

Class Size Reduction

A Summary of:

“Class Size Reduction in California: The 1998-99 Evaluation Findings” (June 2000)
CSR Research Consortium. By G. W. Bohrnstedt and B. M. Stechter, eds.

“Class Size Reduction in California: Early Evaluation Findings, 1996-1998” (June 1999)
CSR Research Consortium. By G. W. Bohrnstedt and B. M. Stecher, eds.

Focus

- Early Childhood
- ✓ Primary School
- Middle School
- Secondary School
- Postsecondary
- Extended Learning

Overview

In the wake of Tennessee’s Project Star study of academic achievement in smaller, elementary school classes, California’s legislature enacted a major Class Size Reduction (CSR) initiative to create smaller classes for all public school students in grades K-3. Begun in 1996, CSR aimed at reducing average class size in these grades from 30 students to 20 or fewer students. During the 1996-97 school year, California gave \$650 per student to schools that had implemented smaller classes and the state allocated an additional \$400 million for new facilities. In the 1998-99 school year, the state provided \$800 per student in small classes. Average expenditures per student in these districts before CSR ranged from about \$4100 to \$4800.

POPULATION

By the third year of CSR (1998-99), nearly 1.8 million (92%) kindergarten through third grade students in California public schools were attending smaller classes (with an average of 20 or fewer students). California’s K-12 public school enrollment was 41% Latino, 39% white, 11% Asian/Pacific Islander, 9% African American and 1% Native American. One-third of these students are considered English Language Learners (ELL) and one-fourth come from families who receive Aid to Families with Dependent Children (AFDC). The state’s K-3 teacher workforce has grown by 38% since the start of the initiative (22,000 new K-3 teachers were hired in the first two years).

Key Findings

Evaluators reported only third grade achievement scores “because of the rapid implementation of the reform.” These scores revealed a small, but statistically significant, positive impact of CSR on the proportion of students scoring above the 50th percentile on the SAT-9 test. Between 1% and 4% more third graders scored above the national median in schools that had implemented CSR.

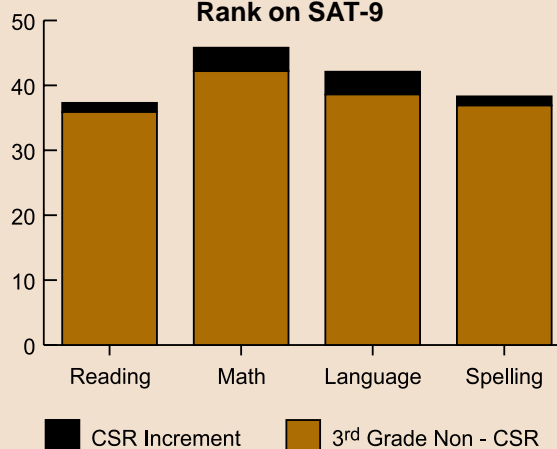
CSR had a similar, positive impact for all students regardless of race, family income or language group. However, evaluators noted that the effect of CSR was quite small when compared to the effect of race, ethnicity or income on student score differentials. The differences between white and minority student scores were much greater than the difference between CSR and non-CSR student scores. For instance, the effect size of race on

reading achievement when comparing African American and white students was 0.8, whereas the effect size of the CSR initiative on reading scores was merely 0.05.

In short, while the CSR initiative improved all student scores slightly, it did not reduce the minority achievement gap and had a much smaller effect on test scores than student backgrounds did.

Students in small mathematics classes had more time to work with measuring instruments (e.g. rulers and compasses), but there was no difference in time on task in language arts classes. On average, teachers in small classes reported spending more time each day working with students in small groups (23.4 minutes vs. 14.6 minutes) and individually (18.1 minutes vs. 11.4 minutes).

