

Taking Our Cue from Research: The Next Level of Design

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Over the past 15 to 20 years, school districts – working closely with their planners and architects – have transformed the process of creating and modernizing school buildings. What was once a relatively “closed” practice, in which a small team of administrators worked quietly with designers to produce a facility that would be serviceable and cost-efficient (but not necessarily much more), has evolved into a highly interactive approach to facility planning that involves broad-based participation from educators, students, and the community.

Many district administrators today would tend to agree that this far-reaching, inclusive approach has revolutionized and improved school design. New schools built today, or those transformed through comprehensive modernization, are likely to be much more supportive of the instructional program and more responsive to the priorities of the overall educational mission within a district.

School districts have seen the benefit in a myriad of ways: better student attendance, fewer disciplinary problems, better faculty retention, improved faculty collaboration, increased volunteer support, and more opportunities for broader course offerings. Some schools point to higher test scores and improved student performance. Many also cite far better school-community relations, with expanded, ongoing support from local residents and businesses that were able to contribute to planning efforts, thus feeling an ownership in the resultant facility.

In order to optimize this increasingly interactive planning and design process, architects recognized the need to improve the framework for discussion and decision-making. What works best to draw out public charrettes, small-group committees, open forums,

surveys, tours, town meetings, on-site design and interactive websites have all now become standard tools in the planning toolbox.

Embracing Research

Now that we have raised the bar on the planning process, what's next? How can we take the practice of school design to the next level? How can we continue to create and evolve the best learning environment for students?


Clearly, we've benefited by listening to a broad range of voices over the past several years, and designing buildings that reflect the collective wisdom and experience of teachers, students, and community members. Now, we need to advance our efforts by listening to another important source: research. Fortunately, the profession has begun to recognize the value of research-based design initiatives for educational facilities, and the imperative of continuing to sponsor and support high-quality research within our industry.

In 1999, when Heschong Mahone published its findings on the impact of daylighting on the quality of learning, the results challenged every architect and school district in the nation to recognize and address this vital aspect of the educational environment. Similarly, other important studies have since examined the critical importance of acoustics, air conditioning, and air quality. Several analyses of the overall impact of the school building environment on learning have also been completed or are now underway.

Once the results of new research is available, design professionals must look closely at the translation – how does the “bricks and mortar” need to respond in order to capitalize on our latest knowledge? For example, once we were given concrete evidence that documented the importance of daylighting in the

classroom, we began to explore the design opportunities – and challenges – carefully in order to bring light into buildings more effectively. We analyzed glare and heat gain, assessed security and maintenance, reviewed costs, and devised innovative solutions. Today, architects and manufacturers are still engaged in addressing the daylighting issue creatively and cost-effectively, with breakthrough concepts emerging at new schools around the country.

The Council of Educational Facility Planners, International (CEFPI) and other industry associations have ramped up sponsorship of many important research studies. As a result, designers will need to respond to the tremendous challenge of blending today's broad-based community input with the best new research results available, while also incorporating the latest in technological breakthroughs in materials and systems.

This will be a formidable task, perhaps especially so in California, where we will see districts aggressively pursuing renovations in order to meet the requirements of last year's Williams settlement and ongoing state School Facility Program district-wide modernization program. Despite the pressure of immediate challenges resulting from *Williams*, the design profession should readily embrace the vital importance of responding to research. We've listened to our peers, we've listened to educators and community members, and now we need to listen to – and champion – advanced research as another important guide for the future. 

Current sources of research relating to educational facilities design included the Council of Educational Facility Planners, International (www.cefpi.org); the National Clearinghouse for Educational Facilities (www.edfacilities.org); DesignShare (www.designshare.com); and the School Design Research Studio (www.schoolstudio.engr.wisc.edu)

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