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A View of the Changing Campus

How Learning Environments Can Support Changes in Higher Education

The buildings that form a campus help create the legacy of that institution. They make impressions. Buildings that are centuries old communicate tradition and an established lineage of alumni. Contemporary facilities communicate a spirit of growth and a sense of optimism for the future.

Businesses have discovered the importance of communicating brand and image in their quest to increase market share. Higher education is no different in this respect.

The leaders of the universities and colleges in the U.S. have learned that image is critical in attracting and retaining students and that the campus environment is a strategic tool they can use to compete and differentiate.[1]

The changes experienced in higher education institutions today are significant. Changing patterns of behavior, learning, and instruction; increasing competition for students and faculty; and aging facilities have coalesced to present the leaders of this country's universities and colleges with both challenges and opportunities. How they address these issues will change the design of the campus environment.

Change Agent: Competition

Increased competition for students and faculty is influencing the way universities and colleges market themselves—in many cases, institutions are actively marketing themselves for the first time, which requires defining their image. The image a school conveys is critical in drawing the attention of prospective students, faculty, and contributors.[2]

Academic programs, off-campus learning opportunities, and the attractiveness and innovativeness of campuses are among the characteristics that will place a school on the Best Colleges lists from publications such as *US News & World Report*. Indeed, "making the list" is becoming essential for attracting top-notch students and faculty, creating visibility, and increasing contributions to the institution. It is becoming an "arms race," says University of California-Berkeley Professor David Kirp.[3]

The definition of the classroom is expanding and now includes cyber cafes, multiuse spaces, and virtual classrooms. The one-dimensional approach to teaching is changing, too. The idea of many instructional methods and learning styles is accepted and growing. Students are working, and will continue to work, more collaboratively. Professors may lecture one day, lead discussion another, or participate in student-led curriculum. Technology has certainly shaped instructional methods, but so has a culture that reinforces creativity, problem solving, efficiency, and productivity.

Steven Crane, an architect active in educational design and building, speaks to the changes in students and teachers that must be addressed in changing architecture: "Teachers are now facilitators. Students used to work as individual competitors, but now they collaborate in groups of five or 10, in study areas surrounding a central resource where they can access information. In the past, the curriculum fit the building, but now the architect must design buildings to fit the curriculum."[7]

Robert Barr and John Tagg discuss the paradigm shift from the college as an institution that exists to provide instruction to one that exists to produce learning. "To say that the purpose of colleges is to provide instruction is like saying that General Motors' business is to operate assembly lines or that the purpose of medical care is to fill hospital beds." The mistake, they write, is that the means is confused with the end.[8]

A learning paradigm sees an institution's objective as producing learning with every student by whatever means work best. It also requires the faculty and the institution itself participate in the learning: to try new things, to change as it goes, to continually improve.

Importantly, a learning institution creates environments and experiences that "bring students to discover and construct knowledge for themselves."[9] The college, then, creates the learning environment.

What does a learning environment look like? How will this influence facility design? The answers to these questions are still being developed. Massachusetts Institute of Technology's Department of Aeronautics and Astronautics revamped its traditional classroom setting and curriculum to be more like work and less like college.

Project rooms, informal meeting areas, and lab and workspaces support a curriculum that became project-based and collaborative—like a professional environment.[10]

The University of Phoenix, one of the nation's largest online universities, operates facilities in over 100 locations throughout the U.S. Since working adults form the majority of the student base, course schedules and styles reflect more closely a work environment. Students are immersed in one course at a time for five or six weeks and participate as members of Learning Teams. These teams create projects that will demonstrate mastery of the topic. It is a highly collaborative process, one that emphasizes discussion and interaction over lecture and individual-based learning. This learning model may eventually influence the curriculum at traditional undergraduate four-year institutions.[11]

Changing traditional ways of thinking and teaching and then creating learning environments that respond requires a long view and ongoing commitment to change. If an entire campus, for example, is a learning space, then designers and planners need to consider the use of lounges, outdoor areas, cafés—anywhere that students may gather. Adaptability and flexibility are chief among the design requirements of a learning environment. Spaces that expand for larger group interaction and contract when teams disperse, and areas where students and faculty work collaboratively, as well as privately, need to be considered as architects and designers plan. Flexible spaces that have multiple uses can support learning and may prove to be cost effective as well. But the challenge will be in the design, planning, and furnishing of a space to equally support multiple uses and different types of learning activities.

Change Agents Made Visible: Creating Space to Learn

Creating environments for learning, and the brick-and-mortar activities of construction and renovation needed to achieve this, require a significant monetary investment, either through private contribution, tax dollars, tuition hikes, or often a combination of the three. It also requires a significant investment of thought and time, since legacies are being created. Campus facilities, on average, are planned to last 30 to 50 years, which also requires careful consideration of the many changes a campus will experience over that time.

Facilities play a large role in building image and shaping impressions. They become a tangible form of intangible things, such as innovation, adaptability, and forward thinking. Facilities, too, reflect culture and society. Today's students are far different, in many respects, from students of 20 years ago. Universities must appeal to them and their styles of learning. Campus facilities and spaces must reflect the behaviors and culture of society in general and a student body in particular.

Change Agent: Students

Multitasking wasn't in the dictionary 20 years ago, but it accurately describes the way many of us, particularly college students, get things done. Mobile technology has certainly influenced this. College students have grown up composing reports on the computer while instant messaging over the Internet while doing research on the Web while flipping through TV channels using the remote. This is not necessarily an ideal scenario, but it is a common one. Today's students have the ability to accomplish many tasks and take in multiple stimuli simultaneously.

