

■ Money Matters: Increased Education Investment Linked to Higher Achievement

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Money invested in student learning matters. This is the conclusion most researchers reach after examining the relationship between funding and student achievement. It means Georgia is headed in the wrong direction as ongoing austerity cuts slashed \$8.3 billion from state public school funding since 2003. Students across the state suffer the effects of these cuts, which include school years shortened, art and music programs cut, elective courses eliminated, and support programs for struggling students reduced. The cuts also undermine promising state policies to strengthen curriculum and enhance instruction. Money is not the only factor in student learning. The way money is used is equally important. But it is an essential factor. If Georgia's students are to be college and career ready, particularly the 62 percent who are economically disadvantaged,¹ the state must invest the resources needed to get them there.

This report will describe deep cuts in state funding for Georgia's public schools in recent years and present research that shows the link connecting school funding to student outcomes. It concludes with a brief discussion of how funds can be spent to increase student learning.

■ Shrinking State Funds: Why Money Matters in Georgia

State money is distributed to school districts through the Quality Basic Education formula. The formula is used to determine how much money each district needs based on data that tracks student enrollment and participation in academic programs such as gifted and talented, special education, and career and technical education. After the General Assembly approved the formula in 1985, the state provided the full amount it called for until 2003. State lawmakers allotted less than the calculated amount every year since then.

The gap between the amount calculated by the formula and the amount delivered by the Legislature is commonly known as an austerity cut. The austerity cut for the 2015 school year is \$746 million. From 2010 to 2014 lawmakers imposed an austerity cut of \$1 billion *each* year. State funding per student fell an inflation-adjusted 12 percent since 2002 as a result of these cuts.

School districts are not able to make up for the loss of state funds. Local district revenues fell along with property values during the Great Recession. Property taxes are the source of most local dollars for schools.

The combined state and local funding losses leave Georgia trailing most states in its public school investment. Georgia spent \$9,247 per student in the 2012 fiscal year, the most recent year federal data are available.² That was \$1,361 less than the national average as the state ranked 35th in spending per student.

Summary of Research Findings

Most researchers who study the link between spending and student learning find a positive effect.

- A comprehensive 2012 review of nearly two decades of research on school funding concludes that there is “an empirically grounded confidence that funding does matter.”³ This confirms the result of a 1996 meta-analysis of more than 60 studies showing a strong positive relationship between funding and student learning.⁴
- A 2011 review of research on increases in state funding mandated by courts says the increases were tied to improved student outcomes.⁵ The review includes studies from New Jersey, Massachusetts, Kansas, Vermont and Michigan, as well as a multi-state analysis.
- A 2013 study examines funding disparities among Arizona school districts and says student achievement in math was higher in high-spending districts than in low-spending districts.⁶
- A 2014 study examines education funding reform in Massachusetts, which significantly increased total funding for public schools and directed additional dollars to high-poverty districts. It says “that the substantial rise in [state] aid and its distributional changes as a result of [the Massachusetts Education Reform Act] led to a substantial increase in student performance across all districts.”⁷ Reforms in Massachusetts merit particular attention because it is a national leader in student achievement by several important measures.
- A 2014 National Bureau of Economic Research study is particularly relevant for Georgia, where most K-12 students are economically disadvantaged. The study finds spending increases lead to better outcomes for low-income students in school and into adulthood.⁸ The comprehensive study relies on national data collected on per-student school district spending from 1967 to 2010 to determine if funding levels can effect results. It says a 20 percent increase in per-student spending for low-income students kept them in school longer: their graduation rate increased and the number of years they stayed in school rose. When they became adults, their wages rose nearly 25 percent and their incidence of poverty fell by almost 20 percent.

