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WHAT IS THE CLASSROOM OF THE

Future?

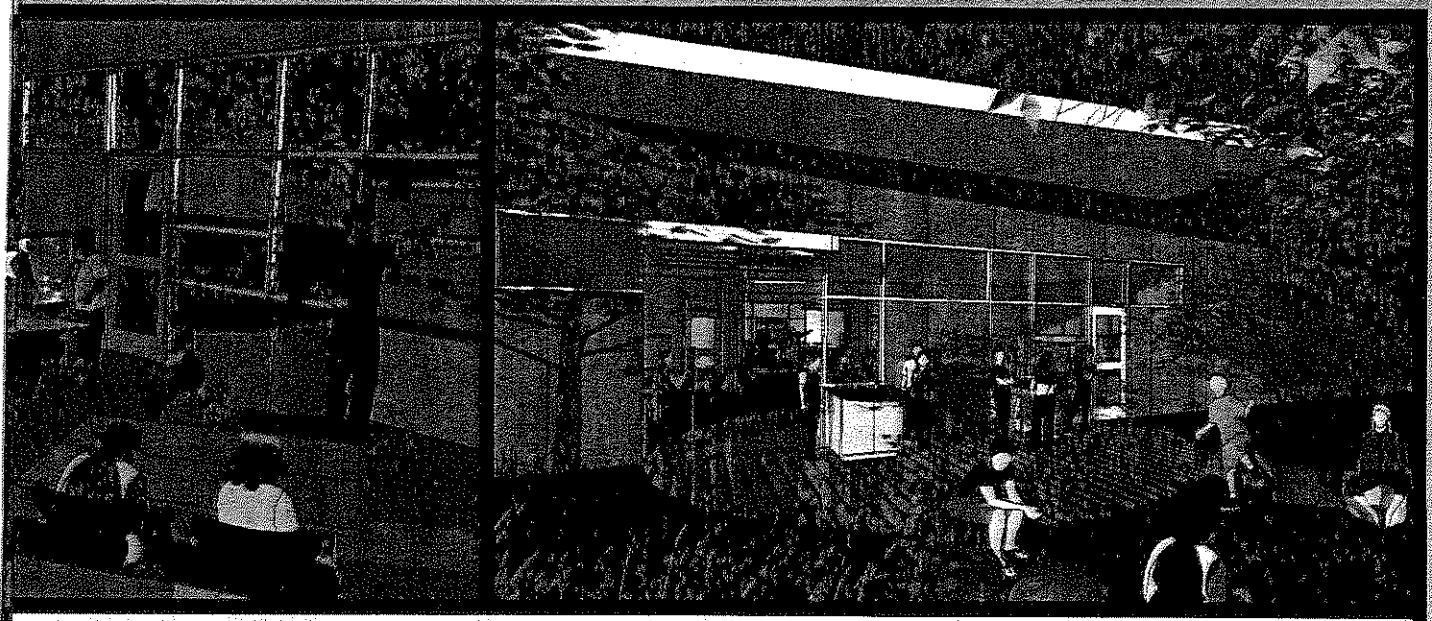
What will the learning space
of the future look like?

It's already here.

BY ELLEN KOLLIE

Imagine Greg Stack's and Natalia Nesmeainova's surprise when they learned last fall that they won first place in a design contest for a fifth grade classroom of the future! The contest was held by *Slate Magazine*, an online publication, and an article about the winning entry can be found at www.slate.com/id/2274623/. "The name of the design is the Fifth Grade Design Studio," says Stack, AIA, LEED-AP, a K-12 thought leader with Seattle-based NAC|Architecture, "because it's for a fifth grade classroom. We gave it that name because the idea is that students, for 21st century skills, need to not just listen and remember, but explore and acquire knowledge and meaning by what they do."

Here's a look at how the winning design does just that, and then a look at other ideas for future classroom design.



Imagining the Future

"In thinking of collaboration, creativity and communication, the idea was to develop a classroom that would accommodate that," Stack says. The two designers asked themselves, "What if we split a class of 24 students into four groups of six students by putting the groups against the walls and leaving the center of the room open for group work, projects or lecturing?" In each small group, every student has his or her own work station with a laptop and a nearby home base. And they can turn around and collaborate as a group with another group of six, or in two groups of three or three groups of two.

By placing the students in U-shape clusters, the teacher can see what's going on in each team area. Also, there is a mirror on the wall tilted in such a way that a student working on a computer can look into the mirror to communicate face to face with the teacher without turning around and the teacher can see what's on the computer screen.

The classroom is also equipped with a central table and a rolling board that is a whiteboard on one side and a tack board on another for each team. Just coming out on

the market are laser projectors the size of a cell phone. "I think that, in a few years," Stack foretells, "smart projectors will be ubiquitous. Each team can be connected to the cell phone-type projector, with the ability to work on the computer and project it on the whiteboard to share what everyone is talking about. The projector can sense people doing things on it to create a mobile smart board."

