Learning Space Design

By Tevian Dray

In early November 2011, I had the pleasure of participating in a colloquium near Washington, D.C., on learning space design. This event, organized by the PKAL Learning Spaces Collaboratory (LSC), brought together nearly 150 faculty members, administrators, and architects to discuss learning spaces for the 21st century.

Organized in 2010 as an outgrowth of Project Kaleidoscope (PKAL), the LSC vision is that all undergraduates should have ready access to learning environments that enable them to become engaged learners. The goal of the LSC National Colloquium was to work toward a common language for discussing student learning environments across disparate stakeholders.

I found it remarkable to have the opportunity to discuss both formal and informal learning spaces not only with other faculty, but also with university administrators and, especially, with architects experienced in innovative learning space design.

Sessions included presentations on, and discussions of, types of learners and learning spaces, relating learning space design to curricular and pedagogical planning, the ever-increasing technological sophistication of entering students, assessment of learning spaces, and establishing collaborations between academics and facilities officers. A panel of students shared their experiences with diverse learning spaces and teaching styles, and architects gave presentations (and posters) about previous projects.

A word of warning is, however, in order for the mathematics community: So far as I could tell, I was one of only two mathematicians present. The desire on the part of many (most?) mathematicians for blackboards rather than whiteboards, falls largely on deaf ears, and even the need for lots of board space is often superseded by the desire for multimedia classrooms.

To counteract this trend, it is essential that mathematicians make their preferences known, repeatedly and, if necessary, forcefully. As the unit that at most institutions teaches the most student credit hours, we are entitled to have at least some classrooms that meet our needs.

Which brings me to the first lesson I learned at this meeting: You can’t please everyone. It is a mistake to design multipurpose spaces that please nobody. Yes, flexibility is essential—movable tables and chairs with wheels, for instance, rather than fixed seating, at least in spaces serving fewer than, say, 100 students. But having a variety of learning spaces is also important, and we need to learn how to schedule them optimally, up to and including sharing several rooms of different types among different courses.

I will say that one of my pet peeves is finally being addressed, namely the need for multimedia classrooms that let you use more than one medium at a time. (Translation: The projection screen should not block the board.)

Other lessons I learned:

- Informal spaces are important. That is: Study space outside classrooms—and outside faculty offices. Shared tutoring space across disciplines. Food and drink nearby.
- Use principle-based planning. Start by deciding what your goals are, not by specifying how many of what kind of classrooms you need.
- Keep assessing the space. After the space is put in use, keep asking how well it meets its goals.
- Connect research and practice. Research on student learning can and should influence learning space design.
- Certification is in the works. An international effort is being made to develop a certification process for learning space design, analogous to the LEED standard for environment-friendly building design.

But the single most important lesson I learned? That whether a particular classroom is attractive to faculty is secondary to the issue of how (and whether) it encourages student learning.

Anyone interested in learning more is encouraged to explore the LSC website (www.pkallsc.org), which includes a growing collection of resources about learning space design. Is your campus designing new learning spaces? Perhaps joint participation in the next such meeting would foster ongoing dialog during the design phase.

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