



The outlook for learning—views on the future. Opinions vary on how higher education deals with change. Faced with diminishing resources, advancing technology and increasing enrollments, colleges and universities continually attempt to find a balance between innovation and tradition to remain relevant and current in a rapidly evolving world.

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In 2005, Herman Miller convened a series of Leadership Roundtables in an attempt to predict what trends would affect education in the year 2015. Representatives from research universities, state colleges, community colleges, private institutions and architectural and design firms participated in exercises designed to brainstorm the future. Their collective thoughts, contained in an original list of 12 predictions, were published concurrently in a white paper, "The Future of Learning—Scenarios 2015," a document that developed case studies of four fictional institutions that had taken a unique and visionary approach to dealing with contemporary challenges.

In the interim, the world economy has gone into a tailspin, and as of this writing there is no end in sight to the recessionary forces that have impacted global economies. To keep its literature current, Herman Miller convened a new panel of experts in the spring of 2009 to review the predictions of the 2005 panel. There was general agreement that many of the "predictions" developed by the original panels had already become realities, and that the original wording developed by roundtable participants needed a more nuanced and contemporary interpretation to recognize how the current financial environment had impacted the original discussions.

This paper contains the revised version of the 12 original predictions and the thoughts of the latest roundtable. There was general agreement that for each original challenge, opportunities were present for those colleges and universities willing to change to accommodate the current financial situation.

1. Globalization will influence and shape all aspects of teaching and learning.

Thomas Friedman, in his best-selling book *The World is Flat: A Brief History of the Twenty-First Century*, offers this observation on the growth of the Internet:

"Never before in the history of the planet have so many people—on their own—had the ability to find so much information about so many things and about so many other people."

With the playing field leveled, or "flattened," due to technology, Friedman identified young people in China, India, and Eastern Europe as providing increased competition to their counterparts in the United States, suggesting that a native educational system that can rapidly respond to competitive challenges is needed.

The presence of international students in the U.S., slowed after 9/11, is beginning to grow again. However, other nations are now attracting American students for graduate work in increasing numbers. Global higher education mobility is now a rapidly growing phenomenon, with over 2.9 million students seeking an education outside their home country, a 57 percent increase since 1999. The emergence of global rankings of educational institutions, the liberalization of the higher education sector through the General Agreement on Trade and Services (GATS) treaty, increased competition in science and technology, and the creation of a European Higher Education Area through the Bologna process, an effort to make academic degree and quality

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assurance standards more compatible throughout Europe. All these efforts indicate that the movement of students and scholars across national borders will increase.

There are still many unresolved issues. Global integration of higher-education practices, such as how to credential across borders and how to make institutional boundaries more “permeable,” still remain. The U.S. system is being influenced by the European practices, such as three-year bachelor’s degree programs. The current weakness in the dollar makes study abroad more expensive. As nations such as China and India develop their own university systems, there will be a decline in foreign student enrollments in the U.S.

Some may quibble with Friedman that the topography of the world hasn’t changed, but with the advent of the Internet, it certainly has made the world seem smaller.

2. The wide range of ability, preparedness, background, opportunity, and motivation of higher education students will require more varied and holistic approaches to inclusive learning.

There is a growing tension in higher education, perhaps felt more in some segments than in others. Colleges and universities seek and recruit an increasingly diverse student body, yet there is internal resistance to dealing with the learning issues that come with the diverse abilities, aptitudes, and skills that the current generation of students possesses.

How well are today’s students prepared to deal with college-level learning? Private liberal arts colleges and research-based universities are particularly challenged by the diverse abilities and lack of preparation found in many students, while community colleges absorb an increasing workload in these areas. There are concerns voiced by faculty in all sectors as to whether the core mission of the institution should include developmental or remedial coursework. Another issue is the increasing realization that our adult population has literacy issues, including technology competency, problem-solving abilities, critical thinking, and communication competency that must be addressed to maintain a competitive workforce in an information age.

