



Class Size Matters
124 Waverly Pl., New York, NY 10011
Phone: 212-529-3539
info@classsizematters.org
www.classsizematters.org

Class-Size Reduction and Black Male Student Outcomes

Reducing class size has been shown to have positive impacts for students of all ages and backgrounds, but the gains are particularly large for minority and disadvantaged students.

Given the current concern over the academic achievement and life outcomes for Black male students, it is important to examine how this educational reform would benefit this population. Here is some of recent research on this topic.

1. Class size reduction improves test scores for Black male students and significantly narrows the achievement gap.

STAR Project (1985-1989)

- [An analysis of the STAR project](#) (Mosteller 1995) found substantial improvement in early learning and cognitive skills resulting from a large-scale experiment in class size reduction, with the gains among minority children were double those of non-minorities.
-
- [Krueger and Whitmore \(2001\)](#) saw 7-10 percentile point increases in standardized test scores for Black students in small classes compared with 3-4 percentile point increases for White students. Furthermore, they estimate that if all students were in small classes in grades K-3, the Black-White test score gap would drop by 38 percent. Moreover, their analysis suggested that historical changes in student-teacher ratios could account for nearly all of the narrowing of the Black-white test score gap on NAEP tests since 1971.
-
- In 2004, Dee analyzed the [effects of student-teacher racial mismatch](#) on academic achievement in small classes. While he found that racial mismatch had negative effects on academic achievement in regular sized classes, this effect was absent in small classes.
-
- In 2009, [Konstantopoulos and Chung](#) concluded that small classes in the early grades led to the narrowing of the achievement gap in reading and science in later grades as well.

- An analysis of experimental data from Tennessee's 1985-1989 Student-Teacher Achievement Ratio (STAR) study showed that for Black students, reduced class sizes caused higher academic achievement in the four domains tested (reading, mathematics, listening, and word recognition skills) each year from kindergarten to third grade. While achievement improved for other students as well, the effect was not as great, thus substantially narrowing the achievement gap. ([Shin 2012](#)).

SAGE Program (1996)

- A randomized research project – the Student Achievement Guarantee in Education (SAGE) program – was launched in Wisconsin in the 1996-1997 school year. An [evaluation of the program](#) conducted by the Wisconsin Center for Education (Webb 2004) found gains were especially strong for Black males, specifically in reading, language arts, and mathematics for first graders.

Other Studies and Reports

- In 1995, [Boozer and Rouse](#) analyzed patterns class size across and within schools and found that Black students tend to be in schools with larger average class sizes, as well as in larger classes within schools. These differences in class size could explain approximately 15% of the Black-White difference in educational attainment.
- A 2012 [NCPEA Policy Brief](#) on the STAR experiment and other class size studies noted that poor, minority, and male students received stronger benefits from reduced class size in terms of improved test scores, school engagement, and reduced grade retention and dropout rates
- [A 2014 meta-analysis of class-size reduction literature](#) that examined 112 peer-reviewed studies revealed that the overwhelming majority found that smaller classes helped to narrow the achievement gap (Zyngier 2014).

2. Class size reduction leads to increases in college entrance and other post-secondary outcomes for Black male students.

- [Krueger and Whitmore \(2001\)](#) found that being in a small class raised the likelihood that Black students take the ACT or SAT from 31.8 to 41.3 percent. Additionally, they concluded that if all students were assigned to small classes, the Black-white gap in taking a college entrance exam would fall by an estimated 60 percent. Past attendance in a small class also raised the average score on the ACT or SAT by 0.15-0.20 standard deviations for Black students.
-
- [Dynarski et al \(2011\)](#) used STAR data to investigate the effects of small class sizes on postsecondary attainment and degree completion. They found that assignment to small classes increase the probability of attending college by 2.7 percentage points, with effects more than twice as large among Blacks. Among students with the lowest

probability of attending college prior to the STAR intervention, the effect was 11 percentage points. Smaller classes also shifted students toward earning degrees in a STEM field (science, technology, engineering, and mathematics), with 4.4 percent of the control group receiving STEM degrees and 5.7 percent in the treatment group.

3. Class-size reduction has non-cognitive and disciplinary impacts that are likely to benefit Black males.

- A [literature review from the University of Glasgow](#) (2002) noted that data from the Tennessee STAR project showed that fewer students who experienced smaller classes in the early years of schooling dropped out of school by tenth grade. In one predominantly rural county in Tennessee the dropout rate by Grade 10 was down to 1.8% for students who had been in small classes, compared with 8.5% and 5.9% for those who had been in 'regular' and 'regular plus aide' classes. Grade retention was also lower for students in small classes. 17% of students from small classes were held back a year compared with 30% and 44% respectively from 'regular' and 'regular plus aide' classes.
- The Glasgow review also cited Tennessee STAR research that found lower suspension rates among students who had been in small classes. The average number of days 10th grade students were suspended was 0.32 for small classes compared with 0.62 and 0.77 for 'regular' and 'regular plus aide' respectively. Similarly, absences were lower for students who'd been in small classes (15.88 days per year compared to 22.55 and 24 for 'regular' and 'regular plus aide' classes).
- [Finn et al \(2003\)](#) conducted a review of class size literature to examine the relationship between class size and learning behavior, social behavior, and teaching styles. Their analysis revealed a positive relationship between reduced class size and outcomes in all three areas. They found that reduced class size was linked with increased academic engagement, including student effort and time on task, especially in grades K-3. Additionally, they find that teachers of small classes were able to get to know each student more intimately and that their tolerance for a broader range of student behaviors was increased.
- [Finn et al](#) also find that class size reduction leads to decreases in anti-social behavior (i.e., withdrawing from interactions with the teacher or other students and engaging in disruptive acts that disturb the work of other students or necessitate teacher reprimand and control) and increases in pro-social behavior (i.e., following rules and interacting positively with the teacher as well as collaborating with other children and supporting their contributions to the class). Students were less likely to engage in inappropriate behavior or disrupt the work of other students. Teachers with small classes made fewer disciplinary referrals than those with larger classes.

