New classrooms in Old Chem and The Commons catalyze collaboration

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Collaboration is key to the success of University of Arizona faculty, staff and students, an idea clearly embodied by the renovated Chemistry building and newly constructed The Commons.

A $42 million project dedicated to collaborative learning, the two buildings were unveiled April 21 and include seven collaborative classrooms, three learning studios designed for online and hybrid classes and a large auditorium specifically designed to facilitate large-scale collaboration among students.

Affectionately known as Old Chem, the renovated Chemistry building also houses departmental and advising offices; numerous workspaces for Department of Chemistry and Biochemistry faculty; renovated space for nuclear magnetic resonance equipment and electronic and metal shops; and a new general education office.

Collaborative learning is a critical part of the University's mission to provide excellent educational opportunities for all Wildcats, says Lisa Elfring, associate vice provost for instruction and assessment and an associate professor for the BIO5 Institute.

"We have come a long way in our understanding of how people learn," Elfring said. "If we think about classrooms, it's very clear from a lot of educational research that the more students engage in social interactions that are focused on the content they are learning, the more they have a chance to practice ideas and practice making mistakes, receiving feedback and turning that into better ideas. Those are the kinds of opportunities that result in deep learning – the kind of learning that will stick with you."

A new way to learn

A very large example of a collaborative learning space is the Turn To Collaborate room located on the first floor of The Commons. A 217-seat auditorium, the room has rows of tables with wide spaces between them to allow for students to turn around and work in larger groups, and tables large enough to accommodate collaborative work.

The Turn To Collaborate room is also the first universally accessible tiered classroom on campus, sporting a series of sloped ramps that allow for full accessibility across the room – including tables without fixed seating – to accommodate wheelchair users. The design is an improvement over traditional amphitheater-style facilities, which tend to have restrictive seating options.

Acoustic paneling on the walls and ceiling reduces noise levels to create an environment more conducive to collaborations among groups of students, while projector screens positioned strategically across the space help students follow along with presentations or track data as they work in groups.

In addition to the Turn To Collaborate room, Old Chem and The Commons also house several multimedia collaborative learning classrooms with seating that allows students to work in groups. Each group of students has access to a display monitor, outlets, dry-erase boards and table space for collaborative work. The classrooms also have software that allows instructors to share content to each display.

Old Chem and The Commons also house two livestream studios specifically designed for educators to livestream their work while they interact with their class. A camera positioned behind the instructor's transparent dry-erase board records and flips the image for the class, while a series of monitors in front of the instructor display a gallery of online students. There is also a hybrid classroom designed for simultaneous in-person and online instruction, with a collection of traditional desks and space for an educator.

"With the innovative teaching methods that this space facilitates, we know that students are able to promote a higher order of thinking – and that in turn leads to better understanding and better transferring of knowledge from one application to another," Liesl Folks, provost and senior vice president for academic affairs, said at the April 21 ribbon-cutting. "Using evidence-based teaching practices in these collaborative learning spaces fosters enhanced learning, engagement and creativity, and also a sense of belonging in the students because they build a community among themselves by working together on problems in their classes."

Accessibility for everyone

Creating a collaborative environment in Old Chem and The Commons required more than new classrooms and a lecture hall. It also meant improving accessibility.

To that end, a new entry atrium was constructed on the building's north side, as well as a common lobby in the center of the building with new elevators and accessible restrooms. The classroom layouts also ensure that anyone can participate.
in class from anywhere in the room.

Technology takes collaboration a step further throughout the facility by allowing for easier communication between students and instructors. Devices like Catchbox allow for students to hold onto an easily passed wireless microphone that allows for easier group conversations in larger rooms, while classrooms take advantage of voice lift systems to project spoken word across smaller classrooms without the need for a microphone at all. Each of the teaching and lecture spaces also includes connectivity for listening devices.

Speaking at the ribbon-cutting, Eric Bell, a physical access consultant at the DRC, said turning the footprint of Old Chem – with its traditional classroom design and large lecture halls – into a collaborative space required a great deal of creativity on the part of the building’s design and build teams.

The project was designed by the firm Shepley Bulfinch, built by Sundt Construction, and managed for the University by Planning, Design and Construction. The Chemistry building was originally built by Sundt in 1936 and was designed by Roy Place, then the University’s chief architect.

“This building represents what we can do when we design with accessibility and inclusion not just as an element, but truly as a focal point,” Bell said.

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