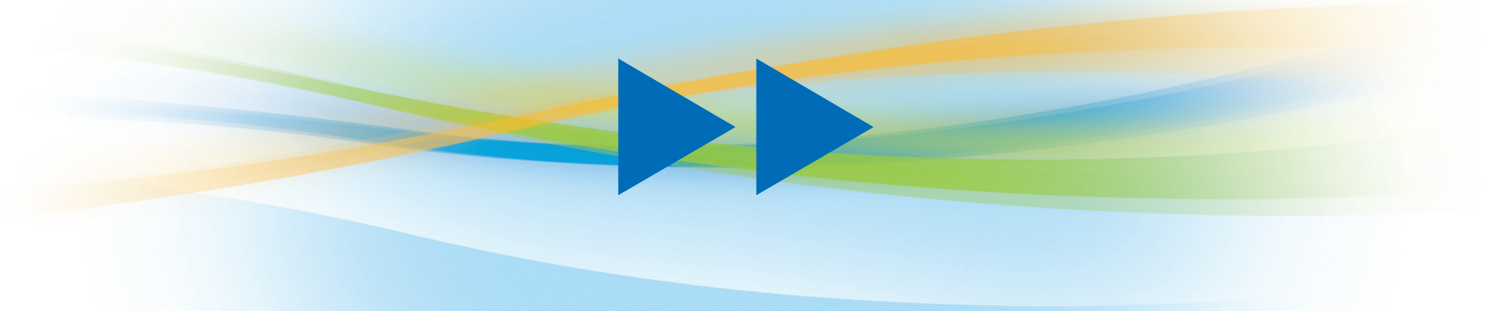
Fast Forward



10 Reasons

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NATIONAL COUNCIL FOR CONTINUING EDUCATION & TRAINING

Dear Educators:

Over the past year we have witnessed firsthand the tumultuous change that has affected almost every part of the economy. Higher education institutions and more specifically, community colleges are in many ways at the center of this storm – feeling the pressures of budget cuts, resource shortages, and strained facilities. Community colleges are also in the unique position of having surging undergraduate enrollments and a heightened demand for vital skills training and workforce development that they are ideally positioned to deliver.

These times call for bold thinking and action by our leaders. Today's students have never known a world without computers, wireless communications, and Internet connectivity that is becoming more ubiquitous by the day. They expect more from their investment in learning– and for it to be different. They know what's possible and refuse to accept less. They are consumers that have become accustomed to quality and choice and competitive prices – at the click of a mouse or the tap of a finger.

Now more than ever, higher education has the opportunity to reinvent itself and lead the way.

- ▶▶ **Fast Forward** to a world where technology enhances teaching and learning by providing new levels of engagement, interactivity, and efficiency – removing the obstacles of time, place, position – and price.
- ▶▶ **Fast Forward** to a world where partnerships augment day to day resource constraints and shortcomings through relationships that provide new capabilities without the investment risk, fixed operating costs, or long lead times of internally developed solutions.
- ▶▶ **Fast Forward** to a place where flexibility and change complement the tried and true, forming a dynamic new education system that answers the needs of its customers as well as its practitioners.

Education To Go and Cengage Learning are proud to be partners with so many of your institutions and we look forward to meeting these challenges and helping you accomplish great success.

Sincerely,
Jerry Weissberg
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The Challenge of Change

Through an extraordinary combination of circumstances, permissive deregulation, errant policy, and old-fashioned greed, America is now facing an economic challenge unseen in recent generations. Every aspect of the country's fiscal health is under siege.

In this time of crisis, those in leadership positions, whether in business, government, or education, have the opportunity to reexamine underlying assumptions, basic operations, and historical precedent to determine if the current *modus operandi* is the appropriate one to deal with the challenges of contemporary problems as well as unanticipated future difficulties.

