



Outlook for Learning: A New Culture Emerges

Increasing our knowledge through research has been part of the Herman Miller culture for decades, as has applying what we learn to develop products and create physical spaces that promote learning and engagement. This focus on research has prompted us to study the outlook for learning and the implications they may have for students, faculty, and administrators.

Our study has been a sustained journey with significant milestones. As recent as 2005, for example, Herman Miller convened a series of Leadership Roundtables with representatives from both academia and the design world. The goal for these roundtables was to discuss trends that would affect education over the next 10 years. The resulting paper, “The Outlook for Learning: Views on the Future,” identified 12 predictions about the future of higher learning. Many have become realities in colleges and universities across North America, while some have had less influence than earlier research indicated.

Five Certainties: A View of the Future

Exploration of the future continues as we seek to define and refine the factors that are shaping education. We examine relevant issues in a variety of ways—participating in academic seminars, conducting focus groups, analyzing current trends, researching and reviewing literature, and talking with higher education consumers and providers. Based on these studies, we have synthesized what we’ve learned and observed over the past few years and present here five new certainties about the future.

As was true with the predictions we made earlier, these certainties are not tied to any timeline, but are part of a continuum; not all colleges and universities will experience them in the same way or at the same time. These five certainties are:

- 1) **The student-as-consumer mindset will have a major impact on all aspects of higher ed.** Students will have more control over their learning experiences; colleges and universities will become more focused on results.
- 2) **The changing role of the instructor will demand new skills and create new tensions.** Collaboration among peers and interaction with students will become more important than ever as faculty roles change.
- 3) **Colleges and universities will behave more like businesses, which will affect decision-making at all levels.** There will be more governance and a focus on success as colleges and universities adopt business disciplines.
- 4) **A new culture of learning will redefine pedagogy and place.** New ways of learning will dictate what spaces look like and where they are located.
- 5) **Learning will happen at every age, everywhere, all the time.** The process of learning—both formal and informal—will be a lifelong journey.

The certainties reflect current trends as well as possible impacts and outcomes. They are categorized by People, Pedagogy, and Place in this document because those are the areas most affected by these new trends.



The student-as-consumer mindset will have a major impact on all aspects of higher ed.

PEOPLE

As the demographics for college and university students become more diverse, the stereotype of an 18-year old going off to a state university no longer holds true. From a growing minority population entering college or university for the first time to careerist working on post-graduate degrees to baby boomers taking leisure classes, there is a much larger mix of students than ever before.

Influences such as ethnicity, gender, income, stage of life, profession, attitude, work modes, previous education, interests, aspirations, beliefs, and relationships all shape students' expectations. For example, children who have grown up using iPads and mp3 players will expect to use or have access to similar devices in class.

With so much diversity in student populations, colleges and universities will be challenged like never before to meet "customer" needs. "Big data" will play an important role in capturing information about the student; creating possibilities for academic interventions that will lead to student success.

Convenience and personalization will alter student perceptions about higher education as students ask themselves, what's the easiest, fastest way to get the degree or skills I need for my job? The experience will become more transactional (what am I getting for my money?) than transformative (how will this change me?).

PEDAGOGY

The diversity in student demographics and the variety of experiences they bring to the campus will influence how they want to learn. Students who know the value of interaction with peers will expect more connectivity and creativity from their college experience. Research indicates that when students interact with content, faculty, or peers, they gain a deeper understanding of the material, leading to student success.

As more students participate in Massive Open Online Courses (MOOCs), study part time, and take courses from multiple universities, academic planners will need to deliver curriculum in many different formats and platforms. There will be more interaction and less lecturing. A blended approach, where students learn content online and attend class for discussion, will be the norm.

Students will have more control over the way they learn, too, determining the balance between online and in-person learning and personalizing their curriculums for the way they learn best.

PLACE

As designers evaluate learning spaces, they must consider the future in order to use resources wisely. Spaces should not be anchored by technology; spaces must be flexible, adaptable, and nimble enough to accommodate different teaching and learning styles, making the real estate work smarter. Learning spaces must also be resourceful, healthful, social, sustainable, and stimulating.

Planners must also acknowledge that as online learning continues to grow, the traditional classroom is becoming less relevant to students; indeed, they can learn anywhere, so colleges need learning spaces everywhere, from dorms to cafés.

It should be recognized, too, that not all students will thrive in an online learning environment exclusively. They will still need interaction and discussion in the classroom. So planners must create campus environments that pull students to physical spaces, where social and intellectual experiences are transformative.