Stack says that the idea behind the studio classroom is that everything is flexible and moveable to quickly accommodate different configurations. Also, the trapezoidal shape provides a home base for the teacher, understanding that there's not a front to the classroom as the teacher is moving around the room, assisting students in discovering meaning by their own activities.

"Really, it's a classroom that would work from fifth grade through high school," Stack sums.

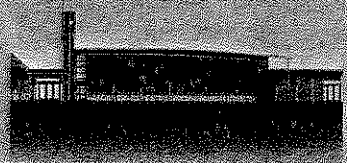
The Future Is Today

While Stack's design no doubt would — and someday may — work well, the future is here, and it must be addressed. "I think the change that's occurring — and maybe

A HEALTHY ENVIRONMENT

INSIDE FOUR WALLS

"If you ask me about the classroom of the future," says Ron Quicquaro, AIA, LEED-AP BD+C, a senior associate in the Glastonbury, Conn., office of Perkins + Will, "I would look just as much to things that make the classroom a healthy environment. Technology does that for us through things like air quality, high-performance lighting, temperature controls and acoustics, all to me supported by technology, not the kind of technology that you teach with. Ergonomics does that through furniture that supports healthy postures and keeps students comfortable, so they can remain focused."



THE CLASSROOM OF THE FUTURE

it's an open-minded perspective — is the notion of individuals learning in their own way and not just by the instructor," says Ron Quicquaro, AIA, LEED-AP BD+C, a senior associate in the Glastonbury, Conn., office of Perkins + Will. "The classroom has started to evolve to support and reflect that notion. For example, furniture is more flexible. It can be arranged in a circle for learning as a team or in a kidney shape for learning as a small group."

John Fabelo, AIA, a principal with Dayton, Ohio-based Lorenz Williams, agrees. "We're finding that the computer lab and the classrooms immersed with technology don't look like computer labs anymore. They more look like Panera Bread, with wireless everywhere. They're very flexible. You may see casual furniture with clusterable or separated work stations." He notes that there is an expectation that computers are research tools and used for many

things. As such, students may sit in any comfortable arrangement. "It is changing the way the classroom feels, the way students use it and interact in it," he observes. "It is becoming more of a learning environment than a teaching environment."

"Next in terms of classroom flexibility and evolution," Quicquaro continues, "is the idea of students moving to another classroom for special education or to work collaboratively." This idea is based on a more tailored response and understanding of how students learn. And that leads to the next evolution, he points out, where

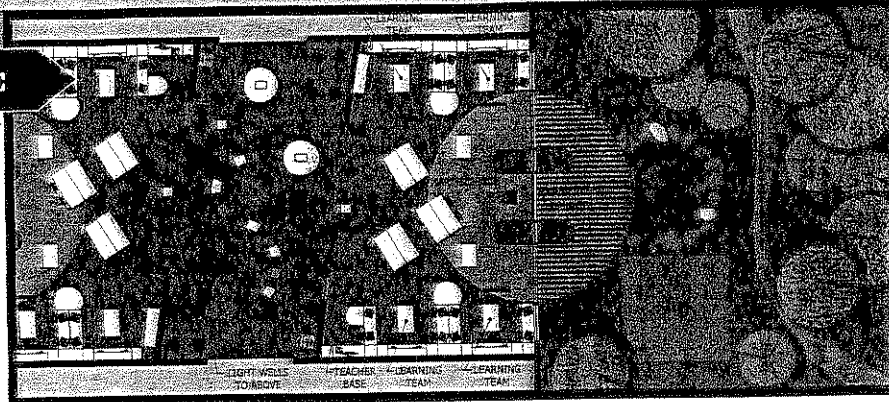
Classroom of the Future. This "Fifth Grade Design Studio," designed by Greg Stack and Natalia Nesmeainova, with Seattle-based NAC Architecture, won first place in a design contest for a fifth grade classroom of the future held by *Slate Magazine*.

learning does not always take place within the four walls of the classroom.

"We gain information so differently," says Quicquaro, "and classrooms are beginning to reflect that." For example, his firm is working on Windham Magnet School in Connecticut, which is designed with an environmental science and cultural studies theme for 600 pre-K through 8 students. The classrooms connect more literally to the outdoors, for learning in the real world as opposed to only in the classroom. "The pre-K and kindergarten classrooms have their own gardens and outdoor spaces," he notes. "Also, we've taken the rainwater from the roof and run it into a bioswale — basically a perennial stream bed — that is connected to the science room, so students move smoothly from the classroom to the real environment."

Similarly, administrators at Common Ground school in New Haven, Conn., who are interested in expanding their 200-student charter high school, are able to boast the expansion of the classroom beyond four walls. Their students grow 5,000 pounds of produce per year, which is sold in New Haven. "They start the seedlings in their classrooms in the spring," Quicquaro points out, "and plant them in a farm area when the time is right. We're seeing this more and more."

