DESIGN FOR LEARNING FORUM

School Design and Student Learning in the 21ˢᵗ Century

A REPORT OF FINDINGS

Executive Summary

As a follow-up to the recent National Summit on School Design, the American Architectural Foundation (AAF) brought together more than 30 architects, educators, design experts, and students for a two-and-a-half-day Design for Learning Forum in Minneapolis, Minnesota, on October 11–13, 2006. Target was the presenting sponsor. This Forum sought to look at the future of school design, with a particular focus on improving the link between school design and achievement.

One of the participants' principal conclusions was the belief that we are at a moment in time—a tipping point—when the combination of increased learning opportunities, advances in technology, and changes in teaching and learning are working to change the nature of school design.

The definition of "school" is being called into question as the learning environment continues to expand.

As one participant noted, "How do you design for learning when classrooms are no longer needed to deliver learning?" As a result, educators are increasingly moving away from the large, factory-like schools that defined K-12 education for most of the 20th century. Increasing efforts are being made to replace standardized education with a greater level of personalization.

In this new, media-rich environment, participants recognized that a school as we now know it may become just one of many educational hubs, as people increasingly use handheld devices to learn anytime and anywhere.

The forum participants made 10 key findings:

1. Recognize the Paradigm Change

The design community must respond more quickly to the ongoing changes in teaching and learning. The current models for school design are not evolving quickly enough, given what one participant called a "snowstorm of paradigm changes." Flexibility must become a defining principle in school design. There was a strong consensus that the design process should give voice to multiple ways of learning in multiple environments.

The two-decade-long effort to improve education has not abated, and there is a new sense of urgency that American education must find a way to jump into the 21st century. New initiatives—such as universal prekindergarten and ending high school at the 10th grade—have profound implications for the design of schools. The voice of design is needed in this larger conversation about schooling and education.

"Through AAF's *Great Schools by Design* program, many superintendents and other district leaders have asked us to help them understand how the design of educational facilities can support student achievement. Target and AAF convened this Forum to help answer their question."

Ronald E. Bogle
President & CEO
American Architectural Foundation

2. Create New Links to the National Education Reform Effort

Participants see a need to create a stronger link between members of the design community and education reformers who are seeking to close the achievement gap and give students access to 21st-century skills. In the past decade, both education reformers and designers have worked on separate but parallel tracks in developing principles to improve our nation's schools. What is missing is the creative link that allows both communities to join together to find ways to improve student achievement.

3. Build for a Changing Student Population

There is a growing consensus among educators that American education should move toward a system of universal prekindergarten programs. Architects must design new facilities to address the specific needs of these younger students.

At the same time, the design community must recognize that an increasing percentage of K-12 students will be poor, members of minorities, or new immigrants and will have a much greater need for additional social services. Seamlessly co-locating these services in the design of new schools is one clear way to help close the achievement gap.

4. Design for the Age Wave

The impending retirement of millions of aging baby boomers in the next decade may dramatically expand the population of citizens who will want access to school facilities. Designing schools as community learning centers is one way to respond to the changing dynamics in this new era of lifelong learning. In addition, the existing workforce is likely to turn to schools for help in updating skills for the new knowledge economy.

Designing schools that are open to people of all ages is also an important way to remain connected to the majority of Americans, who do not have children and have no direct link to America's public schools. In the coming decade, we will reach a point where 75 percent of all Americans will have no direct links to schools. Designing schools for this new age wave will increase the likelihood that this important voting bloc will continue to support public education.

5. Use Technology to Expand Learning but Recognize Its Limits

There was a strong consensus that students have fully embraced new information and multimedia technologies and that educators will have to adapt more quickly. Students commonly have personal computers and other multimedia communication tools, and this shift is leading to a major redefinition of work spaces in school facilities.

> **"Where you learn is in your hands."**
>
> **Linda G. Roberts, Ed.D.**
> National Consultant on Technology and Education

Even as technology gives students greater freedom to learn anytime and anywhere, participants recognized that technology has its limits. Schools still provide what students most need—access to teachers who provide wisdom and meaning in a rapidly changing world.

