

Synthesis of Research Small Schools: A Reform That Works

Numerous studies confirm that small schools lead to improved student achievement and enable educators to realize many of the other goals of school reform.

The urgent need to improve urban schools continues to inspire reform proposals. For example, the 1995 teachers' assessment of Chicago high schools (Sebring et al.) describes "low student attendance, poor engagement in learning, and weak academic environment." The subsequent report from the student perspective (Sebring et al. 1996) describes schools "organized for failure." Such reports lead to an outpouring of suggested solutions. The more popular proposals generate a full chorus of response, including those from skeptics and cynics as well as advocates.

The skeptics and cynics are being heard now on the solution that focuses on small schools. "What do we really know about small schools?" they ask, and "What is there to recommend them?" and "Can we explain their track record?" The questions are healthy and positive in their insistence on evidence. And the answers add up, respectively, to "A great deal," "A lot," and "Yes."

What Do We Really Know About Small Schools?

Until recently, much of the evidence cited in support of small schools consisted of case studies of particular instances—the sort of evidence that skeptics could dismiss as unreliable or atypical. Other studies, however, involving thousands of students and hundreds of schools now make such dismissals impossible for any informed observer. These large-scale studies include one that examined the records of 20,000 students in Philadelphia's public high schools, comparing student performance in large and small schools (McMullan et al. 1994); another examining the scores of 13,000 youngsters in Alaska (Huang and Howley 1993); others that investigated the schools of entire states and documenting the effects of school size (Fowler 1989, Heck and Mayor 1993); and a growing number of studies based on the experiences of nearly 12,000 students in 800 high schools nationwide (Lee and Smith 1994, Lee et al. 1995).

The findings of these studies reveal an unusual consistency. The Philadelphia study concluded that high school students in small schools were more likely than those in large schools to pass major subjects and progress toward graduation. The Alaska study found that *disadvantaged* students in small schools significantly outperformed those in large schools on standardized tests of basic skills. A New Jersey study showed that size had more influence on student achievement than any other factor controllable by educators, and a study in an unidentified Western state showed that the larger the school, the lower the student scores in reading and mathematics. Finally, the national studies confirm conclusively that youngsters learn more in math, reading, history, and science in



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small schools than in large ones—especially disadvantaged students (Lee and Smith 1994). Moreover, findings about the impact of size appear to hold at all grade levels, with a tendency for school size and organization to play a larger role as students get older (Howley 1989, Mosteller 1995, Lee et al. 1995).

The confidence with which the advantages of small schools can be asserted grows steadily stronger with the completion of a substantial number of compilations, or studies of studies, on the importance of size (Cotton 1996, Fowler 1995, Howley 1994, Walberg and Walberg 1994). A recent compilation examining 103 studies observed that many of them find student performance in small schools superior to that in large ones, while *none* finds the reverse to be true (Cotton 1996).

Thus it cannot be said that we lack sufficient reliable evidence of the positive effects of small school size on student success to act upon it. In fact, there is enough evidence now of such positive effects—and of the devastating effects of large size on substantial numbers of youngsters—that it seems morally questionable not to act on it. Size could eventually prove, as the title chosen by one group of analysts suggests, “the ultimate educational issue” (Berlin and Cienkus 1989).

What Is There to Recommend Them?

In addition to the effects on student achievement, there is much else to recommend small schools. First and foremost, a fairly strong record documents which students are most penalized by bigness and which gain most from reducing school size. As long ago as the 1970s researchers found that minority and lower-achieving students seemed to do better in small schools

(Summers and Wolfe 1976). As common sense would suggest, the generally advantaged students—those with high ability levels and affluent, educated, and supportive families—are less penalized by large schools than are their less fortunate peers of lower ability or from poorly educated, low-income families. Some researchers find that high-ability students from well-to-do homes may actually profit more from large schools than from small schools (Howley 1995). But if so, it is definitely *not* a situation in which what’s best for the strongest

(Toby 1993/1994) and that students are likely to be generally better behaved (Gold and Mann 1984, Gottfredson 1985). Youngsters are also less likely to drop out of small schools (Pittman and Haughwout 1987).

