



class size matters

124 Waverly Place, NY, NY 10011

phone: 212-674-7320

www.classsizematters.org

email: classsizematters@gmail.com

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 are at least fifteen studies that link smaller classes in the middle and upper grades to higher student achievement and lower rates of dropouts and disciplinary referrals.

- 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 standardized 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.**¹
- A recent longitudinal analysis found that smaller classes in the 8th grade are linked to significantly higher levels of student engagement and achievement, particularly in urban school districts, with the expected economic benefits from reducing class size in these districts nearly twice the estimated costs.²
- 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 far lower rates of negative behavior and especially large benefits for high-needs students.³
- Additional 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),

¹ 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; <http://nces.ed.gov/pubs2000/2000303.pdf>

² 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>

³ 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/aea%2008%20paper.pdf>.

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 8-10).⁴

- Since smaller classes foster greater academic and social engagement, they also are correlated with lower dropout rates.⁵ 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.⁶
- An analysis of the small and medium high schools in NYC showed that the lower the pupil-teacher ratio, the higher the proportion of students graduating on time, and the lower the percentage of dropouts.⁷ Nationally, in the small schools in which class sizes have increased, this has undermined the ability of teachers to provide the personalized instruction that these schools depend upon for their success.⁸
- A national survey found that 75% of high school dropouts in the United States said that providing smaller classes with more individualized attention would have improved their

⁴ M. Boozer and C. Rouse, "*Intraschool Variation in Class Size*," NBER working paper #334, 1995; Eric A. Hanushek and John F. Kain, "*Teachers, schools, and academic achievement*," October 2001, NBER Working Paper No. W6691, R.F. Ferguson, & H.F. Ladd, "*How and why money matters: An analysis of Alabama schools*" 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 studies from Canada and Great Britain that show the effects 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.

⁵ Russell W. Rumberger, "*Why Students Drop Out of School and What Can Be Done*", 1-3 (Presented at the Conference on Dropouts in America, Harvard University, January 13, 2001).

⁶ See attached chart, from the NEA. Other studies that show a significant correlation between lower dropout rates and high teacher-student ratios include: R. W. Rumberger, "*Dropping out of middle schools*," *American Educational Research Journal*, 1995, 32, 583-625; R. W. Rumberger and S.L. Thomas, "*The distribution of dropout and turnover rates among urban and suburban high schools*," *Sociology of Education*, 2000, 73, 39-67; R.B. McNeal, "*High school dropouts: a closer examination of school effects*," *Social Science Quarterly*, 1997, 78, 209-222.

⁷ NYU Institute for Education and Social Policy, "*Stability in Student and Teacher Characteristics in the First Ten Years; A study of small high schools in New York City*," April 2007; http://steinhardt.nyu.edu/iesp/publications/pubs/IESP_SmallHighSchoolEffectiveness_April2007.pdf

⁸ See American Institutes for Research and SRI International, "*Creating Cultures for Learning: Supportive Relationships in New and Redesigned High Schools*," April 2005; http://www.gatesfoundation.org/nr/downloads/ed/evaluation/Year%203%20Final%20Reports/Relationship%20Rpt%2010_21.pdf.

likelihood of graduating from high school.⁹ International studies also find a strong correlation between smaller classes in high schools and lower dropout rates. Students in Great Britain who provided with smaller classes in high school were much more likely to remain through graduation. This finding was described as “robust”. The analysis also found that “bigger class size has a significant negative effect on wages later in life,” as well as a “significant association between class size and truancy for boys...”¹⁰ A study from Canada showed smaller classes were associated with significantly lower failure rates among high school students in applied or vocational programs.¹¹

- 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.¹²
- Many studies reveal fewer disciplinary problems and school crime associated with smaller classes. A report to Congress found that with other factors held constant, class size was negatively correlated with lower rates of school violence.¹³ Paul Barton of the Environmental Testing Service has written, “school size is less important than class size in terms of improving discipline”¹⁴ 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.”**¹⁵

⁹ John M. Bridgeland et.al., *The Silent Epidemic: Perspectives of High School Dropouts*, March 2006; <http://www.gatesfoundation.org/nr/downloads/ed/TheSilentEpidemic3-06FINAL.pdf>

¹⁰ See Christian Dustmann & Najma Rajah & Arthur van Soest, “*Class Size, Education, and Wages*,” *Royal Economic Journal*, 2003, Volume 113, Issue 485.

¹¹ Fabrizio Antonelli, “*From Applied to Applause: An OSSTF research project on improving student success in Applied level courses*” Ontario Institute of Studies in Education, University of Toronto, November 2004; <http://www.osstf.on.ca/www/issues/briefs/appliedtoapplause.pdf>

¹² Harold Wenglinsky, “*When Money Matters*,” Educational Testing Service, April 1997 ; <http://www.ets.org/research/pic/wmm.pdf>

¹³ Martha R. Asner and James Broschart, editors. *VIOLENT SCHOOLS--SAFE SCHOOLS: THE SAFE SCHOOL STUDY REPORT TO THE CONGRESS*. Vol. I. Washington, D.C.: United States Government Printing Office, 1978. ED 149 464.

¹⁴ Paul Barton, American Youth Policy Forum, “*Order in the Classroom: Violence, Discipline and Student Learning, A Forum Brief*— March 26, 1999;: <http://www.aypf.org/forumbriefs/1999/fb032699.htm>

¹⁵ Carol Ascher, “*Gaining Control of Violence in the Schools: A View from the Field*”, 1994. ERIC Digest No. 100. ERIC Clearinghouse on Urban Education, NY. (ERIC No. ED 377 256).