



Smaller Is Better:

Class size and student achievement

by Ted Villaire

As one of the most talked about and thoroughly researched strategies for school reform, class-size reduction has gained an enthusiastic following among teachers, administrators, parents, researchers, and legislators. The reason for its popularity is evident: not only does class-size reduction strike many as common sense, but also its effectiveness is confirmed again and again by a growing body of research. While the studies pile up, some of the crucial questions are getting resolved, such as which students benefit the most from smaller classes? Are the benefits lasting? Why do students perform better in smaller classes?

To answer these questions, one of the first places to look is the Student/Teacher Achievement Ratio (STAR) project—the most extensive study ever carried out on class size. Conducted in Tennessee during a four-year period in the mid-1980s, this study provided compelling evidence that smaller classes make an important difference in grades K–3. The advantages students received were cumulative, too—the longer they were in smaller classes, the more benefits the students reaped. In all subjects that were tested, students who started in small classes in kindergarten were well ahead of students in standard classes by the time they reached the 3rd grade. According to tests that were administered, the 3rd-grade students in smaller classes on average were 7.1 months ahead academically of students who had been in larger classes. The study also found that students continued to perform better as they joined larger classes and progressed through the grade levels.

Although there's not total agreement on the ideal number of students in a class, most class-size reduction researchers recommend 15 to 17 students as the range that works best. This would represent a sizable drop from the national average (for the 1999–2000 school year) of 21 students in elementary school classes and 24 students in secondary school classes.

Who gets a boost from small classes and why?

According to the findings of the STAR project, as well as studies in other states, small classes make the most difference for students from low-income families. For this reason researchers are quick to point out that shrinking the size of classes can be a powerful tool for narrowing the achievement gap between white middle-class students and minority students from low-income households. Jeremy Finn, primary statistician for the STAR project and professor in the Graduate School of Education at the State University of New York, Buffalo, said students who are already doing well in school still may experience some academic improvement by attending small classes, but the benefits will be less substantial compared to students on the low end of the academic spectrum. This is why he and other researchers recommended that class-size reductions be first targeted at schools and districts with a high number of disadvantaged students. “The boost is needed by students who are at risk,” said Finn.

Compared to older students, it's believed that children in grades K-3 get more out of small classes because these are the years when students are just learning how to cope with the classroom and the educational process. Small classes allow younger students to pick up good classroom habits more quickly because they get more one-on-one interaction with the teacher. As Frederick Mosteller points out in *The Future of Children* (volume 5), grades K-3 are when students "learn to learn, and generally get oriented to being students." Accordingly, when students in the early grades develop positive classroom habits and self-confidence with the learning process, these skills will stay with them as they move through the grade levels. Older students, as the theory goes, have already developed their learning routines and ways of coping with the school atmosphere, and are unlikely to change these habits if class size is reduced.

Even so, some say there are still ways smaller classrooms can benefit older students. Increased student engagement, more teacher feedback, more hands-on learning, higher teacher morale, and other by-products of the small classroom would seem to be beneficial to both younger students and older students, writes Francine Deutsch in a recent issue of the *National Association of Secondary School Principals Bulletin*. "The processes that promote learning are the same at any educational level," explained Deutsch, a professor of psychology and education at Mount Holyoke College in South Hadley, Massachusetts. Instead of dismissing possible advantages of smaller classes in high school and middle school, she contends what's needed is research focusing on older students that is comparable to the class-size research for grades K-3.

Why do students perform better?

