!

Read books with faces, animals, objects.

1 yrs.

Understands several simple phrases.

Has 1 or more words. Enjoys lift-the-flap books

Have "conversations" while pushing the stroller.

Read interactive books.

2 yrs.

Has 250-350 words.

Holds books & looks at pictures.

Read and recite nursery rhymes.

Go to the library to find books together.

3 yrs.

Has 800-1000 words. Repeats common rhymes.

Point to pictures and words as you read. Play rhyming games.

4 yrs.

Comfortably uses long sentences.

Begins to rhyme and play with words.

Focus on a few new words while you read. Repeat them in other situations.

5 yrs.

Has 3000-5000 words.

Starts to match letters with sounds.

Uses complex and compound sentences.

Call attention to letters on signs. Talk about letter sounds ("Mom & milk both have "mmm" sound at the beginning").

6 yrs.

Starts to read words on the page.

Makes predictions while reading using knowledge, pictures, & text.

Have fiction and nonfiction books & magazines available.

Visit museums & libraries.

7 yrs.

Starts to read words automatically. Expands knowledge by listening to and reading books.

Limit screen time to encourage reading.

Encourage the reading & rereading of easy books.

8–9 yrs.

Reads chapter books. Is now learning an estimated 3,000 words a year.

Help your child develop an independent reading routine before bed.

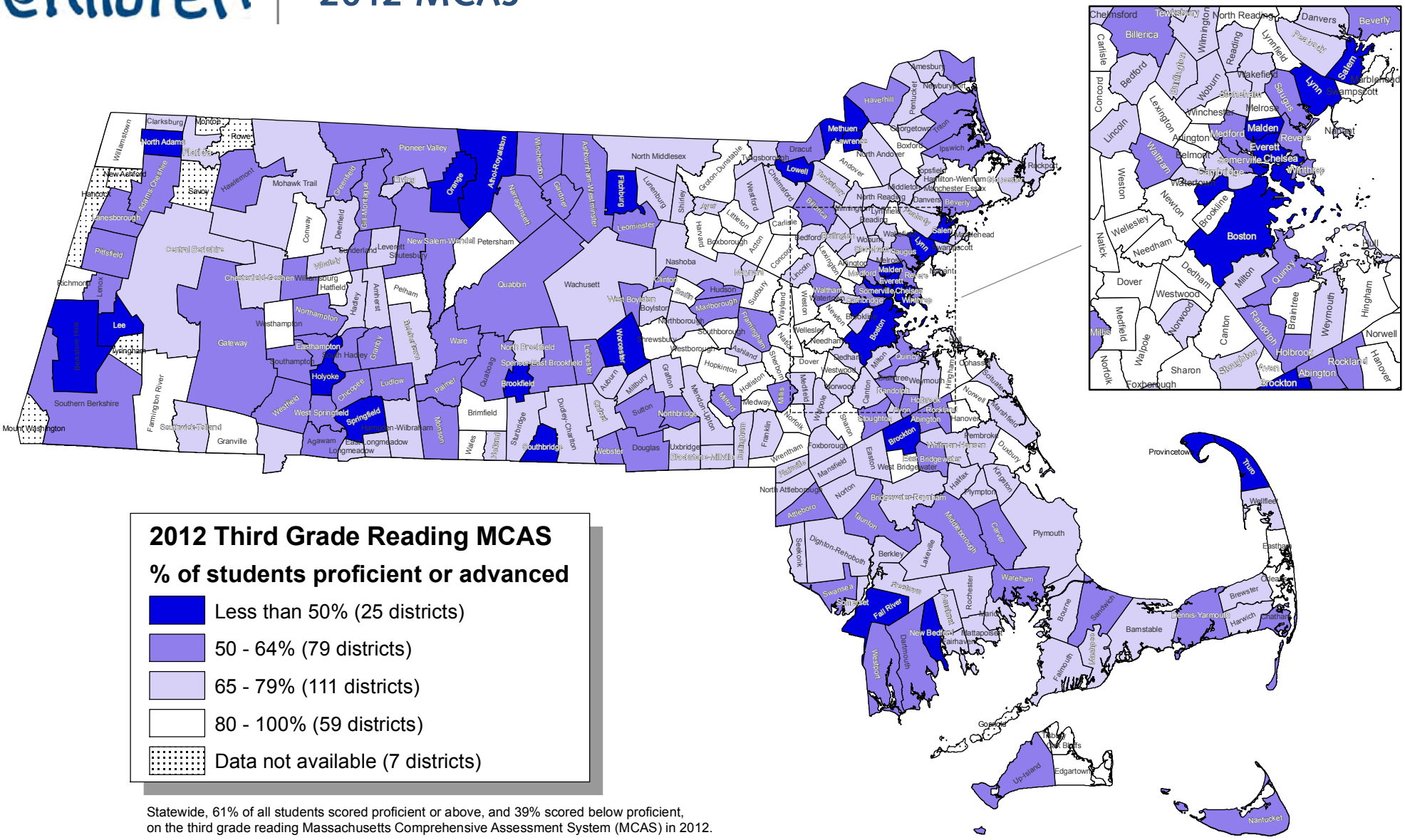
Ways adults can support children's language and reading

