

Opening Up Learning: From Spaces to Environments

The EDUCAUSE Learning Initiative (ELI) Advisory Board is a collegial group. The members are always ready to share ideas and opinions in their face-to-face meetings and in their online discussions. Recently, the members of this group collectively paused and reflected on the real challenges faced in transforming the typically circumscribed paradigm of learning *spaces* into the more open-ended paradigm of learning *environments*, after one member shared the following experience:

Walking around a local antique shop recently, I came across my university's yearbook from the mid-1970s. I stopped to browse through the pages. Young students. Dated fashions. And dear, familiar places—those venerable buildings that provide a sense of continuity across the generations.

But even as I smiled at my own nostalgia, I began to sense something unreal about the candid photos. I puzzled over this for a while before it struck me: today's technological devices, which we take for granted, were missing from the photos. No one was typing on a laptop; no one was talking or texting on a mobile phone; no one was crisscrossing the quad wearing earbuds.

Change is not new to academia, of course. But today it is being driven by the experiences and expectations of incoming undergraduate and graduate students and of new faculty members. Most of them have grown up in an age of ubiquitous information technology, online social networking, and

constantly connected mobility that was the stuff of science fiction in the mid-1970s. Institutions of higher education are being pressed to accommodate their growing demands for new teaching and learning approaches that take advantage of this technological environment—all while facing drastically reduced budgets.

“Creating learning environments that promote active learning, critical thinking, collaborative exchange, and knowledge creation” is the number-one challenge in the EDUCAUSE Teaching and Learning Challenges 2009 project (<http://www.educause.edu/eli/challenges>). Most of us in higher education recognize this challenge, but how do we address it? We can't simply throw financial resources at the problem. Money helps, yes, but there is less of that to go around these days. Besides, the truth is that the real challenge runs deeper. This challenge demands imagination to ask the right questions, it demands intellect to know the desired outcomes, and it demands courage to pursue real and risky change in higher education. It also demands discipline and rigorous critical thinking: not all uses of information and communications technologies can or should be expected to facilitate learning. Administrators, staff, students, faculty, alumni, parents—all who support and benefit from higher education—need to consider how new information and communications technologies might allow a shift in thinking from time- and location-centered classrooms to the idea of learning environments that are as ubiquitous, varied, active, and immersive as the digital

tools that many students live and work with every day. As members of the ELI Advisory Board, we too are trying to rise to this challenge—through research, conversation, and collaboration. And we are finding the challenge to be both inspiring and difficult. How can we preserve what is best about tradition while engaging in exciting, risky innovation?

What, then, is a *learning environment*? First, the idea of a learning environment is not new. Residential colleges, from the Middle Ages to the present, have represented an ever-evolving form of extended learning environment. What *is* new is the concept of a technology-enabled learning environment that can remove the artificial constraints and boundaries around the processes of learning—that can “open up” learning. Unlike a classroom or a learning space, this newly conceived learning environment is dynamic, not static—it evolves over time. Moreover, the learning environment is built around the notion of connectivity: to other learning environments, to a global conversation, to the world's knowledge resources, to learners both formally and informally. It supports tool-switching, serendipity, and multiple approaches to building understanding and catalyzing inquiry. A cognitive ecosystem, the learning environment shifts the educational paradigm away from simply delivering content and toward engaging, empowering, and connecting learners.

This dynamic potential of learning environments emerges from a culture of networking that thrives on the sharing of knowledge through interaction and collaboration irrespective of device or application. Learning environments empower

learners to overcome limitations of time, space, and distance. This culture is growing because today's learners experience expanded horizons of possibility. They realize the potential for interconnectivity in order to exchange social, academic, and professional information. These desires—which have always been present in education but are stronger and more pervasive today—have changed the scope, speed, and nature of learning environments and have made *connecting* critical to participation. To fulfill its historic mission, never

tutions, the academy, and society more broadly.

There are signs of an educational evolution as some institutions have embraced the concept of learning spaces to accommodate the strategic planning and technological innovation that empower people to communicate and collaborate more easily, more often, and more effectively. This widening of scope took place in at least two dimensions. The first dimension is spatial: the redesigning and weaving together of classrooms,

the digital learner, are now poised to navigate a rapidly changing matrix of factors where people, content, tools, and infrastructure find new combinations and sometimes surprising synergies to foster deep and enduring learning.

Any institution taking up this challenge must recognize, however, that students, staff, and faculty have widely varying expertise with established and emerging technologies. They may have had only limited exposure to the vocabulary and operation of technology applications and the associated tools. Their anxieties, which may appear in many forms and across many situations, must be addressed with collegiality and understanding. Even more important, these conversations should focus on how technology supports learning rather than on specific tools or affordances in isolation from the core academic mission—a caution that applies not only to emerging technologies but also to such venerable and too-seldom-examined technologies as learning management systems and other “enterprise” tools.

The concept of technology-intensive learning environments in higher education builds on earlier efforts to broaden and reimagine the idea of learning and how to support it. Sometimes, however, a difference in degree can yield a difference in kind, and the concept of learning environments offers an unprecedented opportunity to examine learning holistically and transformatively. With all the tools now available to us, a failure to create expansive, inclusive, and active learning environments would dishonor the mission of higher education: to benefit society through education, innovation, and service opportunities. Our challenge is to use technology wisely in the process of creating learning environments that stress connections, shared inquiry, and intellectual growth. We must embrace this opportunity for invention. If we do not, we risk having the conversation, the innovation, and even the learning itself pass us by.

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more important than in today's rapidly changing world, higher education must tap into the power and the pervasiveness of this participatory experience, this network of collective intelligence, and must create active learning environments that will empower both instructor and student. Indeed, the new emphasis may bring wonderful and unforeseen opportunities to reshape relationships between individual educational institutions and the academy as a whole—and among insti-

libraries, labs, informal spaces, and virtual/mobile spaces to form a coordinated, institutional learning web that offers students and faculty new opportunities before, during, and after class. The second dimension is organizational: the call for campus stakeholders to unite in designing, developing, and sustaining these disparate yet cross-functional spaces and places. Institutions that have created learning spaces, that have adapted internal structures to meet the needs of