The extraordinarily diverse and complicated system we call higher education has weathered previous storms with remarkable resilience. Its roots literally go back for centuries. In Thomas Cahill's *How The Irish Saved Civilization*, the author lovingly tells the story of how Irish monks copied the scriptures and classical texts threatened with extinction during the dark ages, thus preserving the great works of religion literature, history, and philosophy. They subsequently carried these treasures with them as their missionary work spread, becoming teachers of both the gospel and the works of the great minds of antiquity.

From this movement, the medieval university evolved. While the professoriate may not be the oldest profession, it has a long and noble history. The first scholars and teachers possessed copies of books handcrafted by the monks with elaborate illuminations. Teachers gathered groups of students and read the books to them. To possess one of these books was to possess knowledge. Then technology changed everything.

Johannes Gutenberg developed a process using moveable type printing. This revolutionized book production, and the process spread rapidly throughout Europe and contributed to what we call the Renaissance. Now, the student could have the book and could learn independently. This fundamentally changed the relationship between teacher and student.

If our financial markets are in need of a major "correction," is higher education, an entity several centuries in the making, ready to change in these difficult times.

As we look at how rapidly the Internet and technological advances have impacted higher education in recent years, we should ask if we are in the middle of yet another frame breaking change in pedagogy. Are we ready to examine – and change again – the existing relationship between teacher and student that has endured for centuries, to change the way we operate and educate?

The academy moves very slowly. If our financial markets are in need of a major "correction," is higher education, an entity several centuries in the making, ready to change in these difficult times, or will it fight to remain what it has always been?

In this paper, we will investigate ten issues that challenge higher education to question its basic assumptions and methods of operation, focusing on three areas: people, places, and processes. Some may apply more directly to your institution and situation than others. We will look at faculty, students, financing, facilities, relationships, technology, infrastructure, pedagogy, and demographics. Each topic is worthy of serious discussion on campus. The current crisis of confidence in the American economy only adds to the urgency of the moment. The time to have these conversations – and to embrace change - is now.

1 ▶▶ The times they are a-changin' - except in education.

The old adage, "The more things change the more they stay the same," perhaps describes how any organization's leadership sometimes feel when they try to encourage employees to accept change – without success. The most well intentioned attempts to improve an organization's processes, practices, and values often fail when encountering entrenched mentalities, policies, and traditions.

Organizational change is never easy, and it is particularly difficult in education for several reasons. First, it takes time and significant effort to change an institution, and the people who might have a chance to do it already have full-time jobs. Second, colleges hire faculty and staff to essentially maintain the organization in its current configuration, not to create a new one, so change is not imbedded in the ethos of the organization. Third, and perhaps most challenging, the structure of an organization is designed to serve and preserve the paradigm that created it, and the paradigm inherent in the DNA of higher education is what Robert Barr and John Tagg, in their seminal 1995 article, called the "Instruction Paradigm," in which the purpose of a college is to provide instruction. In a time of great uncertainty and rapid change, this model of a college is showing its age.

Consider this: our academic calendars still contain the remnants of an agrarian age when youngsters were needed back on the farm in summer for the harvest. Our educational system resembles an industrial age model with curriculum fragmented into parts and time segments. We are in an information age, yet persist in the old ways. The underlying assumptions have remained remarkably constant over centuries:

- Teachers are experts who create and disperse knowledge
- Teachers deliver knowledge in the form of information
- Students are evaluated on how much of the dispersed information they have stored

If teachers and administrators can honestly reflect on their own assumptions and beliefs, they will find that what they take for granted about education is embodied in these three statements. Faculty divide knowledge into parcels of information that they give to students within designated time slots. All this is often done in nondescript buildings and rooms that house large numbers of students. Students are motivated to do well by testing, a vague grading system, and the promise of a credential.

