



Class Size Reduction

PSEA Promising Practices to Close Student Achievement Gaps

More than a decade of research has consistently confirmed the impact of small class size on student achievement. Particularly for younger racial and ethnic minority students, students from low income families, and other students who are at risk of failure, class size matters. This is a point that teachers have made for decades; recently, however, the voices of teachers have been joined by others: the U.S. Department of Education, The Carnegie Foundation for the Advancement of Teaching, the National Association of Elementary School Principals, and the National Science Teachers' Association have all encouraged states and districts to configure schools so that classes have about 15 to 18 students, particularly in the early elementary years and in schools and classrooms that serve large numbers of at-risk students. Class size reduction has become an important part of efforts to close student achievement gaps.

Class size reduction improves student achievement in several ways. First, smaller classes allow teachers to individualize instruction and recognize and intervene with student learning problems more efficiently. Consequently, smaller class sizes lead to higher student test scores, particularly among African American students and students living in poverty; one study found that reducing classes from 22 to 15 students in the early elementary years could reduce the black/white test score gap by 38 percent.¹ Smaller class sizes also have other, more subtle, positive impacts on a school's learning environment:

- Improved student behavior resulting in less vandalism, fewer suspensions and expulsions, and fewer classroom disruptions.
- Fewer student retentions in the early elementary grades.
- Fewer high school dropouts. Low income students who attended small classes in the first four years of elementary school are 18 percent more likely to graduate from high school than low-income students who attended average-sized classes in early elementary school.²
- Higher teacher morale that translates into higher rates of attendance, reduced substitute costs, and less teacher attrition.
- Earlier, more accurate identification of student learning disabilities.
- Higher student achievement. One study found that when compared to students in average-sized classes, students in smaller classes in the early years take more advanced courses in high school and are more likely to graduate in the top 10 percent of their class.³ Another study found that African American students who attended small classes in the early elementary years were more likely to take the SAT and ACT in high school. This study estimated that smaller elementary class sizes alone could reduce the black/white gap in SAT and ACT participation by 60 percent.⁴

¹Krueger, A. & Whitmore, D. (2002). Would smaller classes help close the black/white achievement gap? In J. Chubb and T. Loveless (Eds.), *Bridging the achievement gap*. Washington, DC: Brookings Institute Press.

²HEROS study, at www.heros-inc.org; Krueger, A. & Whitmore, D. (2002). Would smaller classes help close the black/white achievement gap? In J. Chubb and T. Loveless (Eds.), *Bridging the achievement gap*. Washington, DC: Brookings Institute Press.

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Issues to Consider

The Cost of Hiring More Teachers. Critics of class size reduction efforts suggest that reducing class size is prohibitively expensive, since it requires hiring more teachers to staff more classrooms. It is true that hiring more teachers is a necessary part of any class size reduction program. Regardless, the Economic Policy Institute found that class size reduction still makes economic sense; every one dollar invested in smaller classes yields about two dollars in economic benefits.⁵

Lack of Space for More Classes. Ideally, class size reduction involves individual teachers working in individual classrooms with 15 to 18 students. However, there is growing evidence that assigning two teachers to one class of 30 students can also be effective in improving student achievement.⁶ In districts where space is scarce, assigning two teachers to work in one classroom is a viable alternative.

Class Size is Not the Same Thing as Student:Teacher Ratio. Some researchers have studied the relationship between “student:teacher ratio” and student achievement and come up empty-handed. Critics of class size reduction efforts use these studies to assert that reducing class size does not improve student achievement. But a “student:teacher ratio” compares the number of students in a school to the number of certified professionals, including librarians, guidance counselors, special education teachers, and others. For obvious reasons, this calculation does not reflect the actual classroom experience of students. As a matter of fact, estimates are that average class size is usually about 9 or 10 students larger than the “student:teacher ratio.” In other words, if a school has a “student:teacher ratio” of 15 to 1, the average class size is probably close to 25. There is no evidence to suggest that reducing the student:teacher ratio improves student achievement, but reducing class size does.

Making the Case for Class Size Reduction in High Schools

Research establishes a clear link between class size in the early elementary years and student achievement across the K-12 continuum and beyond. The case for smaller classes in high schools is less apparent. However, it makes intuitive sense that high school teachers would also be able to individualize instruction more effectively, develop higher quality assignments for all students, and improve classroom management and safety with fewer students in each class. Further research may be able to define ways in which class size impacts teaching and learning at the middle and high school level.

Class Size Reduction in Pennsylvania

About \$16 million of Pennsylvania’s \$250 million accountability block grant program has been used by districts to reduce class sizes for over 23,000 students in grades K to 3.

For More Information contact Dr. Carla L. Claycomb in PSEA’s Education Services Division, cclaycomb@psea.org. The National Education Association (NEA) also has a collection of resources on their website to document the importance of class sizes below 16: <http://www.nea.org/classsize/index.html>.

⁵ Krueger, A. (2003). Economic considerations and class size. *Economic Journal*, 113, pp. 34-63. Mishel, L. & Rothstein, R. 2002. *The Class Size Debate*. Washington, DC: Economic Policy Institute

⁶ SAGE study www.asu.edu/educ/eps/SAGE/annual_reports/2000-2001%20Evaluation/epru-0201-104.htm