



Information Briefing

IOWA SCHOOL BOARDS FOUNDATION

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Class Size (STAR Study)

Students in grades K-3 who were in small classes for three years outperform students in regular-size classes.

The Student Teacher Achievement Ratio (STAR) study was a true education experiment with more than 11,600 youngsters and 1,000 teachers assigned at random during STAR's four years (1985-1989). Some students were assigned to classes of approximately 15 youngsters and 1 teacher (15:1) designated as "small classes." Others were assigned to classes averaging about 25 youngsters and 1 teacher (25:1) designated as the "regular classes" or the control group. Regular classes (about 25 students) with a teacher and a full-time teacher aide were the third group in Project STAR.

Small Classes	Regular Classes	Regular Classes with an Aide
About 15 students 1 full-time teacher	About 25 students 1 full-time teacher	About 25 students 1 full-time teacher 1 full-time teacher aide

Students were assigned to one of the three groups when they first entered public school, usually in kindergarten (K), but sometimes in Grade 1. Teachers were assigned at random to classes each year. STAR originally included 79 schools in 46 of Tennessee's (then) 140 school districts. Each school with one or more small classes, also had at least one of both other types of classes (Regular and Regular with an aide).

Here are a few findings of STAR and STAR-related studies (Achilles, Nye, Zaharias, Fulton & Cain, 1996).

- Students who were in small classes in all three years (K-3) outperformed students in regular classes and regular classes with an aide on all measures. These effects lasted until at least grade 8.
- Students in small classes had relatively fewer discipline problems.
- Teachers had more "on-task" time in small classes and this stayed constant all year. In regular classes the on-task behavior declined over the year.
- Students in small classes were more engaged and participative in school than were students in regular classes and regular classes with an aide.
- There were relatively fewer retentions in small classes. Grade retention is also closely associated with dropout rate.

- The traditional gap in test scores between white and nonwhite students was not as wide in small classes as in regular classes and regular classes with an aide. This gap also stayed narrower over time.
- Early identification of special needs in small classes seemed to reduce later special education placements.
- Student scores in small classes were up in all tested areas, not just in targeted areas characteristic of special projects (reading and math, usually).
- It appears that instructional aides did not contribute much to pupil gains. However, in the STAR study there was virtually no special training of teachers or aides.
- The small classes seemed to be more preventative of learning deficits than remedial classes. If a student does not experience small classes when first entering the “system,” there may be little gain without tutorials (the ultimate class size of one-to-one) or other expensive “treatments.” This finding indicates that class-size initiatives should begin in the lowest grades and move ahead one grade at a time.

Class size is the number of students assigned to a particular teacher/classroom. *Pupil-teacher ratio* is a number computed by dividing the number of students at a site (e.g., a building) by the number of professionals serving that site (e.g. classroom teachers, P.E. teachers, Music teachers, Media specialists, Counselors, etc). **“Pupil-teacher ratio” and “class size” are not synonyms.**

Reference

Achilles, Charles M. et al. (1999) *Let's Put Kids First, Finally Getting Class Size Right*. Thousand Oaks, CA: Corwin Press, Inc.