Education

Small Learning Communities

June 2002

Summary

In the last fifty years, the average size of high schools has changed from having fewer than 1,000 students to now having over 1,500 students. Research overwhelmingly supports the notion that student in kindergarten through high school are more successful when they attend small schools. In fact, smaller learning environments positively affect grades, test scores, attendance rates, graduation rates, drug and alcohol use, and school safety. Moreover, smaller, more personalized learning structures seem to provide the setting for other high school reforms, perhaps because change is easier to implement in a smaller setting. In *Schools that Work: America's Most Innovative Public Education Programs,* the author suggests that making schools smaller is the first step toward enhancing school conditions and improving student outcomes (1992). Analysis of various high school reform efforts also underscores "scaling down" as a common contributor for success. Smaller schools can more readily provide students with mentors, tutors and advisors; make learning more meaningful by linking it to life-experiences and community; and provide

adequate time and support for mastery of knowledge and skills.

Variations on Small Learning Communities

Schools-within-schools are small, autonomous programs housed within larger school buildings. Schools-within-schools are generally responsible to the district rather than to the host school's principal, and are formally authorized by the superintendent and/or board of education. Schools-within-schools have their own culture, program, personnel, students, budget and school space. Both students and teachers choose to affiliate with schools-within-schools.

Career Academies are "schools-within-schools" organized around career themes. They integrate academic and vocational instruction, provide work-based learning opportunities for students and prepare students for postsecondary education and employment, with the personalized learning environment of a small community. Teachers and students integrate academic and occupation-related classes as a way to enhance real-world relevance and maintain high academic standards. Local employer partnerships provide program planning guidance, mentors and work internships. Career academies place an emphasis on building relationships between students and adults-teachers as well as work-site supervisors and other employer representatives. The school-within-a school structure supports constructive relationships between and among students and teachers by grouping students together each year to take core courses with the same group of teachers, thus increasing the support students receive.

House plans divide students in a large school into groups of several hundred, including students from 9^{th} or 10^{th} through 12^{th} grade. Students take some or all courses with their house members and from their house teachers. House arrangements may be yearlong or multi-year arrangements. House plans personalize the high school experience but usually have limited effect on curriculum or instruction. Each house usually has its own discipline plan, social activities and student government.

Magnet Programs use a specialty core focus such as math, science, creative arts, or a career theme or cluster, to attract students from the entire school district. Some magnet programs have competitive admission requirements while others are open to any interested student. Students in a magnet program stay together for their core classes and may take other courses with non-magnet students.

Small schools are the most independent model. They are created through restructuring the students, staff and space of an existing school. Even when they are housed within a larger school building, small schools are more like small freestanding schools than like "programs" within comprehensive schools.

What the Research Shows

Smaller schools support academic achievement. Student achievement in small schools is at least equal, and possibly higher, in small schools relative to larger schools. The findings on academic achievement are equally divided; approximately half the studies show that students do no worse in small schools than in larger one; while the other half finds students in small schools do better on measures such as school grades, test scores, honor roll membership, subject-area achievement, and higher-order thinking skills assessments (Cotton, 1996).

Here are a few examples from *The Class-Size Reduction Program, Boosting Student Achievement in Schools Across the Nation: A First-Year Report*, suggesting that small schools breed academic achievement:

- The 2000 RAND study entitled, *Improving Student Achievement: What State NAEP Test Scores Tell Us*, examined 1990, 1992, 1994 and 1996 National Assessment of Educational Progress (NAEP) data from representative samples of 2,500 students in 44 states to look at the effect of state characteristics, including class size, on student achievement. The study showed that, controlling for students' family backgrounds, states with the lowest pupil-teacher ratios in the early grades had the highest NAEP scores.
- The American Institutes for Research analyzed the performance of a national sample of schools on their respective state assessments. The study concluded that reduced class size is significantly related to higher academic performance, particularly in reading. The positive impact of smaller classes on reading achievement also was found in middle and high schools. This study showed that students benefited not only from small class sizes but gained additional benefit from attending high schools with lower enrollment overall.