Administrators, faced with diminishing resources, advancing technology and increasing enrollments, continually attempt to find a balance between innovation and tradition. Tradition often wins. Longtime observers of higher education will usually agree that subtle tensions and conflict between faculty and administration are a given in any campus culture. Administrators see faculty as resistant to change. Faculty see administrators as being unnecessarily intrusive in their work. In reality, both administrators and faculty are prisoners of a system, structure, and history that prevent meaningful collaboration between and among campus stakeholders. Creative, innovative teachers are still held hostage by the Carnegie unit and by the recurring rhythms of the academic year with its long holiday breaks and light summer schedule, as if to say that learning can only take place in certain familiar patterns and at certain times of the year.

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Everyone – faculty, administrators, support staff, trustees – are caught up in defending a system not of their creation. It is the system in which they were educated. It is the system that annoys or infuriates them when, as parents, they see their children endure some of its inanities. Yet when they are inside it, when they work in it, when they teach in it, they *become* the system, and amazingly, they resist changing it.

Yet, if we cannot change our colleges from within, our current economic situation may be force change upon us. The popularity of the charter school movement, home schooling, franchised for-profit local learning centers, and the rapid growth of online educational alternatives are all clear indications that both the public and their elected officials are looking for ways to bypass the educational bureaucracy that is choking traditional institutions.

For the first time in education's long history, the establishment is facing competition. The growing 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. Given the enormous size of our educational system, the sheer scope of change required, and the entrenched forces opposing such change, significant innovations are scattered. What is needed is more than incremental change. Unless we can transform our institutions to be relevant, competitive, accessible, and accountable, we may lose the franchise.

2 ▶▶ Change in education will come through redefining relationships.

The rapid growth of technology in education has provided a window of opportunity to effect the changes necessary to survive in these challenging times. Consider how much technology has transformed our communication and personal interaction. Not long ago, our "in basket" would contain little pink slips headed "While You Were Out," identifying the phone calls we missed. There were memos to type (on a typewriter!), duplicate, and stuff in interoffice envelopes, meetings to schedule on our desk calendar, and opportunities to play "telephone tag." Faculty were comfortable in their departmental enclaves, venturing forth to occasionally serve on a college committee. Students came to us for instruction at times and in places that suited us. The local campus was the only educational game in town.

All of that is gone. The pervasive influx of e-mail and voice mail has moved us to a different, asynchronous way of communicating, profoundly impacting how we relate to colleagues, staff, and students. We communicate over the campus intranet, adjusting the text and tone of our messages because e-mail deprives us of the rich dimension of human interaction we experience in vocal expression, nuance and intimation. We purchase materials through e-commerce, thus changing the way we relate to suppliers and vendors. We still teach students in classrooms, but we also interact with them in chat rooms, online, and through interactive video. We market our colleges differently, knowing that students now view us as one choice among a myriad of educational providers offering a variety of delivery formats.

Now is the time to redesign basic relationships we have left unchanged for generations – the basic pedagogical interaction between teacher and student, the often turbulent tension between faculty and administration, the caste system relationship that differentiates faculty from support staff, the patriarchal relationship between administration and students. By consciously and systematically examining the many ways in which we relate to each other in a college environment, and by analyzing how technology can liberate us to redefine these relationships, we can devise a new infrastructure, which will inevitably drive the transformation of our organizations, thus making us competitive, accountable, and ultimately liberated from the structural and organizational limitations we have accepted as the norm since we were students many years ago.

If the basic pedagogical relationship between teacher and student changes, other dimensions of the educational environment can change as well to support student learning. Faculty will need instructional design assistance, as well as technical support to maintain ongoing asynchronous communication with students. The nature of academic advisement will also change. Freed of the constraints of the three-credit class and fueled by the limitless research potential of the Internet, faculty can begin to fully explore the multidisciplinary dimensions of their subject matter, an approach previously limited by the constraints of the classroom. Faculty will develop new collaborative initiatives with colleagues in other disciplines, possibly leading to the end of the traditional academic department as we currently know it.

