

A review of research on the effect of lower class sizes: Many studies find “no improvement in learning”

By Liv Finne, Director, Center for Education

April 2015

Introduction

The legislature is considering spending billions of dollars this year to hire thousands of additional school staff in an effort to reduce class sizes in grades K-3 in public schools across the state. Governor Inslee has announced he wants to raise taxes to fund this class-reduction policy. The often-unspoken assumption behind this approach is that lower class sizes automatically improve learning outcomes for school children.

A review of the research, however, does not show that spending billions of public dollars to reduce class sizes statewide will improve student learning. This lack of effectiveness does not have a neutral impact on schools, because spending on class-size reduction means less public money is available for education policies that do benefit children.

Think tanks on the left, right and center of the political spectrum agree that class size reduction policies fail in a basic cost/benefit analysis, especially when compared to the policy of providing all students with an effective teacher. Stated another way, policies that retain bad teachers in the classroom do more harm to student learning opportunities than a large class size. Students with a good teacher in a class large or small learn better than students in a small class with a bad teacher.

Researchers at the left-leaning Center for American Progress describe class size reduction policies as a “false promise.”¹ Center for American Progress analysts also conclude that extensive class size reduction policies in California, Florida and other states have not been cost-effective:

“Large-scale CSR [Class Size Reduction] policies clearly fail any cost-benefit test because they entail steep costs and produce benefits that are modest at best.”²

This review of class size studies also found that:

“Assuming even the largest class-size effects in the research literature, such as the STAR [Tennessee] results that indicate that a 32 percent reduction in class size increased achievement by about 15 percent of a year of learning after one year, CSR will still fail this test because it is so expensive. Reducing class size by one-third, from 24 to 16 students, requires hiring 50 percent more teachers.”³

Researchers at the centrist Brookings Institution agree, and they specifically question the results of studies from the 1980s, like the STAR Tennessee study, often used by advocates to extrapolate findings

1 “The False Promise of Class-Size Reduction,” by Matthew M. Chingos, The Center for American Progress, April, 2011, at www.americanprogress.org/issues/education/report/2011/04/14/9526/the-false-promise-of-class-size-reduction/.

2 Ibid.

3 Ibid.

to the modern day and across an entire state.⁴

Brookings Institution researchers also raise warnings about other states' experiences with statewide class size reduction efforts. California reduced class sizes in the late 1990s by 10 students, down to 20 students in the lower grades. Brookings analysts report the policy hurt student learning when schools were forced to hire unqualified teachers to hit certain number targets.⁵ The Brookings Institution also examined Florida's class size reduction effort, and found that effort delivered no improvement in student learning.⁶

Brookings Institution researchers found that when billions of dollars are involved, it is good policy to consider other, better uses for public money, such as paying good teachers more to provide additional hours of instruction, funding a longer school year, providing summer school services for disadvantaged students, all of which provide higher benefits to students than does a lower class size.⁷

Researcher Eric Hanushek of the Hoover Institution at Stanford University, a right-leaning think tank, has also reviewed the literature. His analysis of 277 separate

studies on the effects of reducing class sizes found that only 15 percent showed statistically significant benefits for students from reduced class sizes, with 13 percent showed student achievement got worse, and 85 percent showed class size reduction has no effect at all.⁸

All these researchers found that having a good teacher in the classroom is much more helpful to students than reducing class sizes. Good teachers provide about one year and a half of learning benefits to students, while a bad teacher may provide students less than half a year of learning.

This finding means the difference for students between having a good or bad teacher in class can be as much as one year of learning in an academic year.⁹ Research found that students who have the misfortune of being assigned to a bad teacher three years in a row may never catch up.¹⁰

Researchers at the left-leaning Center for American Progress conclude that improving teacher quality would have far greater effect on student learning than reducing class sizes, and at a lower cost:

“There are certainly many policies that might be proposed as cost-effective alternatives to CSR [Class Size Reduction], but one set of policies that stand out are those aimed at improving teacher quality.

4 “Reinvestigating Class Sizes in Washington State,” KUOW News and Information, by Steve Scher, Christine Streich, Hannah Burn, April 8, 2014, at kuow.org/post/reinvestigating-class-sizes-washington-state.

5 “Class Size: What Research Says and What Does it Mean for State Policy,” by Matthew M. Chingos and Grover J. “Russ” Whitehurst, Brookings, at www.brookings.edu/research/papers/2011/05/11-class-size-whitehurst-chingos.

6 “The Impact of a Universal Class-Size Reduction Policy: Evidence from Florida’s Statewide Mandate,” by Matthew M. Chingos, Program on Education Policy and Governance, John F. Kennedy School of Government, Harvard University, August 2010, at www.hks.harvard.edu/pepg/PDF/Papers/PEPG10-03_Chingos.pdf.