Smaller schools promote academic equity. Smaller schools help close the achievement gap between students from higher income, mostly white and Asian-American families and students from lower-income, mostly African American and Hispanic-American families (Klonsky, 1998). For ethnic minority students and students of low socioeconomic status, the effects of small schools are especially positive, helping reduce the damaging effects of poverty on student achievement; conversely, large schools have an especially negative impact on those students relative to all students (Cotton, 1996; Howley and Bickel, 2000). In fact, the correlation between poverty and low achievement is as much as ten times stronger in larger schools than in small ones (Howley and Bickel, 2000).

Student attitudes and behavior are more positive in smaller schools, with minority and low socioeconomic status students most profoundly affected. Multiple studies have associated small schools with students' positive attitudes toward school, as well as the lower incidence of negative social behaviors such as truancy, classroom disruption, vandalism, aggressive behavior, theft, substance abuse and gang

participation (Cotton, 1996). The independent Educational Priorities Panel recently completed a study of the first year of the class-size reduction program in New York City. Among improvements reported as a result of smaller classes were:

- Noticeable declines in the number of disciplinary referrals;
- Improved teacher morale;
- A focus on prevention rather than remediation; and
- Higher levels in classroom participation by students (*The Class-Size Reduction Program, Boosting Student Achievement in Schools Across the Nation: A First-Year Report)*.

Extracurricular participation rates are higher in smaller schools. Of all the research on small school impacts, the most well documented finding is that students in small schools participate in extracurricular activities to a greater extent and in a wider variety (Cotton, 1996). This is especially significant since extracurricular participation is associated with other desirable outcomes, such as positive attitudes and social behavior. Students in small schools generally enjoy participating in extracurricular activities more than students in larger schools.

Attendance is higher and dropout rates lower in smaller schools. Smaller schools have higher attendance rates than larger schools, and attendance improves for individual students who transfer from large to smaller schools. Small schools have a relatively greater impact on attendance of minority and low socioeconomic status students and have lower dropout rates and higher graduation rates than large schools; states with the largest school and school districts have the highest dropout rates (Cotton, 1996).

Students feel better about themselves and others in smaller schools. Students' perceptions of themselves academically and generally are higher in small schools, and they feel more connected to teachers and to each other. Interpersonal relations are better both among students and between students and teachers (Cotton, 2000).

Smaller schools prepare students for college as well or better than larger schools. Students from small high schools do as well or better than students from larger schools on college-related variables such as entrance examination scores, acceptance rates, attendance, grade point average and completion (Cotton, 2000).

Larger schools reach a point of diminishing returns on cost-effectiveness. Larger schools tend to have large, costly bureaucracies to manage and control their large numbers of students (Public Education Association, 1992) whereas smaller schools often save money by doing away with the complex large-school

infrastructure. When measured against cost per student graduated, small schools are considerably less expensive to operate than either large or medium-sized schools because the dropout rates of small schools are so much lower (Raywid, 1999; Cotton, 2000).

State and Local Practices

At present, there are numerous initiatives in progress, both at the state and national level to reduce class size. Foundations and private organizations are also investing in smaller learning communities.

The Smaller Learning Communities Initiative is a federal Department of Education effort that grants money to local education agencies to plan, develop and implement smaller learning communities (goal of not more than 600 students) in large high schools (1,000 or more students). As of 2001, the program saw its budget nearly triple to $145 million. Funds can be used to create schools-within-schools, career academies, restructure the day, institute personal adult advocates, develop teacher advisory systems and other innovations designed, create a more personalized high school experience for students and improve student achievement and performance.

Foundation support. The commitment of more than $200 million to start new small schools nationwide or restructure large high schools into smaller schools-within-schools by the Bill & Melinda Gates Foundation. The teaming of the Gates Foundation with the Carnegie Corporation and the New York City-based Open Society Institute to form a new consortium in December of 2000. Together, they pledged $30 million to create more small schools.

State Initiatives (Reducing Class Size, What Do We Know? 1999): States have taken legislative and administrative action to reduce class size.