The changing role of the instructor will demand new skills and create new tensions.

PEOPLE

New roles for instructors will require new skills; interacting and engaging with smaller groups of students is much different than lecturing to large groups in auditorium type settings. It will require more intimacy and person-to-person guidance.

Working with a more diverse student body also requires special skills, such as patience and tolerance. Faculty must also become comfortable with a variety of teaching modalities to accommodate the growing range of learning options.

Studies show that the number of professors 65 and older more than doubled between 2000 and 2011. Will professors in their 60s be willing to adapt to new interactive teaching methods as easily as a 30-year old professor who has had the benefit of more collaborative learning experiences while growing up?

Indeed, millennial faculty will change the dynamics of the workplace overall because of new work style preferences and priorities, which is a different mindset from previous generations.

Younger professors may want more flexibility in keeping office hours, for example. The lines between work/home life may be more blurred as a result of 24/7 access to students via email and having more informal relationships with them overall.

PEDAGOGY

Factors such as shifting student demographics, increased online learning, and more focus on outcomes will all impact teaching methods. And just as a student's expectations are shaped by their experiences, the experiences that professors bring to the classroom will influence their attitudes as well.

Some may be quite satisfied with the status quo and will struggle to meet the needs of the "new" student. Those who are uncomfortable using technology, too, will have challenges. All the changes going on in the classroom may cause older faculty to become dissatisfied with new demands and possibly even result in early retirement. More part-time or adjunct professors may appear on the scene to meet new demands and fill gaps.

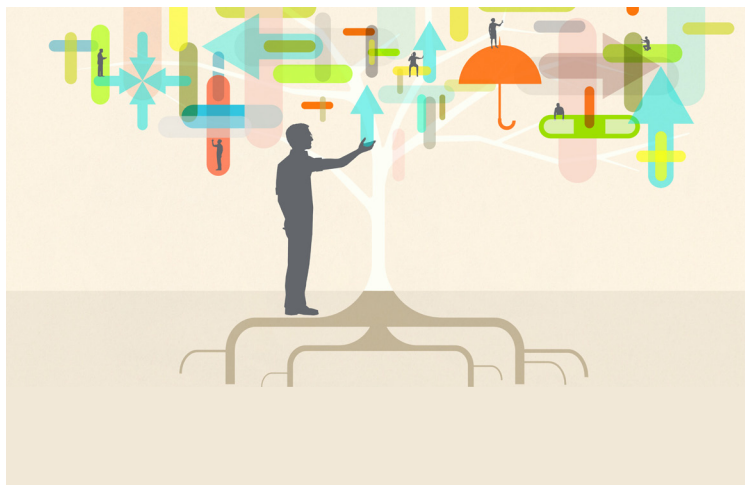
How a professor performs in the classroom (are his students succeeding?) may help determine whether he stays or goes. It's a lot to take in; retraining and more education may be required to prepare faculty for the coming changes.

PLACE

As the traditional classroom becomes less important to students, faculty may have to leave their offices and engage with the students where they are, i.e. in the library, or residence halls.

At the same time, a focus on making the real estate work harder (and smarter) will cause administrators to reevaluate the faculty spaces. Questions such as sharing spaces will arise as the traditional models of the "faculty office" are challenged and scrutinized. This may cause disruptions in the workplace across the campus.

Colleges and universities that focus on change management will help make transitions go more smoothly when preparing any significant alterations to office and learning spaces.



Colleges and universities will behave more like businesses, which will impact decision making at all levels.

PEOPLE

Colleges and universities today are struggling with real challenges, from budget shortfalls and rising costs to potential cuts in federal student aid programs to student readiness. At the same time, there is tremendous potential for growth as the workplace demands people with higher levels of education and training. Indeed, it's estimated that by 2018 the U.S. will need 22 million new workers with college degrees and 4.7 million workers with postsecondary certificates.

The solution to many of higher education's issues lies in designing and delivering educational experiences that meet individual student needs and desired outcomes. In the business-like model of the future, there will be more focus on student success, with emphasis on results. Continuous improvement in productivity and quality will also step into the forefront, just as it has in the corporate world.

As colleges adopt business models, the challenge will be not jumping to the short view, but to keep the bigger picture in mind.

To ensure that goals are met, governance will play an increasingly important role in the business framework of higher education. For example, leaders from university systems and boards of regents will be more involved with academic goal-setting, content delivery, and long-range planning.

At the same time, there will be more partnering between universities/high schools, universities/community colleges, and business/industry to meet demands for a more educated workforce.

