

## Reduce class sizes

More than a decade of research has consistently confirmed the impact of small class size on student achievement. This is particularly true for younger racial and ethnic minority students, students from low income families, and other students who are at risk of failure. Class size matters. Teachers have made this point for decades. The voices of teachers have recently 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.

## PSEA Recommendations

- Expand efforts to reduce class size. Toward this end, the state should ensure that schools continue to receive targeted state investments through programs such as Accountability Block Grants and the Act 61 Basic Education funding formula.
- Establish class size maximums based on research. Class size research suggests that students in kindergarten through grade 3 benefit from a class size of about 15, and students in late elementary school should be in classes of 18 or fewer. PSEA believes that secondary students should be instructed in classes no larger than 20. When appropriate, weighted class size formulas should be implemented to reflect the inclusion of students with special needs.

## How smaller class sizes improve achievement

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 effectively.<sup>1</sup> Consequently, smaller class sizes provide opportunities for high-quality teaching and learning, leading to higher student test scores. The impact is particularly clear 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.<sup>2</sup>

Research also has 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.<sup>3</sup> 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.<sup>4</sup>

Smaller class sizes also have other, more subtle, positive impacts on a school's learning environment:

- Earlier, more accurate identification of student learning disabilities;
- Improved student behavior resulting in less vandalism,<sup>5</sup> fewer suspensions and expulsions, and fewer classroom disruptions;
- Fewer student retentions in the early elementary grades;<sup>6</sup>
- 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;<sup>7,8</sup> and
- Higher teacher satisfaction due to smaller class size may translate into higher rates of attendance, reduced substitute costs, and less teacher attrition.<sup>9</sup>

## Smaller class sizes makes economic sense

Class size reduction is not just good for students: it is cost-effective, good for communities, and good for the Commonwealth. One recent study found that reducing class size in the early elementary grades results in a net cost savings to society of almost \$170,000 per high school graduate. For low-income students, the cost savings per high school graduate are more than \$195,000.<sup>10</sup> In a different analysis, the Economic Policy Institute found that every dollar invested in smaller class size yields about two dollars in economic benefits.<sup>11</sup>

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## Measure class sizes by individual classes, not buildings

Some researchers have studied the relationship between “student:teacher ratio” and student achievement and have 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, school counselors, special education teachers, and others. For obvious reasons, this calculation does not reflect the actual classroom experience of students or their teachers. As a matter of fact, estimates are that average class size is usually about nine 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 closer to 25. Understanding this important distinction, there is no evidence to suggest that reducing the “student:teacher ratio” improves student achievement, while some evidence suggests that reducing the ratio of students to teachers within individual classrooms does.

## Making the case for smaller classes in high school

Research establishes a clear link between class size in the early elementary years and student achievement across the k-12 continuum and beyond. Newer research also demonstrates the explicit educational value of reducing class size in secondary schools, particularly in classes with high proportions of low-attaining students.<sup>12</sup> As in elementary schools, smaller class size allows high school teachers to individualize instruction more effectively, develop higher quality assignments for all students, and improve classroom management and safety.

(01/10)

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<sup>1</sup> Blatchford, P., Bassett, P. & P. Brown. (2008). "Do Low Attaining and Younger Students Benefit Most from Small Classes? Results from a systematic observation study of class size effects on pupil engagement and teacher pupil interaction." Paper presented at the American Educational Research Association Annual Meeting. (2008). New York, NY.

<sup>2</sup> 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.

<sup>3</sup> HEROS study, at [www.heros-inc.org](http://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.

<sup>4</sup> 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.

<sup>5</sup> Harold Wenglinsky, "When Money Matters," Educational Testing Service. (1997) <http://www.ets.org/research/pic/wmm.pdf>.

<sup>6</sup> Jayne Boyd-Zaharias et al, "The Student/Teacher Achievement Ratio (STAR) Project, STAR Follow-up Studies, 1996-1997, HEROS Inc. (1997). <http://www.heros-inc.org/newstar.pdf>.

<sup>7</sup> Blatchford, P., Bassett, P. & P. Brown. (2008). "Do Low Attaining and Younger Students Benefit Most from Small Classes? Results from a systematic observation study of class size effects on pupil engagement and teacher pupil interaction." Paper presented at the American Educational Research Association Annual Meeting, New York, NY. (2008).

<sup>8</sup> HEROS study, at [www.heros-inc.org](http://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.

<sup>9</sup> Finn, J.D. (2002). *School Reform Proposals: The Research Evidence: Class Size Reduction in grades k – 3*. Tempe, AZ: Education Policy Studies Laboratory, Arizona State University.

<sup>10</sup> Muennig, P. & Woolf, S.H. (2007). "Health and Economic Benefits of Reducing the Number of Students per Classroom in US Primary Schools." *American Journal of Public Health*, 97 (1): 2020-2027.

<sup>11</sup> 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.

<sup>12</sup> Blatchford, P., Bassett, P. & Brown, P. (2008). "Do Low Attaining and Younger Students Benefit Most from Small Classes? Results from a systematic observation study of class size effects on pupil engagement and teacher pupil interaction." Paper presented at the American Educational Research Association Annual Meeting, New York, NY. (2008).