

CLASS SIZE MATTERS

As research shows, reducing class size, particularly in the early grades, is one of the most effective strategies to increase student learning and narrow the achievement gap between ethnic and racial groups.

- As studies from Tennessee, Wisconsin, and elsewhere demonstrate, students who are assigned to smaller classes in grades K-3rd do better in every way that can be measured: they achieve significantly higher test scores, receive better grades, and have improved attendance.¹
- Those whose performance improves the most are those who need the most help: children from poor and minority backgrounds, who make about twice the gains as other students. Alan Krueger of Princeton has estimated that reducing class size in the early grades shrinks the achievement gap by about 38%.²
- Smaller classes are a very cost-effective strategy to lower the number of students who have to repeat grades. In Nashville schools, only 16.7% of students who were in smaller classes in the early grades were held back through 10th grade, compared to 43.5% of those who had been in regular-size classes.³
- The benefits of class size reduction in the early grades last throughout a student's educational career. In 4th, 6th, and 8th grade, students who attended small classes in the early grades were significantly ahead of their regular-class peers in all subjects.⁴ By 8th grade, they were still almost a full year ahead of their peers.⁵

1 Jeremy Finn, "Class Size Reduction, Grades K-3," in: School Reform Proposals: The Research Evidence, ed. A. Molnar, 2002 <http://www.asu.edu/educ/eps1/EPRU/documents/EPRU%202002-101/Chapter%2002-Finn-Final.pdf> . See also Ivor Pritchard, Reducing Class Size: What Do We Know? US Department of Education, 1999, available at: <http://www.ed.gov/pubs/ReducingClass/> Alex Molnar, et.al. 1999-2000 Results of the Student Achievement Guarantee In Education (SAGE) Program Evaluation, December 2000, Center for Education Research, Analysis, and Innovation, University of Wisconsin-Milwaukee. <http://www.uwm.edu/Dept/CERAI/documents/cerai-00-34.html>

2 Alan B. Krueger and Diane M. Whitmore, January 2001. "Would Smaller Classes Help Close the Black-White Achievement Gap?" in John E. Chubb and Tom Loveless, eds., Bridging the Achievement Gap, Brookings Institution Press 2002; also available at <http://www.irs.princeton.edu/pubs/pdfs/451.pdf>.

3 Jayne Boyd-Zaharias et al, "The Student/Teacher Achievement Ratio (STAR) Project, STAR Follow-up Studies, 1996-1997, HEROS Inc., September 1997; <http://www.heros-inc.org/newstar.pdf>

4 Finn, op.cit, 2002; at <http://www.asu.edu/educ/eps1/Reports/epru/EPRU%202002-101/epru-2002-101.htm>.

5 . Jeremy Finn et. al, "The Enduring Effects of Small Classes," *Teachers College Record*, Volume 103, Number 2, April 2001, pp. 145–183; <http://www.tcrecord.org/pdf/10725.pdf>

- In high school, students who had been in smaller classes in the early grades had significantly lower drop-out rates, higher grades, and received better scores on their college entrance exams.⁶ For those who attended a smaller class in grades K-3, the difference between black and white students who took college entrance exams was cut in half.⁷
- A definitive study put out by the US Department of Education recently looked at the achievement levels of students in 2,561 schools across the nation, as measured by their performance on the national NAEP exams. The sample included at least 50 schools in each state, including those from large and small, urban and rural, affluent and poor areas. After controlling for student background, the **only** objective factor that was found to be correlated with higher student success as measured by test scores was class size –not school size, not teacher qualifications, nor any other variable that the researchers could identify.⁸

⁶ Helen Pate-Bain, 1999, "Effects of Class-Size Reduction in the Early Grades (K-3) on High School Performance," HEROS Inc., <http://www.heros-inc.org/star-hs-p.pdf>.

⁷ Krueger and Whitmore, 2001, op.cit.

⁸ Donald McLaughlin and Gili Drori, School-Level Correlates of Academic Achievement: Student Assessment Scores in SASS Public Schools. Washington, DC: U.S. Department of Education, 2000. The full report is online at <http://nces.ed.gov/pubs2000/2000303.pdf>. See also David Grissmer, et.al. Improving Student Achievement: What State NAEP Test Scores Tell Us. Santa Monica, CA: RAND, 2000, which had similar results from analyzing national test score data from 44 states to look at the effect of different educational factors on student achievement. The study showed that, controlling for students' family backgrounds, states with the lowest class size in the early grades had the highest NAEP scores. Available at www.rand.org/publications/MR/MR924/

Smaller classes increase student learning. They have also been shown to have a host of other benefits, including enhancing parental involvement, reducing disciplinary referrals, lowering teen parenthood rates, and improving teacher morale and retention.