PEDAGOGY

Many courses are now offered by leading universities online for free, and the convenience and economies of Massive Open Online Courses (MOOCs) delivery are driving student expectations to new levels. But the online delivery model informs the student; it does not educate them. Educators have a continued challenge of teaching students the difference between memorizing content and developing learning skills.

Planners, too, must balance the demand for Massive Open Online Courses (MOOCs) with the need for higher-level skills required in the workplace, such as problem solving, innovative thinking, and collaborating. There will be more connectivity between colleges and corporations to better align curricula in preparing students to meet the specific needs of the workplace.

There will also be increased competition between institutions; for-profit colleges will play a larger role in the multi-platform curriculum. In fact, studies show that for-profit colleges in the U.S. will be educating 15 percent of college students by 2010, versus the current seven percent.

PLACE

As education leaders look for ways to make real estate work harder, planners will focus less on space efficiency and more on space effectiveness:

- Future-proofing spaces will become a priority.
- Spaces will have to serve more than one function.
- The footprint of learning spaces will shrink (fewer large scaled spaces).
- Spaces will become more adaptable/changeable to meet on-going needs.



A new culture of learning will redefine pedagogy and place.

PEOPLE

Tomorrow's students will arrive on campus having had access to unlimited amounts of information from the time they were small children. Rather than conform to the mechanical nature of 20th century learning on campus, students will insist on the opportunity to access all resources and tools available to increase the effectiveness of their educational experience in a more organic structure; they will feel prepared to chart their own educational pathways. Colleges and universities will need to guide students through their chosen pathways and educational experience. Funding will be tied to metrics around student completion and graduation.

As for post-graduate education, students (and their parents) view it as a means to an end: They want to get jobs, or they want to increase their opportunities for a better job.

PEDAGOGY

Multi-sided platforms for delivering content are challenging existing models for planning and assessment. The future will bring an increased focus on connecting curriculum with student achievement.

- Learning will be more closely aligned with career pathways.
- A blend of online and classroom learning will be the norm as colleges seek to transform, not simply teach students.

- Massive Open Online Courses (MOOCs) will become more and more prevalent as courses offer features such as e-textbooks and virtual laboratories.
- The new culture will require experimentation and innovation.
- More governance and accountability will help create new models.

As the focus on student achievement increases, so does the interest in the assessment of learning goals. The relationship between learning space assessment related to learning goals and student achievement will continue to play an important role in integrated campus planning

PLACE

Thanks to a combination of technology and ubiquitous personal devices, every place has become a learning space. (Note: iTunes currently has more than 500,000 resources in their inventory from universities, museums, etc.) If you can learn anything, anywhere, at any time, does place still matter? Will the classroom eventually disappear altogether? The answer is no, but it will look much different in the future.

As technology and online learning change the structure of "on ground" (classroom) learning, new rules will come into play:

- Evidence-based design will develop as a reference for learning space design.
- Factors such as less lecturing and more group interaction will impact space design.
- Technology support will need to be flexible/adaptable because of continual changes.
- Technology and online learning will cause governing bodies to rethink the 50-minute class period structure.
- Students will pick and choose what they learn and where they learn it.
- The campus will evolve into a series of spaces for the sole purpose of active learning, collaboration, and innovation.

Classrooms must also be resourceful, healthful, social, sustainable, stimulating, and adaptable to accommodate a variety of learning/teaching styles and formats. Architects and planners must plan campus environments that nurture student success based on new demographics and new ways of learning. Not all students will thrive in an online learning environment only; spaces should be created that change the student/college relationship from transactional to transformative. That's what education is all about.



Learning will happen at every age, everywhere, all the time.

PEOPLE

Learning is a lifelong process, a continual journey, from birth to school to the workplace to retirement. And with more people of all ages and stages going to colleges and universities, how can educators plan now to take advantage of future opportunities?

It is worth noting, too, that in the future, more students will take courses over longer periods of time from multiple universities, and jump in and out of colleges. And as demand increases in the workplace for workers with higher levels of education, colleges will need to increase learning options to meet those needs. Campus planning will be reshaped to provide a variety of spaces incorporating a layered approach to flexibility and technology.

Community colleges, too, have opportunities to attract more lifelong learners, who appreciate the conveniences offered there. In the future, community colleges will:

- Become more fluid as they expand their roles into areas such as corporate or middle-skill workforce training.
- Partner with high schools to bridge the preparedness gap for higher education.
- Struggle to balance their increasing enrollments with shrinking budgets.

