

PART ONE
The Challenge

As the twenty-first century begins, America faces a daunting challenge: The “baby boom echo” is ready for school. The children of World War Two’s baby boomers, millions of youngsters are crowding into schools across the nation. Thousands of new schools will be needed to accommodate them. This demand for educational facilities is unprecedented in American history.

Demographic evidence of the coming demand has been mounting for some time. From 1977 to 1990, the number of children born to baby boomers increased by 25 percent, reaching a peak of 4.1 million births in 1990. In the following decade, public high school enrollment increased 19 percent and elementary school enrollment increased 12 percent. By the year 2000, public and private school enrollment, kindergarten through grade 12, had reached a record 53.2 million students. After stabilizing somewhat between 2000 and 2010, enrollment increases are expected to resume. Between 2010 and 2020, the number of children aged five to seventeen will increase by 6 percent. By 2030, total school enrollment is projected to be 60 million (U.S. Department of Education, Office of Public Affairs 2000).

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Crowding, Disrepair, and Recession

Many existing school buildings are wearing out. Today, the average American school is almost 50 years old; overuse and deferred maintenance have taken their toll (National Center for Education Statistics 1999).

Why have overuse and deferred maintenance occurred? The recession of the early 1990s—which slowed capital expenditures and impeded maintenance programs—caught many school districts off guard. Although explosive enrollment rates continued during those years, the recessionary economy forced school officials to delay adequate responses to enrollment pressures. By 1998, the condition of America's schools was so critical that the American Society of Civil Engineers felt

compelled to assign school facilities a grade of “F” in its annual infrastructure report. Five years later, in 2003, ASCE had only upgraded conditions to “D minus.”

The backlogged cost of replacing, repairing, and updating America's schools is now enormous. Some 3.5 million students attend schools that need extensive repair or replacement; an estimated \$127 billion is needed to bring America's existing schools into good overall condition (National Center for Educational Statistics 2000).

Moreover, this estimated backlog covers only the maintenance and repairs necessary to meet the functional requirements of existing instructional programs. It does not include the funds necessary for accommodating new technologies and teaching methods. According to a survey conducted by the National Education Association in 2000, the

bill for renovating old schools and building new ones exceeds \$250 billion (National Education Association 2000).

Challenge Affords Opportunity

Challenging as the situation appears, there is a brighter side. The pressing need to renovate, replace, and create so many new educational facilities nationwide presents a compelling opportunity to evaluate existing research about what constitutes an optimum school learning environment and to identify those factors that can enhance student achievement (Schneider 2002).

Such research can be illuminating. It suggests, for instance, that student

Some 3.5 million students attend schools that need extensive repair or replacement. An estimated \$127 billion is needed to bring America's existing schools into good overall condition. Photo: Photodisc.



achievement is directly related to smaller, more personalized environments (Cotton 1996, Lawrence et al. 2002). Research also suggests that a wide variety of classroom configurations is required to facilitate best practices in education. Such practices include collaborative problem solving, technology integration, and personalization (Stevenson 2002). Educational research calls for removing some of the traditional barriers between school and nonschool life, and between school and community. Students achieve better in environments where lifelong learning is a community value, where everyone is a learner, and where school is central to the life and learning of the community, accessible beyond traditional school hours. In short, the demand has never been greater for schools that address a broad range of educational needs.

In response to this demand, innovative and practical learning environments—developed through educator-architect-planner collaborations—are being implemented around the country (Kennedy 2001). Some are variations on the traditional school site, designed to create more effective spaces for contemporary teaching and learning. Others expand the functions of the school to encompass community needs. Still others expand the whole notion of school by creating learning environments in such nontraditional settings as museums, shopping malls, and zoos, thus optimizing opportunities for learning while minimizing the investment of human, financial, and environmental resources.

Schools as Centers of Community

All of these creative solutions share one common theme: **Schools as centers of community.**

Schools achieve this status in either of two ways: They more effectively integrate with the community, or they extend the learning environment to use the community's full range of resources. Indeed, the most successfully integrated schools are able to serve residents in numerous ways.

For instance, later or longer hours may permit senior citizens to use the gym and health facilities during nonschool hours, or immigrants to take evening English classes after work. With millions of baby boomers nearing retirement age, the case is growing for creating schools that can be used by people of all ages. As Joe Perkins, past president of the AARP, has said, "Schools should be a point of unity, not division, between and among generations" (Sullivan 2000).

If the school of the future needs to be designed as a learning center for the entire community, its development must begin with a planning and design process that includes community members and reflects their needs. The idea of citizen participation reflects John Dewey's assertion that we not only need education in democracy, but democracy in education.

By engaging students, parents, educators, and a wide variety of citizens in planning and designing schools as centers of community, the best aims of a democratic society are served by both process and product.

This publication outlines a systematic planning approach that can result in the successful development of schools as centers of community. Its chapters provide

Schools Make a Difference When They Serve as Centers of Community

Schools that serve as centers of community are making notable improvements in four areas (Blank et al. 2003):

- **Student learning.** Students demonstrate significant gains in academic achievement and in essential areas of nonacademic development.
- **School effectiveness.** Parent-teacher relationships are stronger and teacher satisfaction is higher. There is a more positive school environment and broader community support.
- **Family engagement.** Families show greater stability. Parents communicate more often with teachers, are more involved in school activities, and demonstrate a greater sense of responsibility for their children's learning success.
- **Community vitality.** Surrounding neighborhoods enjoy increased security, heightened community pride, and better rapport among students and residents. The schools themselves are more intensively used.

basic principles for designing such schools, case studies of successful projects, and a step-by-step methodology—complete with action checklists—for developing a facilities master plan.