Taking an ostrich-like approach is a not a viable response to this challenge. Teaching methods and pedagogies, institutional resources and commitment, and the traditional ways of engaging students—all must be re-examined to meet the contemporary needs of America’s students and workers.

3. The demand for more experiential, outside-the-classroom learning opportunities will require faculty to respond thoughtfully and proactively.

The newest generation of college students has a preferred mode of activity and interaction not always in sync with an educational system that is centuries old. Writer and educational consultant Marc Prensky, who coined the word “NetGen,” says today’s students are not interested in large lecture halls, preferring informal small group discussion, often conducted through text messaging or e-mail, as a means of gaining understanding of curriculum content. They choose search engines to find information,

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frowning on library-centered research methods or the local course management system (CMS). The social nature of the NetGenerators, as well as their desire for experiential learning, sends a message to educators that interaction is an important technique for colleges to embed in the curriculum.

The importance of interaction is not new; learning studies have consistently demonstrated that students learn more when they interact—with material, with each other, and with faculty. The increasing preference of students for more experiential learning is part of the increasing demand for programs that develop practical, job-enhancing skills. As long as there is a significant gap in student and faculty perceptions regarding the role of each in determining the degree and amount of experiential opportunities to be pursued, there will be the potential for alienation, discomfort, and disagreement.

Colleges need to work with employers to provide faculty with industry “externships” that will update and refresh their knowledge of on-the-job requirements. Involving industry in more meaningful ways to provide input, assistance in curriculum development, internships, apprenticeships, co-op experiences, service learning and program advisory committees can help faculty understand the need for involvement and active engagement in the teaching and learning process.

4. Colleges and universities will be expected to deliver more education in less space—to increase their “learning per square foot.”

There are two aspects to this statement—the expectation that higher education, in the face of unparalleled fiscal challenges, will be asked to do more with less, and that colleges need to become more efficient in response to calls for greater accountability.

It is doubtful that the planners who designed our current classrooms had technology, innovation, and change in mind when facilities were on the drawing board long ago. It's more likely that durability, usability, and cost effectiveness were the driving principles. Too often, questions on multiple pedagogical approaches in a given space, its functionality and flexibility, access to technology, and the human needs of the room, such as lighting, temperature, acoustics, adaptability, and comfort, were lost in the rush to come in on time and under budget.

We have seen that technology has significantly affected our world, and its presence is strongly felt in education, where its growing popularity has increased pressure on an outmoded infrastructure not designed to support the demands of bandwidth, wireless capabilities, and increased power usage. While virtual learning has an increasing role to play in the future, there is no reason to eliminate the place-bound campuses and locations in which government and private educational institutions have invested over centuries. But the likelihood of massive new capital construction funding or extensive renovations is small, given current circumstances. A balanced, blended approach may be the answer.

To be fully accountable, colleges must find ways to respond to critics by demonstrating that deep and meaningful learning takes place in their facilities. Stronger metrics that

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accurately assess learning are needed to assuage concerns about the accountability of higher education in tough economic times. It's time to transform the twentieth-century classroom into the twenty-first-century learning environment.

5. Advancements in technology will drive ongoing changes in all aspects of college and university life and offer new opportunities to enhance and broaden learning experiences.

Today's students bring with them not only a desire for experiential and collaborative learning; they also possess technological competence not seen in previous generations. Older faculty, trained in another era without the benefits of today's technology, may tend to teach as they were taught, resisting a change in their pedagogy or grudgingly increasing their technological competence.

Professional development programs tend to support further expertise in a field rather than provide training and support on how to master current technology to enhance teaching and learning. Administrations are challenged to find the right balance in budget allocations between instructional and administrative computing.

Called upon to support the entire spectrum of college operations—instructional computing, intranet services, student records, payroll, purchasing, admissions, business transactions, financial aid, library and student health centers—IT departments are increasingly challenged to be all things to all people. Any perceived preference for one department over another engenders an us-versus-them mentality that hinders effective collaboration and implementation of services.