Percentage of Third Grade Students Scoring Above the 50th National Percentile Rank on SAT-9



Program Components

CSR reduced class sizes from 30 to 20 students for the majority of K-3 classrooms in California public schools, and it led school districts across the state to hire new teachers and create new classrooms:

- ◆ CSR led to the hiring of 38% more teachers in California elementary schools, but it also resulted in a decline in the average education, experience and credentials of K-3 teachers in the first two years of implementation. Before CSR, only 1% of California's K-3 teachers were not fully accredited, but after two years of CSR, this figure had risen to 12%. The rates were even higher in low-income school districts where more than 20% of teachers in 1997-98 were not fully accredited. The need for teachers created by CSR may have led English Learner and Special Education

teachers to switch to mainstream K-3 classes. In 1998-99 alone, 1000 EL and Special Education teachers across the state moved into mainstream K-3 classes.

- ◆ The demand for new classroom space created by CSR actually reduced the availability of other types of facilities in schools. Principals reported that new classrooms pre-empted 40% of their special education rooms, 27% of childcare space, 26% of music/arts rooms, 22% of computer rooms, 20% of library space, 13% of teacher prep space and 12% of physical education space.
- ◆ The state of California has spent approximately \$1.5 billion per year to reduce class size in primary schools throughout the state since the 1996-97 school year.

Contributing Factors

Unintended Consequences

The increased demand for new teachers due to CSR unintentionally led to a decline in average education level, experience and credentials of teachers, especially in high poverty and high minority districts. Similarly, the increased demand for new rooms, without an adequate amount of funds for additional construction, led to a loss of space for childcare, music, arts, special education, library and computer facilities.

Funding Disparities

Because the state funded schools on a per pupil basis only *after* implementation, schools that did not implement smaller classes quickly received less CSR money. This led to a disparity in funding for school districts serving higher proportions of minority and low-income students that lacked the facilities to implement CSR. In the 1997-98 school year, districts with fewer than 17% minority students received an average of \$100

more per K-3 student from CSR than districts where minority students made up two-thirds of the student population.

Yet in places where CSR was fully implemented, the evaluators pointed to two factors that may have contributed to the academic achievement benefits that accrued from the program.

Discipline

Teachers in smaller classes reported spending slightly less time each day dealing with discipline problems when compared to teachers in large classes.

Individualized Attention

The teachers in small classes reported spending more time giving “sustained attention” to students who needed special assistance with reading and more time “addressing individual students’ personal needs” than teachers with large classes.

Evaluator Comments

AYPF culled the above contributing factors from these studies for comparison with other summaries in the volume. However, the CSR Consortium researchers were quick to point out that these studies were not based on experimental data, and therefore, they were unable to draw clear causal inferences from the CSR research.

Above all, the researchers noted that it is too early to pass a final judgement on the effectiveness of the CSR initiative. “No one has ever implemented a class size reduction reform on this scale before, and it is difficult to establish criteria for success at this juncture. Additional time and experience are needed if we are to measure the cumulative effects of reduced classes,” they concluded.

STUDY METHODOLOGY

Evaluators from the American Institutes of Research (AIR), the University of California-Riverside's California Education Research Cooperative (CERC), RAND, Policy Analysis for California Education (PACE), WestEd and EdSource make up the CSR Research Consortium. AIR and RAND researchers are the co-principals leading the investigation.

Researchers used statewide school demographic data, achievement data from SAT-9 tests, interviews and surveys with parents, teachers and administrators to assess the impact of CSR. The researchers focused on 99 districts, surveying 99 superintendents (88% responded), 432 principals (78% responded), 1485 teachers (65% responded) and 2112 parents (52% responded). Because California also enacted a Reading Initiative, the Teaching Reading Program and the Mathematics Program Advisory at the same time as CSR, they found it difficult to control for the effects of these and other simultaneous reform initiatives in improved student scores.

EVALUATION & PROGRAM FUNDING

The CSR Research Consortium evaluation was funded by the California Department of Education, the US Department of Education, the Walter and Elise Haas Fund, the William

and Flora Hewlett Foundation, the Walter S. Johnson Foundation, the San Francisco Foundation and the Stuart Foundation. CSR was funded by the state of California.

GEOGRAPHIC AREAS

California

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