



class size matters

124 Waverly Place, NY, NY 10011

phone: 212-674-7320

www.classsizematters.org

email: classsizematters@gmail.com

The Benefits of Smaller Classes

Reducing class size, particularly in the early grades, is one of the few educational strategies shown to increase learning and narrow the achievement gap between ethnic and racial groups.

- The Institute of Education Sciences, the research arm of the US Department of Education, concludes that class size reduction is one of only four, evidence-based reforms that have been proven to increase student achievement through rigorous, randomized experiments -- the "gold standard" of research.¹
- Studies from Tennessee, Wisconsin, and elsewhere demonstrate that students who are assigned to smaller classes in grades K-3rd do better in every way that can be measured: they score higher on tests, receive better grades, and exhibit improved attendance. ²
- Those students whose performance improves the most are those who need the most help: children from poor and minority backgrounds, who experience twice the gains as the average student. Alan Krueger of Princeton has estimated that reducing class size in the early grades shrinks the achievement gap by about 38%.³
- And yet though minority students benefit the most from smaller classes, they are more likely to be enrolled in classes of 25 or more. Indeed, the gap in class size between schools with high and low minority populations has increased in recent years.⁴

1 U.S. Department of Education Institute of Education Sciences, "Identifying and Implementing Educational Practices Supported by Rigorous Evidence: a User Friendly Guide," December 2003 at:

<http://www.ed.gov/rschstat/research/pubs/rigorousevid/rigorousevid.pdf> The other three reforms are one-on-one tutoring by qualified tutors for at-risk readers in grades 1-3rd ; life-skills training for junior high students, and instruction for early readers in phonics.

2 Jeremy Finn, "Class Size Reduction, Grades K-3," in: School Reform Proposals: The Research Evidence, ed. A. Molnar, 2002 <http://www.asu.edu/educ/epsil/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>

3 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>.

4 Paul E. Barton and Richard J. Coley, , "Parsing the Achievement Gap II," Educational Testing Service, 2009 at <http://www.ets.org/Media/Research/pdf/PICPARSINGII.pdf>

- Class size reduction is likely to have large public health benefits – with greater medical savings expected than increased spending on antibiotics, hospital buildings, or even vaccines - with nearly two more years of life projected for students who were placed in smaller classes in the early grades. 5
- Smaller classes are also a very cost-effective strategy to lower the number of students who 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. 6
- 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 smaller classes in the early grades were significantly ahead of their regular-class peers in all subjects.7 By 8th grade, they were still almost a full year ahead of their peers. 8
- In high school, students who had been in smaller classes had significantly lower drop-out rates, higher grades, and received better results on their college entrance exams.9 After four years in a small class in the early grades, the graduation rate for free-lunch students more than doubled, and their likelihood of graduating equaled those who were not poor. 10 For those who had attended a smaller class in grades K-3, the difference between black and white students taking college entrance exams was cut in half.11
- National surveys of educators believe that class size reduction is the most effective method to improve the quality of teaching. In a 2008 survey, 76% of first year teachers said that reducing class size would be "a very effective" way of improving teacher quality, and 21% responding that it would be an "effective" method -- for a total of 97% -- far outstripping every other reform cited. 12
- In another national survey, 88% of teachers, and 85% of superintendents and principals agreed with this statement: "If the public schools finally got more money and smaller classes,

5 Peter Muennig and Steven H. Woolf, "Health and Economic Benefits of Reducing the Number of Students per Classroom in US Primary Schools," *American Journal of Public Health*, Sept 27, 2007. See also the summary in *Slate* magazine by Dr. Sydney Spiesel, "Could smaller elementary school classes make kids healthier?" Oct. 16, 2007.

6 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>

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

8 . 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>

9 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>.

10 Jeremy D. Finn, Susan B. Gerber, Jayne Boyd Zaharias, "Small Classes in the Early Grades, Academic Achievement, and Graduating From High School," *Journal of Educational Psychology*, 2005; summary at <http://www.apa.org/releases/smallclasses.html>

11 Krueger and Whitmore, 2001, op.cit.

12 Public Agenda, "Lessons Learned, Issue No. 3: New Teachers Talk About Their Jobs, Challenges and Long-Range Plans," May 26, 2008.

they could do a better job." Again, their support for this improvement strategy far outstripped any other.¹³

- A definitive study commissioned by the US Department of Education analyzed 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 large and small, urban and rural, affluent and poor areas. After controlling for student background, the only objective factor 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 could be identified. The gains from smaller classes in the upper grades surpassed the gains from smaller classes in the lower grades.¹⁴
- A recent longitudinal analysis found that smaller classes in the 8th grade are associated with significantly higher levels of student engagement, with the expected economic benefits from reducing class size in urban schools nearly twice the estimated costs.¹⁵
- A detailed observational study shows that when secondary students are placed in smaller classes, much greater time is spent "on task" and focused on learning, with special benefits for low-achievers and far lower rates of negative behavior.¹⁶

This fact sheet was prepared by Leonie Haimson, Executive Director, Class Size Matters, June 2010; available at www.classsizematters.org/benefits

13 Public Agenda, "[Is Support for Standards and Testing Fading? Reality Check](#), 2006.

14 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/

15 Thomas Dee and Martin West, "The Non-cognitive returns to class size," National Bureau of Economic Research, Working Paper 13994; April 2008; <http://www.swarthmore.edu/Documents/academics/economics/w13994.pdf>

16 Peter Blatchford et.al, "Do low attaining and younger students benefit most from small classes? Results from a systematic observation study of class size effects on pupil classroom engagement and teacher pupil interaction", presented to the American Educational Research Association Annual Meeting 2008, posted at <http://www.classsizeresearch.org.uk/aera%2008%20paper.pdf>. Other studies that find an association between higher student achievement and smaller classes include: M. Boozer and C. Rouse, "Intraschool Variation in Class Size," NBER working paper #334, 1995 (for grades 8-10); Eric A. Hanushek and John F. Kain, "Teachers, schools, and academic achievement," October 2001, [NBER Working Paper No. W6691](#) (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 10) in: H.F. Ladd (Ed.), [Holding Schools Accountable](#), Brookings Institution, 1996; R. F. Ferguson, "Paying for public education: New evidence on how and why money matters," [Harvard Journal on Legislation](#), 1991, 28 (2): 465-498. (for grades 1-7.) For studies from Canada and Great Britain that show benefits of smaller classes in the secondary grades, see Douglas Willms and A.C. Kerckhoff, "The Challenge of Developing New Social Indicators," [Educational Evaluation and Policy Analysis](#), 1995, 17, 113-131. Also G. Frempong and D. Willms, "The **Importance of Quality Schools**" in: J. D. Willms (Ed.), [Vulnerable Children: Findings from Canada's National Longitudinal Survey of Children and Youth](#), 2002. See also Francine M. Deutsch, "**How Small Classes Benefit High School Students**," [National Association of Secondary School Principals Bulletin](#), Vol. 87, no. 635, June 2003.