Develop a habit of talking and reading from birth to build up children's knowledge. Sing songs and play games. Elaborate on what they say to increase their language, then tell your own stories—about what happened on the bus, what you saw on the news, what you heard on the radio—and encourage them to tell theirs. Make reading a routine. Babies enjoy being held and talked to while looking at simple picture books. Toddlers like to look at pictures while lifting flaps and feeling textures and hearing rhymes. Children age 4-9 enjoy longer stories and repeated reading of favorite stories and nonfiction books. Make a point of reading chapter books out loud—listening is tough work for kids at first, but easier with practice; it is valuable for children's language growth to hear great stories that are beyond their reading ability. It is also great fun for caregivers and children alike to read together.

Compiled in consultation with existing research.

Strategies for Children

Third Grade Reading Proficiency by School District
2012 MCAS

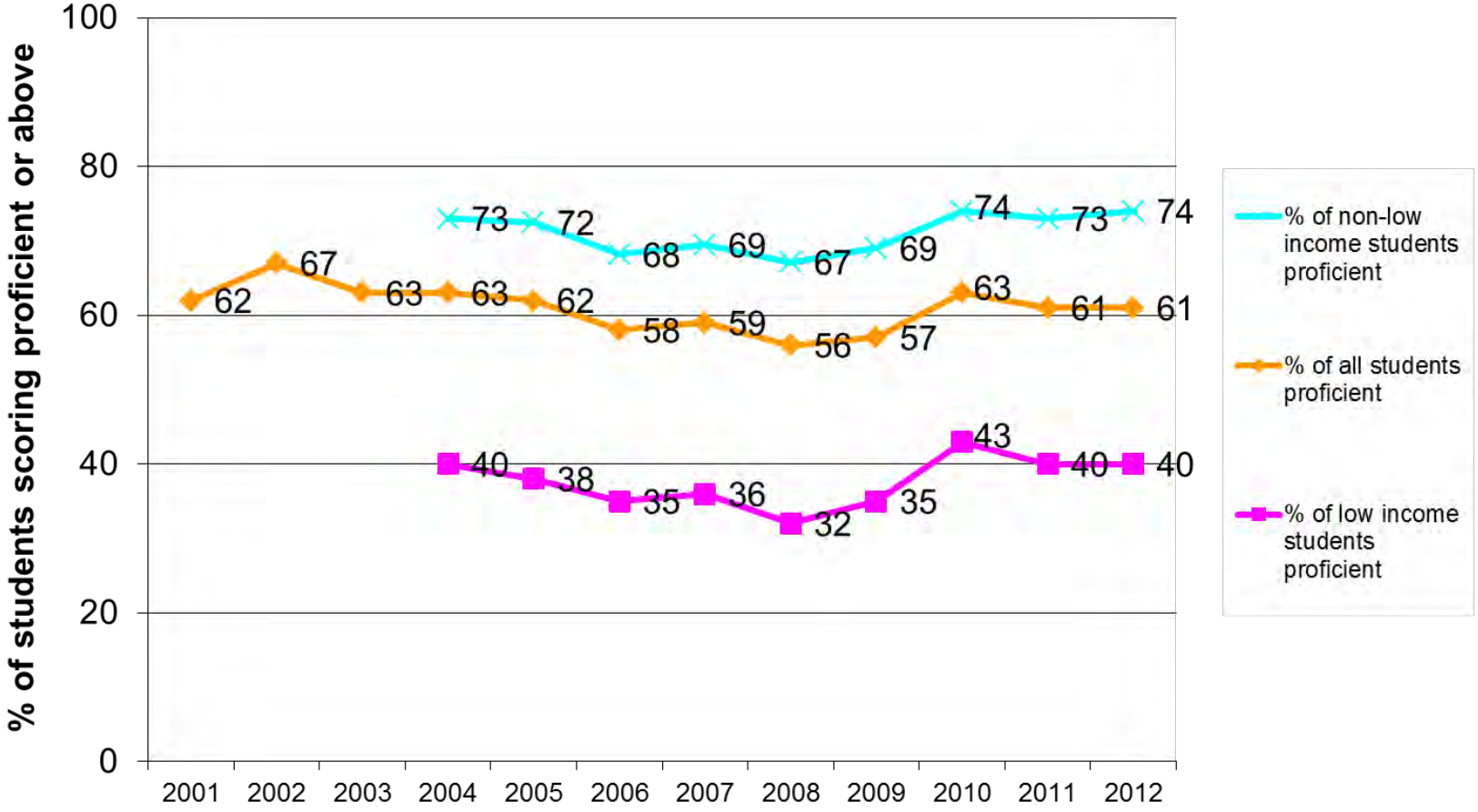


Statewide, 61% of all students scored proficient or above, and 39% scored below proficient, on the third grade reading Massachusetts Comprehensive Assessment System (MCAS) in 2012.

Source: Massachusetts Department of Elementary and Secondary Education
For more information: info@earlyeducationforall.org

Strategies for Children

The Achievement Gap by Income
Third Grade Reading MCAS



Source: Massachusetts Comprehensive Assessment System (MCAS), Massachusetts Department of Elementary and Secondary Education

Strategies for Children

A Clear and Compelling Case for Action

Achievement gap. Drop-out rates. College and career readiness. STEM (Science, Technology, Engineering, Math). These are the priorities on many education agendas. Addressing these issues begins with children's earliest years and includes social-emotional and cognitive development. It includes an early benchmark that strongly predicts children's chances of success in school and in life: the ability to read proficiently by the end of third grade.

Reading is the basis of learning in all subjects. Yet 39% of Massachusetts third graders -- including 60% of children from low-income families -- do not read proficiently.[1] The path to turning this around begins at birth and includes high-quality early education and care.

At Strategies for Children, Inc., research guides our work as we seek to ensure that children in Massachusetts have access to high-quality early education and become proficient readers by the end of third grade. Preventing problems now, rather than remediating them later, is a cost-effective investment that benefits children and taxpayers alike.