Debunking Money Does Not Matter Myth

A perception that money is not connected to student learning persists. A widely read 1986 study held there is not a strong or systematic relationship between spending and student outcomes.⁹ A team of University of Chicago researchers later cited flaws in the study’s methods that undermine its conclusions. They replicated the study using more rigorous criteria and methods, and concluded funding is positively related to student achievement.¹⁰

Education spending steadily rose since the 1960s, which some critics claim did not improve student outcomes.¹¹ A close examination shows education spending increased much less than the 300 percent some observers assert.¹² Per-student spending increased 92 percent between 1967 and 2005 when adjusted by the Net Service Index, which measures inflation in the service sector, according to a 2010 analysis, which examined spending in a nationally representative cohort of school districts.¹³

So where did the additional money go? Thirty-six percent was spent on special education and 12 percent on bilingual and compensatory programs, as well as programs for at-risk youth.¹⁴ As a result, the proportion of money allocated to regular education programs fell to 55 percent in 2005 from 79.6 percent in 1967, while special education’s share climbed to 21 percent from 3.7 percent.¹⁵

Meanwhile, student outcomes improved. National math and reading scores on the National Assessment of Educational Progress exam increased for both fourth and eighth graders since the 1970s.^{16,17} The achievement gap between white and minority students also narrowed slightly during that time.¹⁸ Georgia’s math and reading scores also improved on the NAEP exam.¹⁹

Improving Student Learning Requires Effective Spending

Money matters. Rigorous research makes this clear. At the same time the way dollars are spent is equally important. High quality early education and small class sizes in early grades are linked to higher achievement in school and better outcomes into adulthood, including increased postsecondary enrollment and higher earnings.^{20,21,22} Other strategies linked to improving student learning include:

- Setting high goals
- Teacher training
- Extra help for struggling students
- Use of formative, clinical assessments
- Principal leadership²³

None of these are silver bullets and any single one is not likely to bring significant student learning improvement. These strategies do make a difference, though, in schools with:

- Organizational stability and continuity, (e.g. low turnover, positive school climate)
- Effective leadership and vision, including teacher leaders
- A strategic action plan to focus on whole school change and instructional guidance
- Collaboration and professional development
- External support, (e.g. expert technical assistance to develop and implement plans)
- Funding tied to a strategic plan
- Parent-community ties^{24,25}

School leaders and faculty need help to develop these organizational characteristics and implement strategies to transform teaching and learning. It is hard work, particularly in schools where most students are economically disadvantaged. It is much harder when schools do not have adequate resources and there is ample evidence Georgia's schools do not. Students are in school for less than the standard 180 days in 49 districts in the state because of austerity cuts, according to a 2014 Georgia Budget and Policy Institute survey of school districts.²⁶ The same survey found 62 percent of districts cut elective courses since 2009, 46 percent cut art and music programs, and 36 percent cut programs for low-performing students. Nearly 87 percent cut spending on professional development for teachers during that time.

State leaders set a laudable goal that all Georgia's students will graduate from high school with the knowledge and skills needed to succeed in postsecondary education and the workforce. Lawmakers must now provide the resources needed to get there, because money *does* matter.

EndNotes

¹Georgia Department of Education. Free and Reduced Price Meal Eligibility, Fiscal Year 2015 Data Report. http://app3.doe.k12.ga.us/ows-bin/owa/fte_pack_frl001_public.entry_form .

²U.S. Census Bureau. Public Education Finances: 2012. Table 11. <http://www2.census.gov/govs/school/12f33pub.pdf>

³Baker, B. D. (2012) *Revisiting the Age-Old Question: Does Money Matter in Education*. Washington, DC: Albert Shanker Institute.

⁴Greenwald, R., Hedges, L. V., & Laine, R. D. (1996). The Effect of School Resources on Student Achievement. *Review of Educational Research* 66(3). 361-396.

⁵Baker, B. & Welner, K. (2011). School Finance and Courts: Does Reform Matter, and How Can We Tell? *Teachers College Record*, 113(11), 2374-2414.

⁶Hoffman, M. J., Wiggall, R.L., Dereshiwsy, M. I., & Emanuel, G.L. (2013) State School Finance System Variance Impacts on Student Achievement: Inadequacies in School Funding. *eJournal of Education Policy*. Fall, 1-8.

⁷Nguyen-Hoang, P. & Yinger, J. (2014). Education Finance Reform, Local Behavior, and Student Performance in Massachusetts. *Journal of Education Finance* 39(4) 297-322.