There is no service or activity conducted in higher education that will not be increasingly affected by advancing technology. The time to take an institutional, comprehensive, and holistic review of this rapidly growing tool is now.

6. Interdisciplinary learning will become increasingly common and popular.

One often-heard criticism of higher education is that its structure resembles a group of silos—separate colleges, divisions, or departments that rarely interact. Creative, innovative teachers who want to explore the multidimensional aspects of their subject matter are still held hostage by the Carnegie unit, the need to break down content into 50-minute classes and three-credit courses. Occasionally, creative initiatives such as the learning communities movement and interdisciplinary studies programs are successful, but they are in the minority.

How can a college change its way of doing business to deal with the new generation of students who seek a more collaborative, interactive, and experiential education? Again, technology may be the lever that accelerates change.

Here is one possible scenario. The Internet introduces the student to a vast array of data, information, and knowledge. The physical limitations of the collection in a

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brick-and-mortar library are gradually replaced by limitless opportunities for primary source research by the student, which increasingly becomes self-directed. In time, the role of the faculty evolves from the traditional model—lecture, assign, and evaluate—to one of helping a student identify a course of directed research and study in a set of appropriate disciplines, critiquing progress, and learning with the student throughout the research process.

Ultimately, the faculty-student relationship is changed, and the curriculum becomes a co-designed course of study in which the student contracts for a learning experience with mutually agreed upon outcomes, while the faculty member monitors, assesses, and certifies student progress.

Freed from the classroom, faculty can now collaborate with colleagues throughout the college to design programs of study, which may be called interdisciplinary, co-disciplinary, trans-disciplinary, or whatever term seems appropriate. The important thing is that the curriculum—like life itself—is challenging, rich, and diverse.

7. Students will take much greater control of their own learning as proactive producers and managers of their own learning solutions, materials, and portfolios.

In recent years, there has been an often-contentious discussion on the concept of the student as consumer or customer. Naturally there has been resistance to this concept. There are concerns that such an approach lowers quality, dilutes the authority and role of the teacher, and places the college in a passive, reactionary role. This resistance is natural, as the underlying assumptions of a college education have remained remarkably constant over generations: teachers are experts who disperse their knowledge in a structured setting, and students are evaluated on how much of the dispersed information they have stored.

But times are rapidly changing. Interest in online learning is surging for a variety of reasons, including flexibility in scheduling, family and time constraints, cost of transportation, dissatisfaction with traditional academic scheduling, and economic pressures. More asynchronous interactions with learning institutions provide needed flexibility in a student's life. As noted earlier, colleges and universities are now facing unparalleled competition. The growth of home schooling and charter schools indicates a growing dissatisfaction with the educational establishment.

If students are becoming more proactive regarding their educational choices, then teachers must rethink their approach to the classroom and laboratory, acting as directors and not dictators of student learning. The Internet offers the student a vast array of data, information, and knowledge, providing limitless opportunities for primary source research, which is increasingly becoming self-directed.

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technology infrastructure. Ultimately, the faculty-student relationship could become a co-designed course of study in which the student contracts for a learning experience with mutually agreed upon outcomes, and the faculty member monitors, assesses, and certifies student progress.

Just as our society has moved from a manufacturing to a service economy, so will higher education eventually be seen as a service oriented institution, rather than a manufacturer of knowledge. And ultimately, if a student sees himself or herself as a customer—paying the bills and having high expectations of receiving educational value for the money—the student will go, or log on, to the institution that fulfills an immediate learning need.

8. The average age of students will continue to rise; the mix of cultures, ages, and learning styles will become increasingly varied and rich.

The student body is getting older. Nationally, 39 percent of students enrolled in all degree-granting institutions are above age 25, including 18 percent who are over 35. For many colleges, evening and weekend classes look more like adult education centers rather than the traditionally youthful college environment.