Spaces need to match the habits and study arrangements of a multitasking student body by being as adaptable and flexible as the students who occupy them. A mixture of relaxed discussion and study areas, workspaces that expand or contract depending on need, and private or group spaces with computers and other equipment can coexist in the same space.

The Learning-Teaching Center at the University of Dayton blends areas for quiet and reflection, conversation and socializing, along with faculty offices, research space, an experimental classroom called the Studio, and a café and fireplace lounge. It was planned to become the "heart and soul of the campus community." It has also created an environment where study and learning expand beyond traditional classroom walls.[4]

Technology has had a profound impact on campus environments. A university or college can advance its image as an innovative, forward-thinking place through the design and application of technology.

Digital communications is part of the campus experience. Wireless access and computers and related equipment are expected in every facility throughout a campus. Students use laptops in class for note taking. Professors critique papers and assignments via e-mail. The Web has become another type of reference library.

The extent of technology within a university, and the degree to which it is integrated, can set an institution apart. Computer labs are becoming such a differentiator. These are not the computer labs of old, where students worked alone at rows of anchored furniture. Labs today accommodate individuals, groups large and small, even entire classes and professors. The mobility of wireless technology has influenced the mobility and adaptability of spaces and their furnishings. Environments are becoming flexible and adaptable to accommodate a variety of uses. Mobile walls can quickly increase or decrease the size of a space. Height-adjustable, mobile furniture is replacing the anchored wooden furniture of an earlier generation.

Emory University's Cox Hall houses a computing center replete with monitors set at floor-sitting level and large floor cushions. Students no longer pull up a chair to work at the computer, but now have the option of sitting or lying down on cushions to study—a different type of space, but one that supports individual or collaborative work, and one that provides a relaxed environment for learning.[5] Space can make a difference, and the sense of comfort or well-being a space imparts, and its ability to spark creativity, can help attract the next generation of students and support their learning processes.

The expectations and demands of a technology-savvy student body can challenge the leaders and budgets of higher education institutions. But a technologically advanced and innovative campus matters to students, who are increasingly making their choices according to a school's offerings and environment.[6]

Change Agent: Multiple Learning Styles

The traditional arrangement of a lecture hall or classroom, with a professor standing in front of the class, students sitting quietly and taking notes, is also changing. While not necessarily going away, it is becoming only one of the methods through which faculty teach and students learn.

Whether due to aging buildings, growth in enrollment numbers, or the need to expand current programs and capabilities, construction on university and college campuses is experiencing a boom. New construction and renovation completed in 2003 totaled just over $11 billion for the second year in a row. Of that total, $7.5 billion was spent to construct entirely new buildings; the remainder was evenly split between additions and renovations. In 2004, colleges and universities expect to complete another $11.4 billion in new construction and renovation and begin an additional $11.3 billion in projects.[12] Experts predict that between 2004 and 2006, institutions of higher education will complete $59 billion in new and modernized facilities.[13]

For the leaders of universities and colleges, the challenge is to create places that foster and support learning. Colleges and universities must respond to issues, such as competition, attraction and retention, and multiuse, flexible environments, and they must also plan wisely to build facilities that will adapt to and nurture the learning that takes place in those spaces—for decades to come. At the same time, they must be fiscally responsible to students, taxpayers, and benefactors.

Leaders are discovering that space does matter and that a thoughtfully designed campus that addresses the changing needs and expectations of students and faculty will, in the end, be a center for learning, teaching, and growing.

Notes

1 "Creating Great Places to Learn," Herman Miller internal report, October 31, 2003.

2 Nancy Van Note Chism and Deborah J. Bickford, "Improving the Environment for Learning: An Expanded Agenda," in *The Importance of Physical Space in Creating Supportive Learning Environments*, ed. Nancy Van Note Chism and Deborah J. Bickford (New York: John Wiley & Sons, 2002), p. 92.

3 David L. Kirp, Talk of the Nation radio program, "Marketing Higher Education," National Public Radio, Washington, DC, October 14, 2003.

4 William Dittoe, "Innovative Models of Learning Environments," in *The Importance of Physical Space in Creating Supportive Learning Environments*, ed. Nancy Van Note Chism and Deborah J. Bickford (New York: John Wiley & Sons, 2002), pp. 81-82, 85-87.

5 Beth Royals, manager of Interior Design, Campus Planning, Emory University, personal interview, May 12, 2004, and "The Computing Center at Cox Hall," Emory University brochure, 2003.

6 Dr. Leslie G. Buckalew, "Trends in Higher Education: Teaching and Learning Best Practices and Strategies," Siemens Enterprise Networks white paper, 2002, pp. 3-4.

7 J. Enderle, "Trends in Education," *School Planning & Management*, October 16, 2003.

8 Robert B.Barr and John Tagg, "From Teaching to Learning: A New Paradigm for Undergraduate Education," *Change* (November/December 1995), p. 13.

9 Ibid., p. 15.

10 Paul Cornell, "The Impact of Changes in Teaching and Learning on Furniture and the Learning Environment," in *The Importance of Physical Space in Creating Supportive Learning Environments*, ed. Nancy Van Note Chism and Deborah J. Bickford (New York: John Wiley & Sons, 2002), p. 40.

11 Buckalew, pp. 17-18.

12 Paul Abramson, "2004 Construction Report," [www page] *College Planning & Management*; available from http://www.peterli.com/global/pdfs/CPMConstruction2004.pdf; accessed 7 July 2004.

13 Joe Agron, "Growth Spurt: 30th Annual Official Education Construction Report," [www page] *American School & University*; available from http://www.asumag.com/mag/405asu21.pdf; accessed 7 July 2002.

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