- In 1984, Texas passed House Bill 72 requiring class size to be limited to 22 students in kindergarten through 2nd grade in 1985-1986 and for 3rd and 4th grade in 1988-1989**.**
- Also in 1984, Indiana began its *Prime Time* project that allocated money to support the reduction of class size to 18 in 1st, 2nd, and then kindergarten and 3rd grade classrooms.
- Nevada began a class reduction program in 1990-1991, beginning with a target of a 15 to 1 student/teacher ratio for kindergarten through 1st grade, then applying that ratio in 2nd grade and 3rd grade, to be followed by efforts to reduce the ratio to 22 to 1 for 4th-6th grade, and then 25 to 1 for 7th-12th grade.
- In 1990, Tennessee initiated *Project Challenge* to implement smaller class sizes in 16 of the state's poorest school districts. The state phased in smaller classes at the kindergarten through 3rd grade level in districts with the lowest per capita income and highest proportion

of students in the subsidized school lunch program. The *Project Challenge* districts moved from near the bottom of school district performance in Tennessee to near the middle in both reading and mathematics for second graders.

- Beginning in 1990, Burke County, North Carolina pilot-tested and then phased in a class size reduction project. In 1995-1996 1,193 1st graders and 1,125 2nd graders participated in the initiative. The program's goal has been to reduce class size to 15 students in 1st-3rd grade classes. The Burke County project also includes professional development activities. Students in these classes outperformed the comparison group on both reading and math achievement tests.
- In 1995, Virginia began an effort to reduce class size in k-3rd grade classes for at-risk students, using a strategy in which local systems that devote funds to the voluntary program may receive matching funds from the state. SAGE phased in class size reduction in k-3rd grade in school districts serving students from low-income families. In 1997-98 there were 30 schools from 21 districts participating in the *SAGE* program and 14 schools in 7 districts providing comparison student background and achievement data for an evaluation study of the program that is ongoing. Current results indicate that the achievement gap lessened between white and African-American students in *SAGE* smaller classes in contrast to those in larger classes and that SAGE first graders consistently outperformed comparison students in math, reading and language arts.
- Wisconsin began a class size reduction program called the *Student Achievement Guarantee in Education (SAGE) Program* in 1996-97.
- In the 1996-1997 school years, California began its *Class Size Reduction Program*, through which it is giving money to school districts for the purpose of reducing the student/teacher ratio to 20 to 1 in k-3rd grade.
- Other states reported to be involved in or considering some sort of class size reduction initiative include Arizona, Connecticut, Florida, Georgia, Hawaii, Illinois, Iowa, Kansas, Kentucky, Louisiana, Massachusetts, Michigan, Minnesota, Nebraska, New Hampshire, New York, Oklahoma and Utah. State programs encouraging smaller learning communities are not limited to this list.

Business supported initiatives.

Career Academies

The concept of career clusters and small learning communities are joined together in the career academy approach that operates within high schools.

- The National Academy Foundation (NAF) describes its academies as a place where "students take classes around a career theme - Finance, Travel & Tourism or Information Technology - with the same team of teachers for two to four years. Partnerships with employers, the community, and local colleges bring resources from outside the high school to improve student motivation and achievement." NAF focuses energy on curriculum and staff development, local advisory boards that link with businesses, paid student internships and quality assurance. NAF program sites operate in 39 states.

  The California legislature passed a law in 2001 (enter 709 for chapter number and 2001 for the year to find the statute at the link) that authorized the development of 100 new information technology NAF sites in their state. California has supported and funded the development of career academies for more than a decade. (Enter 574 for the chapter number and 1993 for the year at the link's prompt.)
- Henry Ford Academy's core mission is to develop graduates who are ready for the future-whether that means college, skilled-trade apprenticeships, or jobs in the global, technological workplace. Founded in 1997, by Ford Motor Company, the academy has fewer than 500 students, where enrollment is by lottery. According to the Academy the curriculum includes: mathematics, science, communication skills, and humanities; 'hands-on' learning experiences for students and teachers; worldwide linkages for students and teachers with information, mentors, scholars and peers; new ways of measuring student progress as well as traditional testing programs; and community involvement. The school is located on the grounds of Henry Ford Museum and Greenfield Village. Museum exhibits help students understand how innovations have shaped manufacturing and how principles of design can be used to communicate ideas to others. Industry partnerships provide job shadowing and internship experiences to further expand students' knowledge. Representatives from Learning Designs, Inc., Michigan State University, and Wayne County RESA, and others support curriculum development, which is academic/college-prep, with context-based business projects. The business partners are involved in a wide range of activities-playing a guiding role in defining the mission of the school, encouraging employees to act as mentors to students, and providing students with internship and job-shadowing opportunities in the workplace. They also give students access to the latest communications technologies and computers. The instructional day is divided into three two-hour blocks of time. The academic curriculum, which is aligned with state standards, is presented through the lens of manufacturing. In the morning, students study manufacturing arts (social studies and English). Mid-day activities include physical education, German and lunch. They also receive academic coaching during a 30-minute period in which Ford Motor Company employees visit the school to provide remediation and/or enrichment for individual students. In the afternoon, students focus on manufacturing sciences (math and science). Throughout the instructional day,

teachers aim to link artifacts from the Henry Ford Museum to daily lessons.