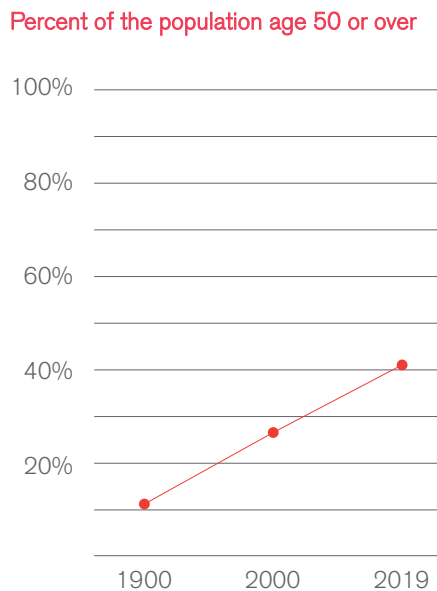
Community colleges enroll 44 percent of all undergraduates in the country—almost 12 million in early 2009. The average age of the student body in two-year colleges is close to 30. Full-time students are in the minority. Women make up almost 60 percent and minorities make up 36 percent of all enrollments. Given its low cost of tuition and local appeal, this sector of higher education will continue to grow and become more diverse.

There is another demographic issue that education needs to address. As we grow as a nation, we also age. The fundamental age distribution of our population is changing at a brisk pace. In 1900, only 13 percent of the population was age 50 or over. In 2000, it was over 27 percent. And in ten years, it will be almost 40 percent.

Let's look at some AARP statistics as they pertain to the workforce. In recent years, the highest growth rate in the U.S. workforce was among workers aged 55-64. By 2015, nearly one in five workers will be 55 or older. Many will want to continue working, yet will need retraining to acquire new skills. America's colleges and universities are best qualified to provide this training. Teaching groups of students of varying ages, backgrounds, and abilities will be a major challenge to colleges in the future.

9. Competition for students and resources will force colleges and universities to sharpen their brands and identities and distinguish themselves in new ways.

The current economic malaise has created many challenges for higher education. Publicly funded institutions face cuts at the state and federal level. Endowments decline in value as fluctuations in the stock market diminish investments. According to



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FinAid, a leading financial aid website, tuition tends to increase on average about 8 percent per year. This tuition inflation rate means that the cost of college doubles every nine years. For a baby born today, tuition will triple by the time the child matriculates in college.

To attract qualified, motivated students, colleges and universities must find ways to attract the best and brightest. In this regard, they are no different than corporations who seek to attract the most talented workers. A positive image translates into sales for corporations and enrollments for higher education.

Many aspects of the educational experience have direct branding implications: student recruiting and admissions, alumni giving, community relations, faculty engagement, staff culture, quality of academics, and the entire student experience. The brand image of an institution is created by and reflects many institutional dynamics.

Just as business leaders have increasingly focused on branding as the marketing means to shape identity and appeal for their product, colleges and universities need to understand the needs, expectations, and perceptions of their stakeholders and constituents (students, faculty, alumni, employers, government) and align their brands accordingly.

10. Colleges and universities will become increasingly important parts of regional economic development, both in creating growth and taking advantage of it.

The days of “town versus gown” are long past. Even private liberal arts colleges recognize the need to relate to, and be a part of, the community in which they are located. While the relationship between campus and community can still be ambivalent due to local issues, the two entities are becoming increasingly interdependent. This is primarily due to the growing demands of economic development and the role colleges and universities play in the training and retraining of America's workforce.

No country can achieve sustainable economic development without substantial investment in human capital. If America wishes to retain its leadership in an increasingly competitive world, it must equip its citizens with the skills and abilities to succeed in a knowledge-based economy. Investing in an educational system that develops and trains our human capital will produce future increases in productivity and profitability. The relationship between economic development and education is symbiotic.

Forward thinking educational institutions will engage business, labor, economic development, and workforce organizations in their region in developing holistic approaches to strengthening training programs through collaborative educational career pathway programs, student internship programs, and cutting-edge curricula.