- [Babcock and Betts \(2009\)](#) investigated the mechanism through which smaller classes boost academic achievement and found that small class sizes allow teachers to more effectively engage “low-effort” students, as defined by a below average “Behavior GPA” comprised of four factors: beginning work promptly, class behavior, self-discipline, and direction following.
- A [report from the Canadian Education Association](#) summarizing the impacts of class size reduction (Bascia 2010) noted that teachers are able to interact with individual students more frequently and use a greater variety of instructional strategies. Students learn more both academically and socially. They are more engaged and less disruptive in the classroom. These improvements in student behavior may be attributable in part to an increase in physical classroom space per student, which provides more opportunities for student movement, different grouping strategies, and interaction among students and between students and teachers.
- An analysis of nationally representative data on eighth graders ([Dee and West, 2011](#)) concluded that reductions in class size were associated with improvements in non-cognitive skills related to psychological engagement with school, consisting their affective reactions to teachers, peers, and academics in general. These positively affected their level of interest in school, their motivation and sense of belonging, while decreasing their boredom and/or anxiety. Students in small classes were more likely to look forward to class, believe that the subject is useful for their future, and are less like to be afraid to ask questions. Dee and West found especially large positive effects on the psychological engagement of boys, Black, low-income and urban students due to small classes and noted that class-size reduction was particularly cost-effective when targeted in urban schools.

4. Class-size reduction has positive impacts on the life outcomes of Black males.

- [Krueger and Whitmore \(2001\)](#) found that smaller classes were a contributing factor to higher income, better health, lower crime, and other outcomes. Their research shows that Black boys who were in small classes in the early grades were slightly less likely to be convicted of a crime and are on average were sentenced to fewer days in a correctional facility. When they attended small classes in the early grades, they were also 40 percent less likely to father a child as a teenager.

Summarized by Leonie Haimson and Katie Donnelly, March 2017; for more information contact info@classsizematters.org or check out our website at www.classsizematters.org

Works Cited

- Achilles, Charles M. 2012. *Class-size Policy: The Star Experiment and Related Class-size Studies*. NCPEA Publications.
- Babcock, Philip and Julian R. Betts. 2009. "Reduced-class distinctions: Effort, ability, and the education production function." *Journal of Urban Economics* 65: 314-322.
- Bascia, Nina. 2010. *Reducing Class Size: What Do We Know?* Canadian Education Association. Toronto, ON.
- Dee, Thomas S. 2004. "Teachers, Race, and Student Achievement in a Randomized Experiment." *The Review of Economics and Statistics* 86(1): 195-210.
- Dee, Thomas S. and Martin R. West. 2011. "The Non-Cognitive Returns to Class Size." *Educational Evaluation and Policy Analysis* 33(1): 23-46.
- Dynarski, Susan, Joshua Hyman, and Diane Whitmore Schanzenbach. 2013. "Experimental Evidence on the Effect of Childhood Investments on Postsecondary Attainment and Degree Completion." *Journal of Policy Analysis and Management* 32(4).
- Finn, Jeremy D., Gina M. Pannozzo, and Charles M. Achilles. 2003. "The Why's of Small Class Size: Student Behavior in Small Classes." *Journal of Educational Psychology* 97(2): 214-223.
- Konstantopoulos, Spyros and Vicki Chung. 2009. "What are the Long-term Effects of Small Classes on the Achievement Gap? Evidence from the Lasting Benefits Study." *American Journal of Education* 116: 125-154.
- Krueger, Alan B. and Diane Whitmore. 2001. "Would Smaller Classes Help Close the Black-White Achievement Gap?" *Princeton University, Industrial Relations Section* 451. <http://arks.princeton.edu/ark:/88435/dsp01w66343627>.
- Mosteller, Frederick. 1995. "The Tennessee Study of Class Size in the Early School Grades." *The Future of Children* 5(2): 113-127.
- Shin, Yongyun. 2012. "Do Black Children Benefit More from Small Classes? Multivariate Instrumental Variable Estimators with Ignorable Missing Data." *Journal of Educational and Behavioral Statistics* 37(4): 543-574.
- Webb, Norman L. et al. "Participation in the SAGE Program and Performance on State Assessments at Grade 3 and Grade 4 for three Cohorts of Students — Grade 1 Students in 1996-97, 1997-98, and 1998-99." Wisconsin Center for Education Research, 2004.
- Zyngier, David. 2014. "Class size and academic results, with a focus on children from culturally, linguistically and economically disenfranchised communities." *Evidence Base* 1.