

The Massachusetts Special Commission on After School and Out of School Time has been created by the Massachusetts Legislature to help define what is needed to support the healthy development of children and youth in and out of school.

These briefs were made possible through a generous grant by the Nellie Mae Education Foundation.

The Potential of Summer: Closing the Achievement Gap¹

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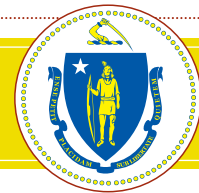
In the public imagination, summer remains a time of relaxation, outdoor fun, camp songs, and vacations. However, research paints a very different picture of the summer months, as a time when some children have access to enriching experiences, while for others the resource “faucet” is turned off. This “opportunity gap” is directly related to the widening test-score achievement gap evident during the school year. In fact, for children from poor economic backgrounds, summer is a season of risks to health, development and learning.

The research on summer learning loss points to some surprising findings:

- **All children learn at similar rates during the school year, despite different social and school conditions.** Research on seasonal learning demonstrates that even struggling schools provide support for children’s educational achievement, and children are able to benefit from these experiences. On the other hand, for many children, summer is a time devoid of learning experiences.
- **All children experience summer learning loss in math skills.** A meta-analysis of existing studies by Cooper and his colleagues (see Resources) found that, on average, children lose about 2.6 months of grade-level equivalency in math skills over the summer.
- **Middle class children continue to build skills in literacy over the summer, while low-income children lose reading skills.** In the same study, Cooper found that children from middle-income families stayed even or gained in reading skills, while their low-income peers lost skills, resulting in an average gap of 3 months of learning between middle and lower class children each summer. Many other studies, stretching over the past hundred years, have similar results.
- **As summer learning losses accumulate over the school years, low-income students fall further and further behind.** In one major study, the gap in reading skills between children from poor families and those from affluent families grew from two months at the beginning of first grade to nearly two years by the end of fifth grade.
- **The accumulated skills losses due to lack of summer opportunities has long-lasting results for low-income students.** A recent extension of the Beginning School Study (see Alexander, Entwisle, and Olson, 2007, in Resources section) found that summer learning losses in the first five years of schooling were directly linked to whether students attended college preparatory classes, graduated high school, or attended four-year colleges. In fact, the impact of summer learning loss on long-term performance was twice as great as that of the preschool achievement gap.

“Learning is not just about retaining information: learning to think, solve problems, analyze information and situations, innovate, communicate, and work well with diverse individuals are all key skills needed in a global economy. The informal learning environments of many summer programs can be prime contexts for the development of these twenty-first-century skills for all young people.”

¹ This issue brief is based on the report: *The Learning Season: The Untapped Power of Summer to Advance Student Achievement*, commissioned by the Nellie Mae Education Foundation and available at www.nmedfn.org



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- **Children who do not have constructive opportunities during the summer are more likely to engage in risky behavior and have poorer physical health.** Decades of research indicates that children left on their own or in the care of siblings are more likely to become involved in substance abuse, truancy, and other risky behaviors. More recent research has found that children are more likely to become obese during the summer months, and the growing field of neuroscience points to the important brain development caused by regular exercise.

The research on summer learning loss points to the fact that enriching learning experiences make a difference year-round. Summer is key to creating educational equity as well as building healthy minds and bodies. At the same time, in an era of increasing global competition, all children need to achieve high standards, and not only in the oft-tested areas of math and reading. Learning is not just about retaining information: learning to think, solve problems, analyze information and situations, innovate, communicate, and work well with diverse individuals are all key skills needed in a global economy. The informal learning environments of many summer programs can be prime contexts for the development of these twenty-first-century skills for all young people.

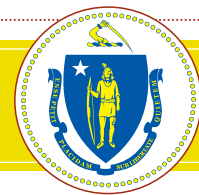
Why Do Some Children Continue to Learn Over the Summer?

According to the “faucet theory,” children in both affluent and lower-income communities benefit during the school year, when learning resources are “turned on” for all children. But during the summer the public faucet is turned off, and the flow of resources to a child depends on what his or her parents can provide. While all families want the best for their children, there are significant differences between the resources that different families and communities can offer.

Middle class children, who typically maintain their reading skills over the summer, are involved in a wide variety of enriching opportunities with their families, relatives, and communities, including camp, vacation, and extracurricular activities. This fact suggests that remedial instruction in a school setting (e.g., summer school) is not required in order to maintain reading skills or to narrow the achievement gap.

Further research is needed to help us better understand how summer experiences support academic success, but existing knowledge from fields as diverse as neuroscience, cognitive development, and resiliency research suggest that there are multiple mechanisms for children’s summer learning, including: broadening children’s horizons and building background knowledge; building strong, caring relationships between children and adults; developing children’s positive cultural, ethnic, gender, and personal identities; providing engaging learning activities that give youth a chance to practice skills and make meaning of their knowledge; and building motivation through successful learning experiences in the arts, sports, or other areas. Such experiences add up to greater engagement in learning, during the summer and carrying over to the school year.

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What Can Be Done?

Given wide disparities in resources, families alone cannot close the summer opportunity gap. Communities, with public support, must take responsibility for providing opportunities for educational, enriching experiences for all children during the summer months.

Furthermore, there is growing evidence that well-designed, intentional summer programs can minimize loss of basic skills. Programs can provide the enriching experiences that lead to long-term increases in school attainment and achievement by building resiliency, initiative, and engagement in learning.

Recent research highlights the success of a “hybrid” approach to reducing summer learning loss that combine some typical aspects of both summer school and summer camp (see Borman et. al., and Chaplin and Cappizzano in Resources section). These programs embed intentional academic content into engaging, fun activities, delivered by trained staff in a context of close relationships and positive social dynamics.

Conclusion

While schools have a powerful impact on student development and learning, they cannot do it alone. For years we have known the powerful influence of family and community experiences on academic outcomes. It has been estimated that an 18-year-old has spent about 13 percent of his or her waking hours in school. If we care as a society about reducing the persistent economic and racial achievement gaps, about healthy development, and about world-class skills for all young people, then summer presents an exciting and potentially fruitful avenue for investment.

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Resources

Alexander, K. L., Entwisle, D. R., & Olson, L. S. (2007). Lasting consequences of the summer learning gap. *American Sociological Review*, 72, 167-180.

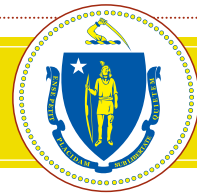
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About the Author

Beth M. Miller, Ph.D., has been conducting research and policy analysis for over two decades. She is currently President of Miller-Midzik Research Associates (MMRA) and Senior Research Advisor, National Institute on Out-of-School Time (NIOST), Center for Research on Women, Wellesley College. Recent projects include: Co-Principal Investigator of the Massachusetts Afterschool Research Study (MARS); evaluations of the National Science Foundation-funded Mixing in Math Initiative and Boston's Literacy Coaching Initiative; and development, in collaboration with NIOST and the Massachusetts Department of Education, of the Afterschool Program Assessment System. Dr. Miller is the author of two commissioned reports for the Nellie Mae Education Foundation: *Critical Hours: Afterschool Programs and Educational Success* and *The Learning Season: The Untapped Power of Summer to Advance Student Achievement*.

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