



class size matters

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Research brief in support of LAUSD resolution to reduce class size

Reducing class size is one of the few educational strategies shown to increase learning for all students and narrow the achievement gap between ethnic and racial groups. In California, as in the rest of the nation, schools have seen sharp increases in class size in recent years, including in Los Angeles schools.¹ Since 2007, California schools have lost an average of 11% of classroom teachers across the state, with a concomitant increase in class size.² The state with the highest student ratio in the nation in the fall of 2011 was California, according to NEA estimates.³ Since lowering class size is one of the few education reforms that are proven to work and to narrow the achievement gap, as well as yield economic benefits twice the cost, investing in smaller classes should be a top priority for Los Angeles schools.

- 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.⁴
- 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. ⁵
- Those students whose performance improves when class sizes are reduced are those who need the most help: children from poor and minority backgrounds, who experience twice the

1 Kevin Yamamura, "California retreats on class-size reduction," Sacramento Bee, January 20, 2013.

2 Legislative Analyst's Office, "Year-Three Survey: Update on School District Finance in California," May 2, 2012. See also EdSource, "Schools Under Stress; Pressures Mount on California's Largest School Districts," May 2012.

3 NEA research, "Rankings of the States 2012 and Estimates of School Statistics 2013," December 2012.

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

5 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>

gains as the average student. Estimates are that reducing class size in the early grades shrinks the achievement gap by about 38%.⁶

- In addition, smaller classes enhance the development of “non-cognitive” skills not captured by tests, like persistence, motivation and self-esteem, which are also linked to success in school and in life.⁷
- Alan Krueger, former chief economist for the Treasury Department and currently Chairman of the Council on Economic Advisers, has estimated that every dollar invested in smaller classes yields about \$2 in benefits.⁸ This estimate does not take into account savings from lower rates of grade retention or special education referrals, both of which are quite costly fall when class sizes were reduced.
- 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.⁹
- 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.¹⁰
- 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.¹¹ By 8th grade, they were still almost a full year ahead of their peers.¹²
- In the Tennessee STAR study, students who had been in smaller classes in the early grades had significantly lower drop-out rates, higher grades, and received better results on their

6 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>.

7 Thomas Dee and Martin West, “The Non-Cognitive Returns to Class Size,” *Educational Evaluation And Policy Analysis*, March 2011; Philip Babcock and Julian R. Betts, “[Reduced-class Distinctions: Effort, Ability and the Education Production Function.](#)” *Journal of Urban Economics*, May 2009; J. Heckman and Y. Rubinstein, “The Importance of Noncognitive Skills: Lessons from the GED testing program,” *The American Economic Review*, May 2001.

8 Alan B. Krueger, “[Economic Considerations and Class Size.](#)” *The Economic Journal*, February 2003.

9 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>

10 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.

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

12 . 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>

college entrance exams.¹³ 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.¹⁴ The graduation rate for free-lunch students more than doubled, and their likelihood of graduating nearly equaled non-poor students.¹⁵

- 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 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.¹⁶
- 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 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 could be identified. The gains from smaller classes in the upper grades surpassed the gains from smaller classes in the lower grades.¹⁷

13 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>.

14 Krueger and Whitmore, 2001, op.cit.

15 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>

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

17 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/