It is because of these and other considerations that 32 states across the country have their own class size reduction programs, according to Education Week's most recent State Report Card.⁸

- Researchers in Wisconsin, California and New York have found that reduced class size leads to more parent volunteers in the classroom, and more parental involvement overall. Teachers explain that this results from their ability to get to know the parents of their students better, and to keep in closer communication about their educational progress and needs.⁸
- Behavior problems are also significantly reduced. In California, students were significantly less disruptive.⁸ In New York City, a principal in East Harlem reported that disciplinary referrals dropped 60% in her school in one year when they instituted smaller classes.⁸ In Burke County, NC, disciplinary problems and interruptions declined by more than 25% after class sizes were reduced. Lower rates of disruption and behavior problems have been also noted in Indiana and elsewhere.⁸
- Reducing class size improves teacher morale, because less time is spent on discipline and classroom management, enabling teachers to focus more on learning and individualized instruction. Smaller classes also results in improved rates of teacher retention, according to research from California and elsewhere.⁸

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- A survey by Public Agenda shows that among teachers themselves, smaller classes is seen as the most effective way to increase the quality of instruction, above raising salaries or providing more professional development.⁸
 - Recent analysis demonstrates that those students who were in smaller classes in the early grades also exhibit lower teen parenthood rates in later years.⁸
 - Economist Alan Krueger of Princeton has found that reducing class size leads to economic benefits that are twice as high as the costs, in terms of future earnings potential alone. His estimate is based on conservative assumptions, and does not take into account other costly outcomes that have been found to occur more often among those in larger class sizes in the early grades, such as higher rates of grade retention and teen parenthood. ⁸

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The importance of class size in the middle and upper grades

In addition to the overwhelming evidence that class size matters in the early grades, there is abundant research indicating that smaller classes are linked to higher student achievement and lower rates of disciplinary referrals and dropouts in the middle and upper grades as well.

- One comprehensive study, commissioned by the US Department of Education, looked at the achievement levels of students in 2,561 schools across the nation, as measured by their performance on the NAEP (national) exams. The data included at least 50 schools in each state, including those from large and small, urban and rural, affluent and poor areas. After controlling for student background, **the only objective factor that was found to be correlated with higher student success was class size**, not school size, not teacher qualifications, nor any other variable that the researchers could identify. What was even more striking is that **these achievement gains were more strongly linked to smaller classes in the upper rather than the lower grades.**⁸
- Some of the numerous studies that show a correlation between smaller class size and significantly higher student achievement in the middle and upper grades include: R. F. Ferguson, **“Paying for public education: New evidence on how and why money matters,”** (for grades 1st -7th), Steven G. Rivkin, Eric A. Hanushek and John F. Kain, **“Teachers, schools, and academic achievement,”** (for grades 4-5); R.F. Ferguson, & H.F. Ladd, **“How and why money matters: An analysis of Alabama schools”** (for grades 4,8,and 9), Michael Boozer and Cecelia Rouse, **“Intraschool Variation in Class Size”** (for grades 8th-10th).⁸
- Since smaller classes foster greater academic and social engagement, they also lead to lower dropout rates. ⁸ A statistical analysis using data from the National Center for Education Statistics reveals that in school districts across the country, graduation rates are highest where student-teacher ratios were lowest, with the gains particularly sharp for among minority students. ⁸
- .Minneapolis has a city-funded class size reduction program for all grades through high school, with limits of 19 students in K-2, 25 in grades 3-8, and an average of 26 in high school. ⁸ From 1997-2001, students demonstrated a 25% gain in math passing rates (vs. 3% gain statewide); and a 70% gain in reading passing rates (vs. 51% gain statewide).⁸
- The evidence from Minneapolis also shows that gains are greater the longer students have the benefit of smaller classes. For example, 79.4% of those students who have had seven years of lower class size scored at or above grade level in reading, compared to 53.5% of students who had only one to three years of lower class size, and 42.3% who had no years of small classes. Similar trends were noted in math. The improvement among minority students has been particularly impressive – with an approximate doubling of pass rates among black and Hispanic students who had the benefit of smaller classes on a sustained basis. (See also attached chart). ⁸

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- In an analysis of more than 200 school districts, researcher Harold Wenglinsky of the Educational Testing Service concluded that for eighth graders, smaller classes were associated with higher rates of achievement in math, as well as a much improved “school social environment”, as measured by factors such as higher attendance and lower rates of school vandalism.⁸
 - Other studies show fewer disciplinary problems and school crime associated with smaller classes. A report to Congress found that after holding other factors constant, smaller class size was correlated with lower rates of school violence.⁸ More recently, Paul Barton, director of the Policy Information Center of the Environmental Testing Service has written, “school size is less important than class size in terms of improving discipline.”⁸ As another expert has written, “Indeed, many educators are convinced that, without reducing class size, all other attempts to ensure school safety can at best offer marginal improvement.”⁸