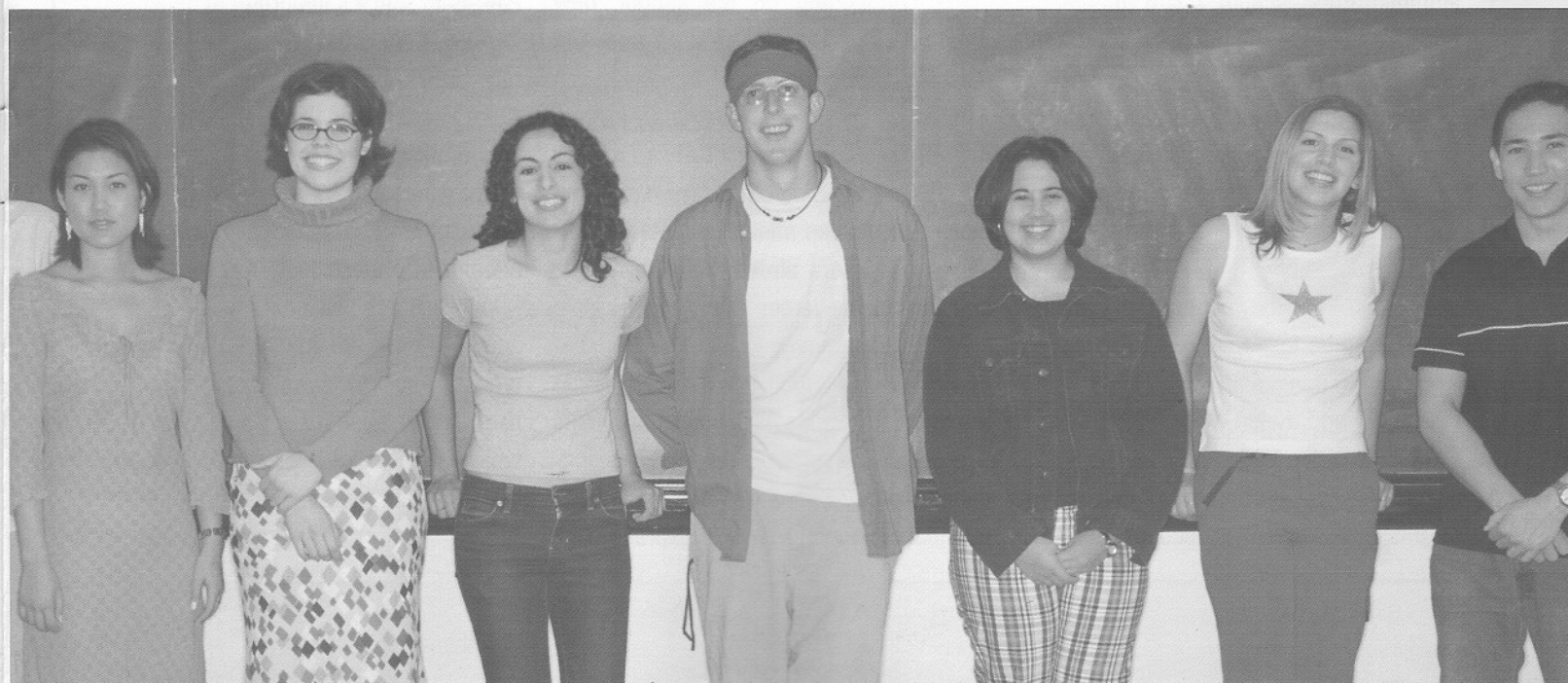
A smaller group of students enables more one-on-one contact with the teacher, more written and oral feedback for the student, and more opportunities for the students to ask questions and respond during class. The result is that students are more engaged—they feel more pressure to stay on their toes. Another advantage of smaller

classes is that teachers can tailor instruction to their students. "Children learn in different ways," said Helen Pate-Bain, a principal investigator for the STAR project. "Teachers need time to figure this out and determine what their [students'] individual needs are." Pate-Bain explained that teachers with smaller classes are more likely to use innovative teaching methods, such as hands-on learning, field trips, and learning centers that concentrate on different areas of study.

As teachers in smaller classes get better acquainted with students, students get better acquainted with each other. Former teacher Karen Schwengel can attest to the advantages of teaching in a small tightly knit classroom. Schwengel taught in small classrooms for 10 years in Burke County, North Carolina. Burke County School District—comprising about 15,000 students who are primarily African-American and largely from low-income families—switched to small classes in the early 1990s. "In small classes the students become a unit very quickly," said Schwengel. This greater sense of community cut down on discipline problems considerably and made the classroom feel like a safer place, she said. "Students will get their buddies to shape up," explained Schwengel. "You don't have to worry about behavior—you can just teach."