6. Design for Health, Safety, and Sustainability

The importance of daylight and indoor air quality are now givens for increasing student achievement. Participants agreed that other environmental factors, including lighting, sound, heating, and nontoxic materials, deserve greater attention.

Sustainability must become much more of defining principle in new construction and renovation. Participants also recognized that school design can and should play a role in addressing the growing challenge of student obesity. There is, however, a tension between designing for learning and designing schools to meet growing safety concerns in a new era of terrorism.

7. Blur Boundaries—Design for Community Benefit

The traditionally rigid boundary between school and community is becoming blurred and will only become more so as technology increases the capacity of students to learn anytime and anywhere. Participants agreed that we now have the opportunity to rebuild the connection between school and community and see the community and the larger environment as a valuable learning asset.

School facilities serve multiple civic and social purposes beyond teaching and learning, and historically they have played a major role in the socialization of young people. In addition, schools play an increasing role in child rearing by providing a wide array of nonacademic services and supports—including breakfast, lunch, health care, and after-school programs—to millions of children, in addition to providing emergency shelter in times of crisis.

Participants believe that these civic and social purposes will become even more important in the years ahead and should be more fully integrated into the design of new schools. Schools in the future will increasingly provide a rich array of social, recreational, and artistic opportunities to the broader community, as mayors and other community leaders seek to cluster educational and municipal facilities in order to maximize the use of tax dollars.

8. Involve Citizen Designers to Reinvigorate the Design Process

Authentic community engagement makes for a better school and a stronger community. Diversity matters—who is at the table in the design of new schools matters a great deal. Participants agreed that design process must include many voices, including the students and teachers who will inhabit the space on a daily basis. Several forum participants recognized that many parents and other decision makers have outdated ideas of what a school is. Such ideas prevent design excellence that is in the interest of improving student achievement. One way to encourage creativity is to develop a "wiki" for school design to give parents and students a better understanding of the language of school design.

Other participants voiced concerns about state and regulatory policies and suggested that these policies dictate the development of mediocre schools. There was also a clear consensus about the need to create a new and richer design matrix to move school boards beyond the bottom line as the sole and overriding reason to choose one design over another. Several participants suggested that design be integrated into current educational metrics regarding accountability.

There was a strong consensus on the issue of developing a pedagogy of space in order to use schools as learning tools Participants generally agreed that a greater effort should be made to document the complete design process, including the development of post-occupancy reports. Some participants suggested that the education community should examine how evidence-based design is now being used by hospitals and other industries to improve services.

9. Expand the Research Agenda

In the coming decade, American education will continue to move forward in developing a new system of data-driven decision making. This process has just begun and will only accelerate in the years ahead. The design community must recognize this sea change in educational policy making and act accordingly.

Although there is a growing body of evidence regarding the link between student achievement and teacher retention, and such factors as daylight and indoor air quality, little has been done in the way of research. The link between school design and other conditions for successful learning needs to be investigated, including student mobility, truancy, graduation rates, personalization, and ways special education accommodations affect the achievement of other students.

10. Develop a Campaign for Innovative Design

There is a growing disconnect between what we know about good design and what is happening in the field. Although some districts are incorporating new concepts, reaching a broader constituency across the country continues to be difficult. Forum participants agreed that a tension exists between the value of good design and the reality of just getting a school built. This problem speaks to the greater need for bringing educators together with designers to support new concepts in how education is delivered.

There was a strong consensus on the need to develop an awareness campaign to change people's understanding of the importance of innovative design and the ways it can help improve learning. Participants also agreed that the design community should make much more of an effort to document both its successes and failures.

Forum participants recognized that improving the design process presents significant challenges. The ability to design great schools is often hindered by state and regulatory policies that dictate mediocre school design. Implementing reform is difficult in a context of inappropriate standards, security concerns, and the difficulty of getting stakeholders to arrive at a consensus about the value of innovative design and its link to learning.

Nevertheless, participants were optimistic about the ability to create a stronger link between design and student achievement. They also recognized that our nation's schools must act as centers of community, serve multiple civic purposes, and reflect the core values of our democracy—active citizenship, diversity, equity, and access to new learning opportunities.