

Designing the Collaborative Learning Classroom: A Primer

“Collaborative learning is based on the idea that learning is a naturally social act in which the participants talk among themselves. It is through the talk that learning occurs. ... We know that learning occurs from sharing our ideas, beliefs, and writing through our interactions with others.” So Jeanne Marcum Gerlach defines collaborative learning on page 8 of *Collaborative Learning: Underlying Processes and Effective Techniques*, edited by Kris Bosworth and Sharon J. Hamilton (San Francisco: Jossey-Bass Publishers, 1994).

Gerlach continues her explanation of collaborative learning by expounding on its benefits, noting that social interaction leads to advanced cognitive development and promotes higher academic achievement than do individualistic learning activities: “... we must reject the idea that learning occurs only in silent classrooms. Rather, learning is enhanced in informal settings with peers. Listening to different points of view about how to solve problems or to do different perspectives on issues helps students to reach deeper levels of understanding about their subjects. ...there is no single, right way of using collaborative learning.” (P. 9)

James A. Brady, AIA, REFP, executive director of Austin, Texas-based America's Schoolhouse Council, which is dedicated to excellence in planning, building and maintaining our nation's schools, agrees with Gerlach's statement of benefits, observing that collaborative learning classrooms are responding to an emerging changing instructional model. “We have moved away from lecture-based, classrooms,” he says. “We are moving into a more authentic learning that parallels the work environment, if you will — we learn from each other. The instructional model that helps student learn is that of practicing the content, which is in a collaborative way, rather than in isolation. When we do the theory instead of hear the theory, it has application, and when we move instruction to an authentic environment where there are more simulations of real life experiences, the classroom becomes a very different space in which to learn and work and play and remember.”

The design of a collaborative learning classroom environment offers variety. “Many people talk about the Starbucks model,” says Randall Fielding, AIA, chairman and founding partner of Fielding Nair International LLC, a worldwide school planning and design firm, describing an environment that has soft and hard seating in different heights and configurations. “It's a good model, and people enjoy it because it's not institutional and fits with the fact that much of our communication is less formal today.”

Building on Fielding's description of variety, Brady points out that a collaborative learning classroom requires more than the obvious ability to hold round table discussions; it requires a multiplicity of possibilities for presenting, creating and reflecting. One way to ensure multiplicity is to limit the number of impediments to the room. For example, does the built-in furniture support collaboration or is it storage space that gets in the way

because it can't be moved or reconfigured? Here are other, more specific components to consider when creating a collaborative learning classroom.

Furniture

An interesting place to start in describing furniture for the collaborative classroom is to describe what it is not. It is not a tablet arm chair, which does not accommodate left-handed students, student movement, or collaboration in terms of holding a laptop or building a volcano. "I call it the one-armed bandit," Brady says seriously. "It's difficult to physically move, and a group of them can't be pushed together to make a bigger collaborative area. It doesn't stack to create an open floor space. The slanted top makes it difficult to use it to create something. So there are lots of reasons why that style of desk is an example of what we don't want."

Brady describes tablet arm chairs as "owning the room," and offers a reminder that "furniture can't hold the title to the real estate, if you will." In fact, none of the components themselves own the classroom. The students own the classroom. Therefore, in creating a collaborative learning classroom, there needs to be a fluidity of materials and equipment so the room can be reorganized for the lesson at hand.

Here are the key elements that successfully describe furniture for the collaborative classroom.

One key is varied furnishings, as previously noted are found in Starbucks: comfortable stuffed seating by a window, chairs by round tables, different-height furniture. "One of the great things about higher tables," says Fielding, "is you can sit at one and be comfortable, and someone can come up to you and talk without having to sit down. Having to sit down is a much bigger commitment. The ability to stop and pause at a higher table allows for informal learning, communication and collaboration, which can be quite powerful."

Another key element is flexibility, and there are a couple of ways to achieve it. The first, as noted above, is through varied furnishings, and the second is via furniture that is flexible in itself. Examples here include adjustable-height desks and tables and soft seating that can be folded down to flat banquettes. "Furniture should move," Fielding says, "because students need to be moving frequently. If you're using hard seating, the chairs should have lots of flexibility and movement built into them."

Jerry Craddock, principal of Adelanto High School, a new \$75-million, 312,000-sq.-ft. school in Victorville, Calif., and part of the Victor Valley Union High School District, understands the importance of flexible furniture. Defying traditional classroom table convention, he chose the SICO MultiApp table, because of its built-in mobility, and the resulting ability to quickly transform any classroom configuration.

"The school's administrators were looking for furniture that could be used in different set ups and changed quickly," says Darin Shoemaker, principal with Corona, Calif.-based School Space Solutions, which helped Craddock make the purchasing decision. He says

that Craddock envisioned two primary ways in which the multiple application tables will be used in the classroom by the school's 3,000 ninth through twelfth graders. The first is four students per table, facing forward while being taught by a teacher. The second is four students per table, facing one another for collaborative work, which will often include the use of laptops, iPads and other types of technology.