A different, but no less vital, sort of indicator of effectiveness is the kind of impact a school makes on an individual’s life beyond its walls—and how long such influence lasts. This, of course, is really education’s ultimate goal: to affect the attitudes and dispositions and capabilities of youngsters—in

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students is best for all. Size has negative effects in low socioeconomic settings that it does not have in high socioeconomic settings.

In small schools, otherwise “marginal” or at-risk students are much more likely to become involved, to make an effort, and to achieve (Oxley and McCabe 1990, Wehlage et al. 1987). As a result, such schools manage to reduce the well-established negative effects of race and poverty on school success. In doing so, they narrow the gap separating the school achievement levels of advantaged youngsters from those of the disadvantaged (Lee and Smith 1994, Lee and Smith 1995, Lee et al. 1995). Whereas in large high schools success tends to be stratified along socioeconomic lines, this does not hold for small schools.

Beyond this, major studies have documented that small schools are far more likely to be violence-free than large ones

short, the kind of human beings and citizens they become.

Smallness permits the sort of human connections that result in strong student-school bonds, enabling the school to affect youngsters’ personal habits, such as smoking, alcohol use, and drug use; their aspirations, such as life plans; and their post-high school behavior, such as college attendance (Downey 1978, Walberg and Walberg 1994, Marian and McIntire 1992). The kind of influence a school can exert is seen in the aspirations of students attending Central Park East Secondary School in East Harlem, perhaps the nation’s most famous small school: 80 percent finish high school; more than 90 percent of these then go on to college (Bensman 1994, 1995).

Finally, small schools have produced new types and models of effective secondary education. The Metropolitan Learning Center, a high school in Port-

land, Oregon, for instance, is almost 30 years old. It is open to students throughout the city and imposes no special entrance requirements. It attracts students interested in the arts. Several years ago it was reporting a dropout rate of 2 percent, while that of the district stood at 30 percent. The Center also had the highest per capita scholarship rate in the city (Harris 1987).

To cite another case, Nova is a small, innovative high school in Seattle. Its 135 students enter with academic records ranging from strong to very weak, and they come from homes ranging from affluent to poor. But Nova sends 85 percent of its graduates to college, and its students' average SAT scores regularly stand at the very top among Seattle's high schools. In the spring of 1997, a new city-wide writing assessment program declared 62 percent of Nova's 11th graders proficient, as compared with only 28 percent of the district's students (*Seattle Weekly* 1997).

California's Career Academies are an example of a successful new genre of schools-within-schools. They focus on introducing students to an entire industry—with the help of resources in the community—as the youngsters pursue a college prep program. The Health and Media Academies in Oakland have become nationally known for their success in marshaling business collaboration in keeping minority, largely poor youngsters in school (Guthrie and Guthrie 1993, Stern et al. 1992). Figures from two of Oakland's academies show that

in this community where dropping out of high school is the norm, most academy students successfully complete high school and then go on to college.

Small schools are also producing new models for addressing what has been a difficult and growing problem for many schools: how to deal with students who do not speak English. La Escuela Fratney, a small elementary school in Milwaukee, offers a model two-way bilingual program (Peterson 1993), and New York's International High School has now inspired two or three other new small high schools in New York alone, which together represent a new model for secondary education. When they enter, International's students have been in the United States fewer than

four years, and they barely speak English. More than two-thirds come from families with below-poverty incomes. Yet 96 percent of them graduate from International, and of these, an amazing 97 percent go on to college (Bush 1993).

Can We Explain This Track Record?