Not new, but still being defined, and sure to continue to be defined in the future, is the idea of schools built for partnership with and in the community. Fabelo's firm is



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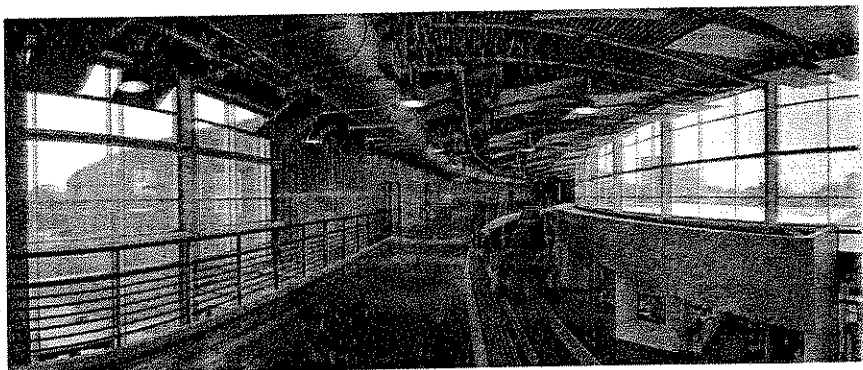
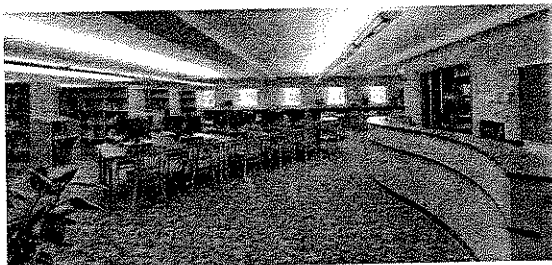


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Future Is Now. The Ponitz Career Tech High School was recently completed in Dayton, Ohio, and was designed to provide a technology-rich and flexible learning environment for more than 500 students in grades 9-12. It is a partnership between Sinclair Community College and Dayton Public Schools.

working on two public schools — a girl's and a boy's academy — right now that capture this essence. The Charity Adams Earley Girls Academy (grades K through 6) sits on the same campus as the local Girl Scout headquarters, which is outfitted with a climbing wall, ceramics studio and music space. A partnership has been created so that students at the academy may take advantage of the Girl Scout facilities. "In the past," Fabelo says, "schools were like silos — independent and on their own. Now we're connecting beyond the school. In this instance, students graduate from elementary school with a relationship with the Girl Scouts that allows them to keep growing and learning."

Similarly, the Dayton Boys Prep Academy (grades pre-K through 7) shares a wall with a city recreation facility. The students have access to a swimming pool that the school district couldn't afford to build on its own. They also have access to two basketball courts. In return, the community has access to the school's gym, lobby/cafe-teria and music room. "The beauty of it," Fabelo observes, "is that the students have access to the fitness space because of the partnership. A synergy is created by building community partnerships, with both private and public entities. And the end result is win/win for the students."

The recently completed Ponitz Career Tech High School in Dayton was also built upon a partnership and designed to provide a technology-rich and flexible learning environment. The 200,000-square-foot high school, which accommodates more than 500 students in grades 9 through 12, is a partnership between Sinclair Community College and Dayton Public Schools.

Located near the college campus, it is organized around small learning communities supporting specific subject and learning opportunities, as is a college. Each subject area includes a program lab simulating a true work environment. "It allows students to think about a career path early on," says Fabelo. "They see that high school is not an end, but a beginning for the next two years of college."

What is the classroom of the future? It's flexible in furniture and format. It's loaded with technology that assists the learning process. It's an extension of the outdoors. It's a community space. It's designed for independent or collaborative work. It's not going away. Understanding that learning occurs in all places and at all times, the classroom serves — and will continue to serve — as a facilitator of learning. It's a critical space for guided learning and social interaction for students of all ages.

MORE EFFECTIVE LEARNING

Flexibility for the Future

Because education is becoming more and more predicated on the fact that learning can occur anywhere, anytime, flexibility in classroom design is becoming more and more important.

Flex Space by Mill Valley, Calif.-based Nanawall, helps teachers achieve classroom flexibility for small group instruction, peer tutoring, collaborative teaching

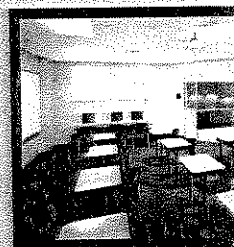


PHOTO COURTESY OF NANAWALL

and more by allowing them to easily expand and enclose areas between classrooms. Specifically, flexible learning space is created by eliminating the common wall between two classrooms and installing two operable 15-foot-wide opening glass walls. The enclosed flexible space, which is STC rated for sound, can be part of either or both classrooms.

When students in the flexible area are seated at their desks, they are not distracted by the other classrooms or classmates, yet the teacher can stand up and see both classrooms. In addition to allowing for more effective learning, Flex Space allows for shared resources and economy of space.

The brainchild of SHW Group, Dallas, Flex Space can also be used in fitness rooms, cafeterias, performance halls, natatoriums, student union centers and stadiums. For more information, visit www.nanawall.com/CadWizard/CaseStudy.aspx?id=17.