⁸Jackson, C. K., Johnson, R., & Persico, C. (2014) The Effect of School Finance Reforms on the Distribution of Spending, Academic Achievement, and Adult Outcomes. Cambridge, MA: National Bureau of Economic Research. <http://www.nber.org/papers/w20118>

⁹Hanushek, E. A. (1986). The Economics of Schooling: Production and Efficiency in Public Schools. *Journal of Economic Literature*, 23, 1141-1177.

¹⁰Greenwald, R., Hedges, L. V., & Laine, R. D. (1994). Does Money Matter? A Meta-Analysis of Studies of the Effects of Differential School Inputs on Student Outcomes. *Educational Researcher*, 23(3), 5-14.

¹¹Rebell, M., Lindseth, A. & Hanushek, E. A. (2009). Many Schools are Still Inadequate, Now What? *Education Next* 9(4).

¹²Ibid.

¹³Alonso, J. D. & Rothstein, R. (2010). Where Has the Money Been Going? A Preliminary Update. Washington, DC: Economic Policy Institute. <http://s2.epi.org/files/page/-/pdf/bp281.pdf>. In a 1995 report, Rothstein and his co-author Karen Hawley Miles argue that education spending should be adjusted by the Net Services Index rather than the Consumer Price Index. (Rothstein, R. & Miles, K. A. Where's the Money Gone? Changes in the Level and Composition of Education Spending. Washington, DC: Economic Policy Institute, 1995.) Education is a labor-intensive service field. The CPI, which is typically used to adjust education spending, is based on average productivity gains in all industries, such as manufacturing where productivity gains are easier to attain. It understates the inflationary costs in education. Using the NSI, Alonso and Rothstein calculated that per student spending increased by 92 percent between 1967 and 2005.

¹⁴Alonso, J.D. & Rothstein, R. (2010). Where Has the Money Been Going? A Preliminary Update. Washington, DC: Economic Policy Institute. <http://s2.epi.org/files/page/-/pdf/bp281.pdf>

¹⁵Ibid.

¹⁶National Center for Education Statistics, U.S. Department of Education. *Digest of Education Statistics* 1995. Tables 105 and 115. http://nces.ed.gov/programs/digest/1995menu_tables.asp

¹⁷National Center for Education Statistics, U.S. Department of Education. A First Look: 2013 Mathematics and Reading. <http://nces.ed.gov/nationsreportcard/subject/publications/main2013/pdf/2014451.pdf>

¹⁸Ibid.

¹⁹Ibid. NAEP did not begin reporting state scores until the 1990s so the test scores gains cited for Georgia cover the following periods: fourth grade reading, 1992-2013; eighth grade reading, 1998-2013; fourth grade math, 1992-2013; eighth grade math, 1992-2013.

²⁰Heckman, J. J. The Case for Investing in Disadvantaged Young Children. Big Ideas for Investing in Our Nation's Future. Washington, DC: First Focus. 2009. <http://www.heckmanequation.org/content/resource/case-investing-disadvantaged-young-children>.

²¹Folger, J. & Breda, C. (1989). Evidence from Project STAR about Class Size and Student Achievement. *Peabody Journal of Education* 67(1), 17-33.

²²Dynarski, S., Hyman, J., & Schanzenbach, D.W. (2013). Experimental Evidence on the Effects of Childhood Investments on Postsecondary Attainment and Degree Completion. *Journal of Policy Analysis and Management*, 32(4), 692-717.

²³Timar, T. & Roza, M. (2010). "A False Dilemma": Should Decisions about Education Resource Use Be Made at the State or Local Level? *American Journal of Education*, 397-410.

²⁴Timar, T. & Chyu, K. K. (2010). State Strategies to Improve Low-Performing Schools: California's High Priority Schools Grant Program, *Teachers College Record* 112(7), 1897-1936.

²⁵Bryk, A. S., Sebring, P. B., Allensworth, E., Luppescu, S. & Easton, J.Q. *Organizing Schools for Improvement: Lessons from Chicago*. Chicago: University of Chicago Press. 2010.

²⁶Suggs, C. Cutting Class to Make Ends Meet-2014. Atlanta: Georgia Budget and Policy Institute.