The success of small schools is variously attributed to a number of things: to the more human scale of such schools, to their more satisfied and willing students, to more committed teachers, to the opportunity for choice such schools typically afford, to the fact that most of them have a focus or coherent mission, to their relative autonomy and distance from the bureaucracy, to heightened responsiveness to their constituents, and to a better school-student and school-family match. But irrespective of which of these features is most important, substantial agreement is emerging as to the centrality of three ingredients in producing them: (1) small size (Walberg and Walberg 1994, Lee and Smith 1994, Lee et al. 1995), (2) an organizational structure departing significantly from the conventional (Bryk and Thum 1989, Lee et al. 1995), and (3) a setting that operates more like a community than a bureaucracy (Bryk and Driscoll 1988, Bryk et al. 1993, Bryk and Thum 1989, Lee and Smith 1994, Wehlage et al. 1987).

One reason that size appears so pivotal is that smallness *permits and invites* a number of practices and arrangements that have independently been

Highlights of the Research on Small Schools

- Students at all grade levels learn more in small schools than in large schools, although school size and organization tend to play a greater role as students get older (Howley 1989, Mosteller 1995, Lee et al. 1995).
- At-risk students are much more likely to succeed in small schools than in large schools (Oxley and McCabe 1990, Wehlage et al. 1987).
- Small schools are far more likely to be violence-free than large schools (Toby 1993/1994).
- The bonds created in small schools enable such schools to influence students' post-high school behavior, including college attendance (Downey 1978; Walberg and Walberg 1994; Marian and McIntire 1992; Bensman 1994, 1995; *Seattle Weekly* 1997; Bush 1993).
- The success of small schools is attributable to various features, all of which seem to emerge from three key factors: (1) small size (Walberg and Walberg 1994, Lee and Smith 1994, Lee et al. 1995), (2) an unconventional organizational structure (Bryk and Thum 1989, Lee et al. 1995), and (3) a setting that operates more like a community than a bureaucracy (Bryk and Driscoll 1988, Bryk et al. 1993, Bryk and Thum 1989, Lee and Smith 1994, Wehlage et al. 1987).



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students, and the way students interact with each other. Size is the key feature in permitting or denying the opportunity to make the school a community in which each individual is known and treated as such, or determining whether a depersonalized, rule-governed environment is necessary to keeping order.

found desirable. In other words, small schools comfortably accommodate much from the lessons we've learned about school effectiveness.

First, we've learned that school organization matters (Lee et al. 1993, Witte and Walsh 1990). Organization may be the major reason so many youngsters are more successful in the more personalized, nondepartmentalized environment of the elementary school than in the high school. The way schools are put together structurally clearly affects student achievement (Lee et al. 1995), and it affects school attendance patterns (Bryk and Thum 1989) and dropout rates (Bryk and Thum 1989, Wehlage et al. 1987). It also makes a bigger difference to disadvantaged students than to those who are not (Bryk and Thum 1989, Lee et al. 1995, Lee and Smith 1994, Bryk et al. 1993). How a school is

structured obviously depends on its size: the larger it is, the greater the need for organizing people into subunits and specializations and the more fragmented the experience of teachers and students becomes.

Second, whether a school operates more as a bureaucracy or a community matters a great deal. It determines whether staff members see their job primarily as delivering services or whether they see it as succeeding in educating. It also determines whether teachers are grouped in departments and students in stratified (tracked) classes, or whether the two are grouped together in smaller units—small schools or schools-within-schools. Whether the model is bureaucracy or community has major consequences for the kinds of relationships teachers share with one another, the way they connect with

Third, creating the sort of school organization that will stimulate and support success will require a lot of changes in most schools. And we've a long history to show that school change is extraordinarily difficult. Making even a small change effective is often a matter of restructuring, not just of improvement or reform. Further, restructurers have concluded that starting a new school may be far easier than refashioning an existing one. Hence, some see the establishment of small schools, or schools-within-schools, as our best response to the challenge of what to do with failing schools—or even with schools needing more modest improvement.

Fourth, there appears to be almost a natural sequence—a logical progression—taking the small schools that are adequately supported from one item on

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