For a model of how this might work, consider the evolution of online courses. The earliest online courses were text-based replications of course syllabi. As faculty learned the technology of presentation software and knowledge navigation tools, they began to design new approaches to facilitating learning by changing the ways in which they related to students. As this phenomenon continued to grow, new faculty roles emerged as access to information and multiple learning sources became generally available to student and faculty alike. Rather than allowing students to "surf" randomly to find information relevant to a course of study, faculty now research and develop Web sites relevant to their courses, synthesizing the information, making it into a cohesive body of knowledge, skills, and competencies that students may access in a variety of learning modalities. And we are just at the beginning of this movement.

Let's look at another relationship, the one initiated by the student with the teacher. The Internet opens the student to a vast array of data, information, and knowledge. The physical limitations of the brick and mortar library are gone, replaced by limitless opportunities for primary source research, which is increasingly becoming self-directed. Thus, the role of the faculty can be changed from the traditional model – lecture, assign, and evaluate – to one of critiquing student progress and learning *with* the student throughout the research process. In time, the student, sensing this independence, will become more proactive in negotiating grade expectations and/or conditions of evaluation. As certification of skills and competencies grow in value as coin of the realm in the business world, more individualized programs of study will emerge, supported by the technology infrastructure. Ultimately, the faculty-student relationship becomes 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.

The idea of the student as a "customer" proactively designing a course of study with the teacher has been viewed as heresy in some faculty circles. But just as our society is becoming a service economy – the manufacturing and services sectors of our economy have essentially reversed their positions of importance in the past 50 years – so will the academic community come to 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 expectation of receiving educational value for the money – it really doesn't matter what any of us think. The student will go – or log on – to the institution that fulfills an immediate learning need.

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Many academic institutions initially viewed the incursion of technology into education with unease, hostility, or outright fear, perceiving it as the black hole into which precious funds flowed, diverted from traditional recipients. But technology has not gone away, and as we assimilate it into our daily work, we begin to explore its rich potential. Eventually, we may see the seismic changes technology has wrought in how we behave, perform, collaborate, and produce meaningful student learning.

3 ▶▶ The higher education business model – if there is one – is antiquated and unresponsive.

Wander down the corridor, stop in at several faculty offices, and ask this question: "Can you tell me what the business model of the college is?" It's doubtful if you'll get an accurate answer, or any answer at all. It may be a topic that has never been discussed or publicized. In fairness, it's not the responsibility of the faculty to know or espouse it. Perhaps you won't get any answer because there is no cogent or rational model.

In the business world, companies develop business models to demonstrate how they can sustain themselves by generating revenue. A product or service is developed, a method of marketing and selling it is implemented, and a customer base is identified. Does education function in a similar manner?

Generally, faculty would frown on their courses being labeled as products or their teaching as a service. They want nothing to do with selling or marketing, except on a limited basis for their own courses or department. And as we've said, calling a student a customer is likely to start a heated discussion in some circles.

Today's community colleges have a core business – providing associate degrees or certificates by routing students through a prescribed set of courses. Public institutions gain revenue based on a complex full-time-equivalent student model, with no two states using the same formula. Credit-free instruction or training as well as recreational or avocational learning opportunities are all peripheral to the mission. Anyone who comes into the college for one or two refresher courses and subsequently leaves fully satisfied with the experience is nonetheless labeled a "non-completer." Public funding mechanisms sustain the model by rewarding the offering of courses and credit hours. There are no rewards for successful grades, course completion, or learning. The method of generating revenue is putting students in seats.

In his illuminating essay "The Decline of the Knowledge Factory," John Tagg argues that the college of the post World War II period is essentially a knowledge factory, with the student passing through on an assembly line of courses. Picture the student on a virtual conveyor belt, passing from one instructor to another. At each station on the line, another piece of specialized knowledge is attached. The pace is steady – the instructor has exactly one semester or quarter to affix the knowledge. At the end of the belt, the student emerges as the product of many hands, yet there is no evidence of quality control, no guarantee that the finished product is a coherent holistic entity. A transcript and a diploma are produced, but not necessarily an education. As we move into a knowledge economy, graduates will need increasingly sophisticated knowledge and skills. Does this business model meet the challenges of the new economy?