7 “Reinvestigating Class Sizes in Washington State,” KUOW News and Information, by Steve Scher, Christine Streich, Hannah Burn, April 8, 2014, at kuow.org/post/reinvestigating-class-sizes-washington-state.

8 “Improving Student Achievement: Is Reducing Class Size the Answer?” by Eric Hanushek, Hoover Institution, Stanford University, June 1998, at hanushek.stanford.edu/publications/improving-student-achievement-reducing-class-size-answer.

9 “Why an effective teacher matters,” by Eric Hanushek, Hoover Institution, Stanford University, February 2011, at www.studentsfirst.org/blog/entry/why-an-effective-teacher-matters-a-q-a-with-eric-hanushek/.

10 “How the world’s best-performing school systems come out on top,” McKinsey and Company, September 2007, at mckinseysociety.com/downloads/reports/Education/Worlds_School_Systems_Final.pdf.

“Researchers agree that teacher quality is the single most important in-school determinant of how much students learn. Stanford economist Eric Hanushek has estimated that replacing the worst 5 percent to 8 percent of teachers with average teachers would dramatically boost achievement in the United States.

“Investing less in CSR would free up resources that could be used to recruit and retain highly effective teachers. For example, schools might “treat different teachers differently,” or pay teachers differently based on their effectiveness in the classroom or the subject area they teach, as Robin Chait and Raegen Miller have suggested.”¹¹

Reducing class sizes limits teacher pay increases

Since teachers’ salaries are funded from state and local dollars, directing those dollars to the hiring of new staff necessarily reduces the amount of public money available to increase current teacher salaries and benefits.

The Brookings Institution explains that by one estimate, an increase in average class size by five students would result in enough public money available for an across-the-board increase of 34 percent in teacher salaries.¹²

Teacher effectiveness is often ignored by state legislators

The Washington legislature has not conducted a cost/benefit analysis which

compares class size reduction policies to policies designed to provide an effective teacher for every classroom. Washington State Institute for Public Policy’s recent cost/benefit analysis of possible education policies does not include studies on teacher effectiveness published since 2007.¹³

Since 2007, several high-quality studies, from institutions like Harvard University, show that being assigned to a highly-effective teacher provides significant long-term benefits for students.

For example, in a study published by the National Bureau of Economic Research, Raj Chetty and John Friedman of Harvard University and Jonah Rockoff of Columbia University tracked one million children from 4th grade through adulthood. They found that when a highly-effective teacher joins a school, test scores rise immediately for students in the grade taught by that teacher. They also found that students assigned to higher-quality teachers are more likely to attend college, earn higher salaries, live in better neighborhoods, and to save more money for retirement.¹⁴

Education researcher Eric A Hanushek found that students assigned to effective teachers will likely have higher lifetime earnings, by more than \$400,000, while the negative impact of a bad teacher tends to reduce students’ earnings by \$400,000.¹⁵

11 “The False Promise of Class-Size Reduction,” by Matthew M. Chingos, The Center for American Progress, April, 2011, at www.americanprogress.org/issues/education/report/2011/04/14/9526/the-false-promise-of-class-size-reduction/.

12 “Class Size: What Research Says and What Does it Mean for State Policy,” by Matthew M. Chingos and Grover J. “Russ” Whitehurst, Brookings, at www.brookings.edu/research/papers/2011/05/11-class-size-whitehurst-chingos.

13 “Benefit-cost results, Pre-K to 12 Education,” Washington State Institute for Public Policy,” December 2014, at www.wsipp.wa.gov/BenefitCost?topicId=4.

14 “The Long-term Impacts of Teachers: Teacher Value-Added and Student Outcomes in Adulthood,” by Raj Chetty, Harvard University and National Bureau of Economic Research (NBER), John Friedman, Harvard University and NBER, Jonah Rockoff, Columbia University and NBER, December 2011, at obs.rc.fas.harvard.edu/chetty/value_added.pdf.

15 “Valuing Teachers: How Much is a Good Teacher Worth?” by Eric Hanushek, *Education Next*, Summer 2011, at hanushek.stanford.edu/publications/valuing-teachers-how-much-good-teacher-worth.

Conclusion

State lawmakers may feel that they are helping students by directing more public money to a class-size reduction program and the hiring of more school district staff.

Union executives certainly promote that conclusion – they benefit from increased hiring because public school teachers must pay them mandatory dues and fees each month.

A review of the findings by researchers across the political spectrum, however, shows that class-size reduction does not result in significant benefit for students. Instead it draws money away from proven policies that help students, such as paying good teachers more to provide more time on instruction, summer school, and pay raises and bonuses to recruit and retain good teachers in public school classrooms.

*Liv Finne is
Washington Policy Center's
director of the Center for
Education.*

*Nothing here should be
construed as an attempt to
aid or hinder the passage of
any legislation before any
legislative body.*

*Visit washingtonpolicy.org
to learn more.*