Colleges and universities need to be more proactive in participating in local and regional economic and workforce development issues. They can position themselves as centers that bring together and strengthen various regional endeavors. They are the logical conveners of initiatives that strengthen the local economy. Connecting strongly

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with governmental economic development organizations will increase local support at a time when higher education is challenged with an uncertain economic future.

11. The structures of educational institutions and the types of employment relationships between them and faculty will continue to multiply; inequities among faculty will cause tensions.

The American Faculty: The Restructuring of Academic Work and Careers (Schuster and Finkelstein) has provoked considerable discussion within the academy with its pessimistic view of the future of the professoriate. The author's data-driven research predicts a big increase in the use of part-time faculty with lower wages and no benefits, a decline in full-time and tenure track appointments, a shift from the arts to the professions, increasing workloads, wages falling behind inflation, and large applicant pools for fewer positions. The culmination of these trends may lead to a stressful, fractious working environment.

There's another cloud on the campus horizon—faculty are aging. Data from the National Center for Educational Statistics shows that in 1987, the age structure among most faculties could be described as uniform, with 25 percent of the full-time instructional staff less than 40 years old, 50 percent between the ages of 40 and 54, and 25 percent being 55 or older. However, the professoriate aged rapidly during the next decade, so that by 1998, only 18 percent of faculty was less than age 40 while over 31 percent were aged 55 years or older. More recent statistics confirm the gradual aging of the faculty.

Senior faculty, seeing retirement savings and investments shrink due to the economy, are now much less inclined to retire. Continued employment of faculty beyond normal retirement age diminishes prospects for promotion among eligible younger faculty, reduces the number of new hires with the potential to bring revitalized energy to academic departments, and increases labor costs. On the other hand, delayed retirement might help institutions respond to increased numbers of students while maintaining a veteran instructional resource and keepers of institutional memory.

In the current economic climate, academic leaders should re-examine personnel policies and engage in strategic planning, not just to fill positions when they become open, but to select a new generation of faculty who can deal with a technologically sophisticated, diverse, and growing student body.

12. Accountability and assessment tools will continue to become commonplace in defining institutional effectiveness.

Historically, quality in higher education has been defined as adherence to self-defined standards, with accrediting agencies overseeing academic enterprises. While other countries regulate higher education through a government ministry, the United States has opted for a system of voluntary self-regulation. Over time, criticism about the relatively

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static rate of change in higher education, low completion rates, and poor workforce preparation has increased.

The Spellings Commission is the latest group charged with recommending a national strategy for reforming postsecondary education, with a primary focus on how well colleges and universities are preparing students for the 21st-century workplace. A significant motivation behind the Spellings Commission's formation was the fear that the United States higher education system was deteriorating and failing to prepare the workforce for the rigors and competitiveness of a global marketplace. Not unexpectedly, the Commission's report was met with sustained and vocal criticism from the education establishment.

The greatest concern was focused on a Commission proposal that would create a public database, where statistics and other information about colleges and universities could be viewed by anyone in order to provide necessary accountability. The database could eventually contain items such as the "learning outcomes of students." The Commission argued that colleges might have a more vested interest in the success of their students if this information were made public to prospective students and their parents. The critics argued that it was too much work to measure and improve performance, and such a movement would compromise the "integrity of the academy."

There is a dangerous link between funding challenges referenced earlier and increased calls for accountability, a quid pro quo that legislatures and governmental agencies could use to leverage unwilling colleges into cooperation. Publicly funded institutions need to be accountable to their principal stakeholder—the public. Should colleges continue to resist implementing solid assessment systems and accountability measures, they risk exacerbating an already tentative relationship with their benefactors. It is better to be proactive in assessment than to be reactive to external mandates.

Looking to the Future

Each of these twelve statements provides both a challenge and an opportunity for colleges and universities. Scanning the horizon for future trends that could impact the educational enterprise is a wise expenditure of institutional time and energy, assuring a strong, resilient, and vibrant academy for generations to come.

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