PEDAGOGY

New frameworks for content delivery will continue to enhance access to education. For example, mobile computing devices have become an integrated component of anytime-anywhere learning, and that will impact pedagogy in many ways:

- Students will come to college having used multiple personal devices their entire lives and will expect to have use of them during and after any in-person classes.
- Students will expect wireless access to be available anytime, anywhere.
- Gaming will become a part of the curriculum delivery modalities. (Note: 82 percent of children ages 2-5 play games on video-game consoles.)

Planners, too, must more closely align the design of the space with the learning activities occurring there.

PLACE

Campus planning will shift toward providing a variety of spaces, using a layered approach to flexibility and technology, creating more places throughout campus where students can learn informally. To make spaces work harder:

- Flexibility/adaptability must be incorporated into all space designs.
- Planners must look at every space as a learning space.
- Modular solutions will become more the norm.
- Thanks to technology, learning/knowledge will be accessible all the time.

Resources/Recommended Reading

Listed first are what we consider to be our “Top 10” resources in terms of what best represents our findings. With the exception of one, all resources can be found online.

A New Culture of Learning, Cultivating the Imagination for a World of Constant Change. Thomas, D., Seely Brown, J. 2011. Thomas and Brown.

Help Wanted: Projections of Jobs and Education Requirements for 2018; Executive Summary, Georgetown University Center on Education and the Workforce, <http://www9.georgetown.edu/grad/gppi/hpi/cew/pdfs/ExecutiveSummary-web.pdf>

Game Changers, Education and Information Technologies, Educause <http://www.educause.edu/game-changers>

The College Of 2020: Students, Chronicle Research Services http://www.washington.edu/faculty/facsen/issues/college_2020.pdf

A New Generation of Faculty, Association of American Colleges and Universities, http://www.aacu.org/peerreview/pr-su10/pr_su10_NewGen.cfm

Community Colleges: A Look Ahead, Herman Miller Research Library http://www.hermanmiller.com/content/dam/hermanmiller/documents/research_topics/Community_Colleges_Look_Ahead.pdf

CollabTech 2010: The Classroom Flipped http://www.youtube.com/watch?v=mwY9WZS-Sng&feature=player_embedded

Online Education Venture Lures Cash Infusion and Deals With 5 Top Universities, New York Times, <http://www.nytimes.com/2012/04/18/technology/coursera-plans-to-announce-university-partners-for-online-classes.html>

Harvard and MIT Put \$60-Million Into New Platform for Free Online Courses, The Chronicle of Higher Education, http://chronicle.com/blogs/wiredcampus/harvard-and-mit-put-60-million-into-new-platform-for-free-online-courses/36284?sid=wc&utm_source=wc&utm_medium=en

The Worrisome Ascendance of Business in Higher Education, The Chronicle of Higher Education, http://chronicle.com/article/The-Worrisome-Ascendance-of/132501?cid=cr&utm_source=cr&utm_medium=en

Additional Resources

New Way of Thinking About Higher Education, Inside Higher Ed <http://www.insidehighered.com/views/2012/05/24/new-way-thinking-about-higher-education-performance-essay>

Leveraging Service Blueprinting to Rethink Higher Education: When Students Become ‘Valued Customers,’ Everybody Wins, Center for American Progress, http://www.americanprogress.org/issues/2011/10/service_blueprinting.html

National Study of Undergraduate Students and Information Technology, Educause Center for Applied Research, <http://www.educause.edu/Resources/ECARNationalStudyofUndergradua/238012>

The Child-driven Education; Sugata Mitra on TED.com <http://blog.ted.com/2010/09/07/the-child-driven-education-sugata-mitra-on-ted-com/>

Campus Tech Leaders: People Matter Most, Herman Miller Research Library, <http://www.hermanmiller.com/research/research-summaries/campus-tech-leaders.html>

St. Louis University Case Study, Herman Miller Case Study Library <http://www.hermanmiller.com/research/case-studies/saint-louis-university.html>

Kansas State University Case Study, Herman Miller Case Study Library <http://www.hermanmiller.com/research/case-studies/k-state-olathe-international-animal-health-and-food-safety-institute.html>

Discovery Park at Purdue University <http://www.purdue.edu/discoverypark/>

Pfeil Innovation Park Notre Dame <http://pic.wakeupandsmelltheinnovation.com/about-us/>

Technopolis Innovation Park – Delft http://en.wikipedia.org/wiki/Technopolis_Innovation_Park_Delft

UW-Milwaukee Innovation Park <http://wauwatosa.patch.com/articles/tosa-is-home-to-uw-milwaukee-innovation-park>