

Where We Learn Matters: How Interiors Affect Engagement

By Wendy Rogers

Did you know that according to a study by the U.S. Environmental Protection Agency the average American spends nearly 90 percent of their time indoors? For students this means a significant part of their day is spent within a learning space. Every day we have the opportunity to provide healthy environments that address new science standards, changing technology, integration with the outdoors and the various ways students learn. As emphasized by the U.S. Green Building Council's campaign of the same name, where we learn matters.

Through informed decision-making, the design of the interior environment positively influences student experience and behavior. More than ever before, the most important skill for designers to have is the ability to empathize with students. Empathy combined with a research-based approach is critical to design successfully for the next generation. The following are three interior design concepts that are key to compassionately designing educational environments:

Create Connections

Interior design inspires curiosity by connecting students to their peers, their community and the outdoors. Similar to the way a school district outlines an educational program by considering how each discipline works together and tailoring it to each student, designers consider how different elements work together — everything from furniture and rooms, to walkways and buildings — to identify a design program. By understanding the function of a space and the activities that may happen within it, a successful interior inspires curiosity and challenges students to explore the world around them. Using elements like flexible furniture, transparent materials, operable connections and graphic branding in the interior can transform learning, from the four walls of a classroom to the horizon.

These ideas were successfully implemented in three new middle school additions for the Westminster School District in Southern California.

"Our challenge was to foster collaboration between teachers in a culture that had traditionally been in silos," explains Kate Mraw, interior designer and associate, LPA Inc. "Inspired by Daniel Pink's 'A Whole New Mind,' the district's leadership team and LPA's integrated designers collaborated to implement a new curriculum supported by a thoughtful program with spaces that flow together."

The programming phase began by having participants define the qualities of the spaces they needed for conventional art, shop and computer instruction classes. The exercise evolved to a more universal discussion of how students imagine, explore and create. By conten-

plating the process for learning, labs were broken into activity zones that address the needs of individuals and small and large groups. Every space has a physical connection to each other and the outdoors. The result is an exploration center that allows for multiple pedagogies — including team teaching, problem-based learning and traditional instruction — creating an interdisciplinary workshop for learners.

Establish Sense of Scale

Students learn in many ways and by designing spaces that respond to small, medium and large group activities, we give students ownership over their learning environment. Establishing a sense of scale, or understanding the volumes and perspectives of a space, is important in educational design. By using design elements that create different scales of volumes, students respond with behavior that is appropriate for the specific program. Imagine a large, open learning space that is bright and active. This space would be effective for inspired project-based learning. Compare this to a niche with a low ceiling and a small scale for an individual student to study. This space results in a very different response from students than the open collaborative space. It's an interior designer's responsibility to create opportunities for various learning modalities.

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Library. "We wanted students at this school-within-a-library to have a completely flexible learning environment that scales to suit their project and curriculum needs," explains Mraw.

"For learning to happen everywhere, movement matters. Regardless of the primary function of a tool or furniture piece, secondary uses were explored, developed and designed," Mraw continues.

Students have individual laptops used for online learning blended with other next-generation learning and instructional methods. The active spaces accommodate the flexible nature of their pedagogy, while giving students ownership over the environment and supporting the school's mission of creating lifelong learners.

Engaged Environments

Creating spaces that are sustainable as a "healthy learning environment" is an important aspect of interior expertise. By specifying materials that are low maintenance, high performing and long lasting, designers contribute to the impact on the project from a sustainability standpoint. This creates an experience for students while they inhabit a space. The proper balance of natural daylighting, lighting, acoustics and finish decisions impact a student's experience with the space. This balance between the sustainable and visual qualities of a product can be the most tactile and engaging understanding a user has with the interior design of the educational environment.

There is opportunity in every project to demonstrate that the design for the interior of a school matters. At Montgomery Middle School in Chula Vista, Calif., the challenge was to achieve LEED for Schools Platinum while adhering to the district's mandate for a single package unit per classroom. Designed in collaboration with the maintenance and

operations group, the innovative solution uses high-efficiency HVAC units located within a two-story mechanical distribution hub in the center of each classroom. Combining this with displacement ventilation provides a quieter, healthier environment for learning by delivering air at the warmer temperature, saving energy at a lower volume, and reducing background noise. Manual operable windows on opposing walls give students and teachers greater control over natural ventilation and the room's thermal comfort. Based on a 2003 study by Lloyd Engelbrecht, professor emeritus of art history at the University of Cincinnati, the primary wall is a different color than the other walls to reduce eye fatigue. This environment is a more comfortable, enjoyable place to learn because it addresses how students hear, breathe, see and feel.

A successful interior design respects the larger context of the campus to consider the flow between zones and takes a closer look to identify the unique ways teachers and students interact with a space. With empathy for the ways a school community engages with their environment, interior designers create connections, cultivate learning opportunities and encourage engagement. The next generation of learners will innovate in personalized, inspiring spaces, proving where we learn matters.

A Green Schools Chair for the U.S. Green Building Council, Wendy Rogers, FAIA, works to promote the adoption and design of green schools in California. During her 27-year career at LPA Inc., she's designed more than 50 educational facilities and received awards from the American Institute of Architects, the Codillon for Adequate School Housing, and the Green California Schools Summit.