Early Indicators

- In the first few years of life, a young child's brain creates 700 neural connections a second.[2]
- Disparities in children's cognitive, social, behavioral and health outcomes are evident at 9 months and larger at 24 months.[3]
- By age 3, children from low-income families have vocabularies that, on average, are half the size of more affluent peers.[4]
- Children's vocabulary in kindergarten correlates strongly with their reading ability in high school.[5]
- Children who struggle with reading in third grade are four times less likely to finish high school by 19 than other children.[6]

Educational Benefits of High-Quality Early Education and Care

- Low-income children who attended high-quality preschool programs are 40% less likely to need special education services or be kept back a grade, 30% more likely to finish high school and twice as likely to attend college.[7,8]
- Children who attended high-quality early education programs score higher on school readiness assessments, have stronger early literacy and numeracy skills, and exhibit fewer behavioral problems in school.[9]

Economic Benefits of High-Quality Early Education and Care

- Nobel laureate James Heckman and other leading economists estimate that investments in high-quality early education yield a 10-16% rate of return, outpacing the average return of the stock market since World War II.[10]
- Children who participated in high-quality early education programs become more employable workers, strengthening the state and federal tax bases.[11]
- Low-income children who attended a high-quality early education program earn $548 more a month at age 40 than non-participants.[12]
- Parents with reliable early education and care for their children have less turnover and lower absenteeism. Absenteeism due to discontinuity of child care costs U.S. businesses an estimated $3 billion per year.[13]

Health Benefits of High-Quality Early Education and Care

- Children who attended high-quality early education programs are more likely as adults to have health insurance and proactively seek medical treatment.
- Children who attended high-quality early education programs are less likely to smoke, use drugs or abuse alcohol, and more likely to wear seat belts.
- Girls who attended a high-quality early education program are less likely to become teenage mothers.[14]

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