Increasing calls for accountability will demand greater quality. Enrollment projections point toward larger quantity. Given the archaic funding models currently in existence, growth is the only option to maintain current revenue streams. The current business model – Tagg's knowledge factory – sacrifices quality to deal with quantity.

As colleges strategically plan for the future, they can no longer afford the luxury of functioning on a part-time or selective basis, continuing to schedule classes based on an outdated calendar developed in a bygone agrarian era, in which the traditional classroom was one stage on the assembly line. The age of the college as a local knowledge monopoly – the place where you go to take courses – is over. As information and educational options become more universally available through technology, learners now have choices due to increasing competition.

America has seen in recent years the steep decline of manufacturing and the rise of the service economy. We know all too well the metaphor of the Rust Belt. The age of the factory is over. The rate of change in society compared to the rate of change in education is amazing and disturbing. Can higher education change in order to catch up, or is our model too antiquated to survive?

4 ▶▶ Students are changing far more rapidly than the colleges that recruit them.

Students have a preferred mode of activity and interaction that is not in sync with an educational system that is showing its age.

Today's students have a new set of characteristics that make them a unique force to be reckoned with. Simply stated, they have a preferred mode of activity and interaction that is not in sync with an educational system that is showing its age. Marc Prensky, who coined the word, "NetGen," says students are not interested in large lecture halls, preferring informal small group discussion, often through text messaging or e-mail, as a means of gaining understanding of curriculum content.

In turn, this new breed of student has caused many faculty to question traditional pedagogy, to rethink their interaction with students both online and in the classroom or laboratory. This welcome flexibility is more prevalent in the younger generation of faculty while resistance to change, particularly when dealing with sanctity of the classroom, is still evident among their older colleagues.

Consider this scenario. Senior educators went through what was called a "formal education." Essentially, they went to classes, listened to a lecturer, took notes, completed reading assignments, took a number of examinations and eventually were awarded a degree. The NetGen students will have none of this. They want a learning space in which they can get to know one another, engage in dialogue, work independently or in groups on projects, get or provide feedback, and in general, seek a collaborative environment that fosters understanding and learning.

They socialize, communicate, and learn in different ways than the preceding generation of students – using 3D visualization, podcasting, wikis, Facebook, My Space, Twitter, social networking, and blogging with alacrity and ease. They are multitaskers who want their learning in a variety of modes to match their curiosity and interests. They are technologically astute, having had access to it all their lives. In many cases, they are more technically savvy than the people who are teaching them. Because of their mastery of technology and the ubiquitous availability of data and knowledge, they don't necessarily have – or want – access to a brick and mortar campus.

The new student instinctively uses a search engine rather than go to a library. Consider how the role of the librarian has changed in the past decade. No longer the exclusive "keeper of the flammable inventory," today's librarian now presides over banks of computers, ably guiding the learner through self-initiated searches. This new generation of students favors experiential learning implemented by technology that they can customize. Due to the ever-present Internet, any space has become a potential learning space.

Yet despite the research on this new generation by Prensky, Educause, and others, higher education has been slow to respond. The social nature of the NetGeners, as well as their desire for experiential learning, suggests that interaction is an important technique for colleges to implement in the curricula. 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 – yet colleges still operate under an old structure and organization, still offering lecture as the predominant delivery mechanism, in a time-bound, place-bound bureaucratic mode.

However, the NetGen students are not the only significant demographic change in the student body. According to the National Center for Educational Statistics, three-quarters of all undergraduates are "nontraditional." They may have delayed enrollment after high school, attend part-time, hold a full time job while attending classes, have dependents, or even lack a high school diploma.