Issues of Sustainability

Although smaller learning communities may lead to benefits for students, implementing and sustaining smaller school units is not always easy. For one, recruiting more teachers at a time when teacher shortages loom is a daunting task. Furthermore, research points to the need for professional development for teachers accustomed to teaching larger classes so that they may take full advantage of smaller classes (Reducing Class Size, What Do We Know? March 1999). (For more information about teach quality issues click here.)

Another study found that the lack of flexible procedures at the district and sometimes the state level stunted the successful implementation of smaller learning communities within large high schools. In fact, insufficient faithfulness to the small school concept (either in design or implementation), insufficient autonomy and separateness of the sub-unit or sub-school; and failure of cultural change to accompany structural change resulted in these schools failing to yield positive outcomes (Raywid, 1996).

Bibliography

Allen, Lili, *Wall to Wall, Implementing Small Learning Communities in Five Boston High Schools*. Northeast and Islands Regional Educational Laboratory and Jobs for the Future,

American Federation of Teachers. *Improving Low-Performing High Schools: Ideas & Promising Programs for High Schools*. July 1999.

Cotton, Kathleen. *School size school climate and student performance*. Northwest Regional

Educational Laboratory, School Improvement Research Series, Close-Up #20. 1996.

Cotton, Kathleen. *Summary of findings from the research on school size*. A fact sheet prepared for the American Youth Policy Forum. 2000.

Gewertz, Catherine. "The Breakup: Suburbs try smaller high schools". *Education Week*. May 2, 2001.

Gregory, Tom. Breaking Up Large High Schools: Five Common (and Understandable) Errors of Execution ERIC Clearinghouse on Rural Education and Small Schools EDO-RC-01-6. December 2001.

Grissmer, D., Flanagan, A., Kawata, J. and Williamson, S. *Improving Student Achievement: What State NAEP Test Scores Tell Us*. Santa Monica, CA: RAND, 2000.

Haimson, L. (April 2000). *Smaller is Better: First-hand reports of early grade class size reduction in New York City Public Schools*. New York, NY: Educational Priorities Panel.

Howley, Craig and Bickel, Robert. *When it comes to schooling...small works: School size, poverty and student achievement*. Rural School and Community Trust, Policy Program. February 2000. (variation on ERIC available)

Klonsky, Michael. *Small schools: the numbers tell a story*. University of Illinois at Chicago, Small Schools Workshop. 1998.

Making the Case for Smaller Learning Communities. US Department of Education, Unpublished.

Raywid, Mary Anne. *Taking stock: The movement to create mini-schools, schools-within-schools, and separate small schools*. Hofstra University. April 1996.

Raywid, Mary Anne. Current Literature on Small Schools. ERIC Clearinghouse on Rural Education and Small Schools, EDO-RC-98-8. January 1999.

Reducing Class Size, What Do We Know? U.S. Department of Education, March 1999.

Smaller Learning Communities Fact Sheet. U.S. Department of Education, 2000.

The Class-Size Reduction Program, Boosting Student Achievement in Schools Across the Nation: A First-Year Report. United States Department of Education, September 2000.

Wood, George. Schools that work: America's most innovative public education programs. New York: Penguin Books, 1992.

This issue summary was a collaborative effort between NCSL's Learn, Work and Earn Project and the Institute for Educational Leadership's Center for Workforce Development. It was made possible by a grant from the U.S. Departments of Education and Labor.

Denver Office: Tel: 303-364-7700 | Fax: 303-364-7800 | 7700 East First Place | Denver, CO 80230 | Map

Washington Office: Tel: 202-624-5400 | Fax: 202-737-1069 | 444 North Capitol Street, N.W., Suite 515 | Washington, D.C. 20001