"The ability to fold the table tops down and slip the tables against a wall where they would not consume a lot of classroom space was also important," Shoemaker says. This is a perfect example of furniture requiring flexibility to accommodate the collaborative instructional model. It also demonstrates the importance of thinking through the collaborative model in order to secure classroom furniture designed specifically to meet the need of this total learning environment.

To be sure, furniture's added flexibility may come with a higher price point than furniture that serves one purpose. And no one argues that initial cost is an important consideration for administrators who have to spend taxpayers' dollars wisely. However, before flexible furniture is ruled out because of budget constraints, Brady notes that, by virtue of its flexibility, it serves more than one purpose. Therefore "I may have to spend more for this table," he says, "but I don't need as many tables overall."

All of these elements are ideal for implementing collaborative learning in new facilities. However, it is just as possible to use these elements to implement collaborative learning in existing facilities. Of course, it would be ideal if the walls in existing schools were flexible, but the collaborative model itself is more important than walls, and furniture is a more economical tool for advancing the implementation of that model than is building a new school. As Brady observes: "Furniture is a great way to bring an older facility into the new, more flexible, teaching strategies."

Technology

Technology, both wired and wireless, is in every school. Additionally, all kinds of devices are being used for education: laptops, iPads, eReaders, even cell phones. The primary benefit of these devices is their portability.

In the collaborative classroom, flexible furniture supports the use of technology. In *Planning and Designing Schools* (New York: McGraw-Hill, 1998), C. William Brubaker notes that flexible furniture and equipment is one of 10 items to consider for preventing obsolete schools. "One of the fastest ways to limit flexibility in the learning environment is to select built-in counters, shelves, and storage units.... Using proper furnishings to support the equipment and goals of each space allows for a variety of settings and ease of future adaptability." (P. 154)

Similarly, in the collaborative classroom, technology supports education. Mark Graham, AIA, LEED GA, NOMA, a principal with WLC Architects Inc., Rancho Cucamonga, Calif., advocates designing the collaborative environment with many electrical outlets in different areas for both charging and using technological devices.

Acoustics

Good acoustics are important for collaborative learning, as they enable students to hear what is being said on the other side of the table, but not what is being said in the next group. “To this end,” Fielding says, “you want to absorb the reverberation so that sounds aren’t bouncing off walls and coming back at you.”

Brady agrees, noting that collaborative learning has a different sound level than lecture-based learning. “We tend to think of sound as negative, and it can really be active learning in a positive way.” They are many ways to achieve high-quality acoustics, including carpeting, panels, baffles, banners and more.

Flooring

Flooring in a collaborative learning environment can be many things – vinyl composition tile, laminate, concrete, cork, carpet — depending on how all parts of the room are addressed. “The key is that it should be comfortable,” says Graham. “And remember that, if the client’s choice is a very hard surface, such as sealed concrete, it will create poor acoustics, which may call for sound attenuation.” He also notes that the choice needs to allow flexible furniture to move easily and not mar flooring in the process: “The choice should allow the teacher, students and furniture to move around without special effort.”

Windows

“Natural daylighting makes you feel comfortable in the learning environment,” says Graham. “That comfort translates to the ability to learn. Studies comparing learning with natural daylight vs. learning without it have shown a significant difference in test scores.”

Fielding observes that a collaborative classroom with windows allows students to change their focal length. He recommends longer vistas — at least 50 feet. As a bonus, windows providing natural daylighting may reduce dependence on artificial light, thus creating energy savings.

Lighting

“The way we perceive the environment often is that we move toward brighter spots and color,” says Fielding, “so the idea that classrooms should have uniform lighting levels, which is built into today’s standards, is ridiculous and goes against everything we know about people. When you walk into a room, you’ll be attracted to the light at the windows or higher lighting, similar to that at the Starbucks coffee counter where the baristas take your order. Variety in color and light is valuable.”

Be sure, too, to avoid lighting levels that create glare on teaching surfaces, which prevents students from seeing what is being presented.

Outdoor Learning Spaces

High schools are often built with outdoor learning spaces, which can be quite effective for collaborative learning. Adelanto High School, for example, has a series of outdoor learning spaces throughout the facility. An amphitheater provides space for large-group learning. A centrally located courtyard provides various gathering spots for small group

collaboration. Landscaped and shaded areas include power connections for plugging in. “We created intimate spaces with accent colors outdoors to give students the feeling that they’re at home rather than in a large school,” says Graham.

“Although some critics conclude that schools and their programs have not changed much over the past 50 years, this is essentially untrue,” observes Theodore J. Kowalski in *Planning and Managing School Facilities, Second Edition* (Westport, Conn.: Bergin & Garvey, 2002). “Many new ideas have been introduced at all levels of schooling. Incrementally, curricula are becoming broader, instructional paradigms are becoming more diverse, and experimentation with organizational structure is more accepted. Collectively, these conditions are serving to make school buildings larger and more complex.” (P. 173) Larger and more complex schools are all the more reason that, as the collaborative learning instructional model is embraced, designers, teachers and administrators work together to successfully create the collaborative learning classroom — from furniture to outdoor learning spaces.

Minneapolis-based SICO America Inc. is a global leader in mobile folding and rolling, space-efficient products — including mobile folding classroom and cafeteria tables, portable stages, choral risers and more — that help schools optimize their use of space.