

THE IMPORTANCE OF CLASS SIZE

Summarized by Citizens for Needham Schools

Maintaining effective class size at all levels, K-12, and particularly during the elementary years, is a high priority for the Needham Public Schools. The following report summarizes a landmark study on class size and demonstrates the importance of smaller class sizes, in this case small being defined as around 15. The average class size in Needham elementary schools is 20.

The following report was copied from the website and excerpted below. Anywhere text appears in italics a summary sentences were added. To read the full report, including references for the STAR report, visit <http://edolicyreports.org>.

EXCERPTS FROM

What Research Says About Small Classes and Their Effects

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Summary: This research report is part of a series entitled IN PURSUIT OF BETTER SCHOOLS: WHAT RESEARCH SAYS that is supervised by Bruce J. Biddle and David C. Berliner and supported by The Rockefeller Foundation. The series provides timely and trustworthy summaries of research on major issues facing education today, with special emphasis on how America's poor and minority students are affected by educational policies.

Educators have long argued that students do better in smaller classes, but those who want to reduce public school funding have claimed that students do just as well in larger classes, and politicians often quarrel about whether we should spend additional tax dollars to reduce class sizes.

Responding to this debate, a large amount of research has also appeared on the impact of class size-- indeed, more studies may have surfaced for this topic than for any other question in education! *Small, short term studies and surveys were used to try to assess the benefit of smaller class size, but with inconclusive results. The STAR project is a controlled trial based on sound scientific principles.*

The Tennessee STAR Project (Student/Teacher Achievement Ratio) Project was arguably the largest, best-designed, field experiment that has ever appeared for education and has provoked a great deal of interest. *It began in the mid-1980s and involved 79 participating schools, 328 classrooms, and about 6,300 students. It was funded by the state of Tennessee and was initially a four-year study seeking to compare achievements for early-grade students who would be assigned randomly to one of three treatment conditions: standard classes (with one certificated teacher and more than 20 students); supplemented classes (with one teacher and a full-time, non-certificated teacher's aid); and small classes (with one teacher and about 15 students).* It began with a cohort of students who entered kindergarten in the Autumn of 1985, and the study design called for each of those students to attend the same type of class for four years. *After STAR was completed, STAR II followed the students through grade 12.*

To assess how well students were doing in the STAR study, towards the end of each year they were given the Stanford Achievement Test battery which generated separate achievement scores for reading, word-study skills, and mathematics. When results from these tests were examined, a number of findings appeared. First, it quickly became clear that results from standard classes and supplemented classes were quite similar. (Thus, few advantages appeared merely because untrained aids were added to classes of standard size.) However, results for small classes were far more dramatic suggesting that:

Long-term exposure to small classes (in the early grades) had generated substantially higher levels of achievement; and

The extra gains associated with long-term exposure to small classes (in the early grades) were greater the longer students were exposed to those classes.

It was found that average students who had attended small classes were months ahead of those from standard classes for each topic assessed at each grade level. When typical students who had experienced one or more years of small classes in the early grades reached grade eight, they were 4.1 months ahead in reading, 3.4 months ahead in mathematics, 4.3 months ahead in science, and 4.8 months ahead in social science.

Students who had attended small classes also enjoyed other advantages in the upper grades. They earned better grades on average, fewer of them had dropped out of the schools they were attending, and over the years fewer of them had been retained in grade. And once they entered high school, more small-class students opted to learn foreign languages, more took advanced-level courses, more were to be found in the top 25% of their classes, more graduated from high school, and more volunteered to take the ACT and SAT exams (the major tests now taken by high school seniors who aspire to enter colleges and universities). Moreover, initial published results have suggested that these upper-grade effects were also larger for students who are traditionally disadvantaged in education.¹

These results indicate additional STAR findings:

- The extra gains found for long-term attendance in small classes (in the early grades) continued to appear when students were returned to standard classes in the upper grades;
- Extra gains associated with long-term attendance in small classes (in the early grades) appeared not only for tests of measured achievement but also for other measures of success in education; and
(Initial results indicate that) the greater gains experienced by students from groups that are traditionally disadvantaged for education were retained when those students were returned to standard classes.

Some questions about the STAR project include: the population diversity did not match that of the rest of the country, students may have moved from one group to another throughout their school years, and participation in the project was voluntary. Questions such as these do not imply that we should reject findings from STAR, but they serve to remind us that STAR project was but a single study and that other evidence would also be needed to nail down class-size effects.

What Do We Know About Small Classes Today?

Major Conclusions

Given findings from these different types of research, what should we conclude today about the effects of small classes? Although the results of individual studies are always questionable, a host of different studies have now appeared on the effects of small classes, and those studies suggest a number of general conclusions:

- When it is planned thoughtfully and funded adequately, long-term exposure to small classes in the early grades generates substantial advantages for students in American schools, and those extra gains are greater the longer students are exposed to those classes.
- Extra gains from small classes in the early grades are larger when class size is reduced to less than 20 students;
- Extra gains from small classes in the early grades are found for various academic topics and for both traditional measures of student achievement and other indicators of student success;
- Extra gains from small classes in the early grades are retained when students are returned to standard-size classrooms, and these gains are still present in the upper grades, the middle school, and the high school years;

- Although extra gains from small classes in the early grades appear for all types of students (and seem to apply equally to boys and girls), they are greater for students who have traditionally been disadvantaged for education;
- (Initial results indicate that) the greater gains associated with small classes in the early grades for students who have traditionally been educationally disadvantaged are also carried forward into the upper grades and beyond; and
- Evidence for the possible advantages of small classes in the upper grades and high school is so far inconclusive.