Being able to focus on teaching instead of classroom management had a powerful effect on teacher morale in her school, said Schwengel. She and her colleagues felt less exhausted and more effective in their roles, which led to a more supportive learning environment for the students. She also found that small classes enabled her to have more contact with her students' families. She had fewer families to keep in touch with and more time to do it. Overall, she said, class-size reduction produced a combination of benefits that enabled her school to move up in ranking from 43rd of the 117 districts in the state to 13th in 1998.

Compared to other types of school reform, Jeremy Finn said class-size reduction is the approach with the most research backing it up. The results are clear: in smaller classes, teachers are more



attentive to individual students, the classroom atmosphere is more cohesive, behavioral problems go down, and teacher morale goes up. As students advance, fewer drop out of school and fewer are held back a grade. More students take advanced-level classes in high school, more graduate from high school, and more take the ACT and SAT exams.

Given all these impressive results, Finn advises schools to be realistic when carving out smaller classes. He said it's not the silver bullet of education reform, and positive results take at least a couple of years to materialize. Furthermore, he said class-size reduction is most effective when it's combined with other types of school improvement efforts. "Class-size reduction is one piece of education reform," said Finn. "But it's an essential piece that produces academic and behavior benefits that carry into high school." **OC**

Making Small Classes a **BIG** Issue

In many school districts around the nation, parents are playing central roles in advocating for smaller classes. PTAs can be particularly effective in bringing this issue to the forefront because PTA leaders and members already know the importance of making their voices heard among school administrators, school board members, teachers, parents, community members, and legislators.

Parents who are interested in creating smaller classes in their school can start by educating themselves about the issue and then raising the awareness of others in the school community. (Easy-to-understand information on the benefits of smaller classes can be found on www.reduceclasssizenow.org, a website operated by Helen Pate-Bain and Helen Wise, both former presidents of the National Education Association.) To educate the school community on this issue, Pate-Bain recommends that

PTAs organize informational programs or panel discussions featuring experts, teachers, and advocates who are knowledgeable about the benefits of small classes.

Once people begin to understand the advantages of class-size reduction, one of the first questions asked is "What's the cost?" Depending on the school, new rooms may need to be secured and new teachers may need to be hired. Charles Achilles, a principal investigator for the STAR project and author of *Let's Put Kids First, Finally: Getting Class Size Right*, said many schools can minimize costs by re-locating teachers already working in the building. In the larger view, Achilles said smaller classes have a number of cost-saving effects, such as reduced grade retention, less costs for behavior problems such as vandalism and detention, less academic remediation, and increased teacher attendance. Another view is expressed by

Where Does PTA Stand on Federal Class-Size Reduction Policies?

Congress provided funds from 1999 to 2002 for a federal initiative to recruit, hire, and train qualified teachers specifically to reduce class sizes in grades K-3. In 2002, the No Child Left Behind Act (formerly known as the Elementary and Secondary Education Act) consolidated the class-size reduction proposal in a teacher-quality block grant. Schools can still use the funds to hire teachers, but there is no longer an emphasis on class-size reduction as a priority. Furthermore, the combined funding in the block grant is not sufficient to meet professional development needs or allow for recruitment, hiring, and training new teachers for the purpose of reducing class size. National PTA believes that improving teacher quality and reducing class size are key elements of effective school reform. PTA opposes the consolidation of the class-size reduction initiative with the professional development programs because one program will not adequately address these two separate and distinct needs. Schools will be forced to choose between hiring new teachers to reduce class size and providing critical improvement and expansion of professional development opportunities. As of now, more than 25 states have established some type of class-size reduction program. More funding earmarked specifically for class-size reduction will allow more states and individual districts and schools to create class-size reduction policies that are beneficial for students.

Alan Krueger, an economist from Princeton University, who determined that each dollar invested in smaller classes saves two dollars in the effects that students would eventually have on the labor market.

When providing information to community members about class-size reduction, Pate-Bain said it's important to understand the terms "class size" and "pupil-teacher ratio" (PTR) as they are used in research. *Class size* refers to the number of students who regularly appear in a teacher's classroom, whereas *PTR* is derived by dividing the number of students in a school by the number of professionals who work at the school (e.g., counselors, special teachers, administrators, librarians, etc.). Pate-Bain urges people to beware of studies that use PTR, because it's a poor gauge of the typical number of students in a school's classroom.