

THE POWER TO COLLABORATE

DESIGN HAS THE ABILITY TO ENCOURAGE COLLABORATION
IN EDUCATIONAL FACILITIES AND LEARNING INSTITUTIONS
— THUS SPARKING CREATIVITY AND FRESH THINKING.

BY DAVID WHITEMYER

Arranged in a 75-degree arc, much wider and shallower than most lecture-type classrooms, the new 363-seat auditorium in Iowa State University's LeBaron Hall is designed to foster collaboration. The rows are spacious, allowing students and instructors to move about easily, and chairs in every other row swivel almost entirely around. At the front of the room, a whiteboard stretches across the broad stage, welcoming its use.

The designers of the auditorium – not coincidentally, a collaborative group of professors, university facility planners, interior designers and architects – embraced “active learning,” an educational methodology that involves group discussions and interactive activities. As educational facilities move away from instructor-centered classrooms, this pedagogy-turned-design-trend is popping up in classrooms, libraries, museums and other learning spaces – illustrating that collaboration is the lesson of the day.

PHOTOGRAPHY BY DAISUKE MORITA/GETTY IMAGES

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The Interdisciplinary Science and Technology building at Arizona State University in Phoenix was designed by richard+bauer to promote interaction.



A LEARNING ENVIRONMENT

Back in 1999, Roger Schank, a leading authority in learning theory, shook the status quo by preaching, “Classrooms are out! No more classrooms! Don’t build them.” Though we’re a long way from that extreme, he was advocating an educational style where students learn by doing things and by having face-to-face interactions.

“Classrooms of today need to be very flexible, where everyone can see each other,” says Jeff Davis, AIA, President and Principal of architecture and planning firm Tappe Associates Inc. in Boston. “There aren’t a lot of classrooms in contemporary spaces where desks are lined up, facing front.”

Davis’ firm has an extensive portfolio that includes elementary schools, high schools and collegiate facilities. In recent years, he has observed the collegiate model learning space being developed in elementary and high schools.

“Teachers are not providing information the way they used to [where they stand in front and speak],” he says. “The way education is evolving, teachers are facilitating group conversations.”

It’s happening at all grade levels. And designers are making the change. For example, some classrooms are incorporating a U-shape setup, where nearly every student can see one another. In courses where students often break into small teams, a room with moveable tables is handy.

LeBaron Hall’s design allows students to move around and gather in groups, says Dorothy Fowles, Ph.D., FIIDA, Professor at Iowa State University in Ames, Iowa. “Active learning involves a lot of interaction,” she says, “and [the swivel] chairs allow students to turn to their partners and come up with collective responses,” fulfilling one requirement of establishing group collaboration: making eye contact. The auditorium’s wide aisles are conducive to students getting up, moving around and conversing with others, and its arc design allows a broad viewing range.

However, the auditorium does have its limits, Fowles admits. Although the seats in LeBaron Hall spin, they’re still fixed in place – a decision based partly on budget and partly on cleaning logistics. Ideally, a space encouraging collaboration would include moveable chairs and tables.

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OUTSIDE OF THE CLASSROOM

Learning and collaboration don't end when students leave the classroom. Davis' firm recently completed work on a new 24-hour study space in the Massachusetts Institute of Technology's (MIT) Hayden Library in Boston. Part of the firm's assignment was to come up with a way to pull students out of their dorm rooms and foster group activity.

“Within the library environment is a series of large collaborative spaces,” Davis says. “And they can be twined down to smaller spaces for two or three people.” This 6,000-square-foot space has been so successful that MIT is considering building similar spaces in some of their two dozen other libraries.

Kelly Bauer, IIDA, Principal of Phoenix-based richard+bauer, a design firm with a number of academic and public

libraries under its belt, notes that libraries aren't just quiet spaces anymore. They're being used as meeting places for community clubs and committees, as well. “[Libraries] are trying to keep their patrons, and are encouraging people to come in and collaborate,” says Bauer, recently named *Contract* magazine's Designer of the Year with partner Jim Richärd. “So we're facilitating this through design.”

Richärd+bauer has designed a number of Phoenix-area libraries. Many clients have requested that facilities be programmed with specific spaces for teens and young adults to gather and work together. As in an ideal active-learning classroom, Bauer says, people converse and collaborate almost naturally when there is flexibility and comfort – a space that can be changed to accommodate user group. That may mean having individually controlled lighting, moveable wall partitions or a variety of furniture types.

ACCIDENTAL COLLABORATION

Flexible classrooms can help teachers facilitate discussions, and comfortable library spaces can enhance group interaction. But sometimes collaboration happens serendipitously – and good design can encourage that, too.

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The Desert Broom Library in Phoenix was designed by richard+bauer to allow collaboration among patrons.



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The firm of richard+bauer is currently designing a new space for the Prescott Valley Public Library in Arizona to encourage interactivity and collaboration, and to meet the community's changing needs.



At the Salk Institute, a California research facility designed in the 1960s by renowned architect Louis Kahn, collaboration is the formula for scientific success. There is a lack of walls, creating a feeling of connectedness among faculty and students. Researchers in one lab comfortably discuss subjects with their counterparts in other labs.

Another interesting feature at Salk is a number of large floor-to-ceiling chalkboards constructed into the courtyard columns. During fits of inspiration or to illustrate a concept, the chalkboards are used informally by scientists as they stroll through the plaza together. This type of collaboration promotes the sharing of ideas, which leads to better research and scientific breakthroughs.

Richard+bauer used many of Salk's concepts in the design of the Meinel

Optical Science Research Building at the University of Arizona in Phoenix. The university simply wanted its scientists to collaborate. "We were asked to help their culture to design a space that would get researchers out of their office and talking with each other," Bauer says.

The design team placed casual interaction spaces along pathways and at intersections. Here, they included moveable marker boards, coffee carts and furniture. The building has won two awards from IIDA's Southwest Chapter, as well as a 2007 AIA Honor Award for Architecture.

In all of the educational facilities Davis designs, he places impromptu meeting areas as nodes off wide corridors. "If you think of the more successful public spaces in the world, they're usually plazas with areas on the sides in which to congregate," he says. Often, the best conversations and collective thoughts occur in these types of human-scaled, on-the-side spaces.

Davis is quick to point out that most of the things designers can do to encourage collaboration don't cost very much. From formal classrooms to school hallways, and from laboratories to libraries, "it sometimes takes a bit more room, but it adds flexibility," he says. "You can get a lot of mileage out of a few small moves." ■

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—Dorothy Fowles, Ph.D., FIIDA, Professor of Interior Design, Iowa State University