While faculty and administrators assume that they understand their students, this diversity within the entire student body in terms of interests, attitudes, experience, and goals may be difficult to fully fathom. It is important to understand who they are, how they are different, identify what learning activities are most engaging for them, and to probe how technology can make both student and teacher more productive and effective. To attempt to educate students without understanding who they are is a recipe for failure.

5 ▶▶ The professoriate is aging – crisis or opportunity?

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% of the full-time instructional staff less than 40 years old, 50% between the ages of 40 and 54, and 25% 55 years or older. However, the professoriate aged rapidly during the next decade, so that by 1998, only 18% of faculty was less than age 40 while over 31% were aged 55 years or older. More recent statistics confirm the gradual aging of the faculty. The changing age pattern can be attributed to a number of causes, including past hiring patterns, low turnover rates, low retirement rates, and federal laws ending mandatory retirement.

Another reason for this demographic change is the rush to hire new faculty during the growth years of community colleges in the 1960's and 70's. As this large cohort of older faculty approaches traditional retirement age, academic leaders have expressed concerns about the prospects that senior faculty will remain on the job well into their 70s. Aging faculty, seeing retirement savings and investments shrink due to the current economy, are now much less inclined to trade their current lifestyle for a potentially threatened pension.

This aging of the faculty should pose a series of questions as colleges face an uncertain future amid declining funding and increased calls for accountability.

This aging of the faculty should pose a series of questions as colleges face an uncertain future amid declining funding and increased calls for accountability:

- Does an aging faculty affect the quality of instruction or its ability to respond to a rapidly changing educational environment and student mix?
- Does the prospect of a growing proportion of faculty aged 70 and over create a new set of problems for colleges?
- If faculty aging is viewed as a financial and quality constraint on institutions, should colleges alter the age composition of their faculties by offering new incentives to retire?
- Can strategic planning be improved by better institutional research and the use of faculty planning models?
- Can new research and planning models provide needed information to assess the long run impact of alternative hiring strategies?

Continued employment of faculty beyond age 70 diminishes prospects for promotion among eligible younger faculty. It also 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.

But ultimately faculty will retire, creating a unique opportunity for institutions of higher education to restructure and chart a new direction. A large number of retirements will allow academic administrators to reallocate positions across their institutions. And if recent trends are any indication of future reality, the faculty will look very different in several ways.

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. Their data-driven research predicts a big increase in the use of part-time faculty, 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 must be met with thoughtful planning to ensure the future of the academy.

The most important job of any academic administrator is to provide a quality learning environment for students, with faculty as an essential component. This requires the development of progressive human resource policies and levels of compensation that advance the process of recruiting, retaining, and eventually, retiring faculty. Having the right hiring and retention processes ensures successful instructional planning. Faculty aging and delayed retirements are a special challenge to institutions that have stable or declining enrollments. As they do not have the opportunity to restructure their faculties through new hiring due to enrollment growth and the added state support it brings, they must depend on retirements to create vacancies.

So the challenge is this: the faculty is aging, retirement rates remain low, employment costs rise, and funding is stagnant at best. Administrators, under the gun to stay on budget while providing increased instruction, look for greater staffing flexibility and lower employment costs. In this climate, academic leaders should recognize the impact of today's employment decisions on the faculty of the future by reconsidering their personnel policies and engaging in strategic planning, not just to fill positions when they become open, but to select new faculty who are ready to deal with a technologically sophisticated, diverse, and growing student body.

6 ▶▶ The brick and mortar campus no longer holds the local knowledge monopoly.

For centuries, the design of a higher education facility has been true to the maxim "Form Follows Function," popularized by the American architectural guru Louis Sullivan. Drawing upon centuries of tradition in which the teacher possessed knowledge and students received it by hearing it from the teacher, the primacy of this format drove design of facilities, most notably in the evolution of the traditional classroom and lecture hall. While the shortcomings of the format were readily apparent, higher education facilities designers have done little, until recently, to break the pattern of one-way communication that minimizes interaction.

But that is slowly beginning to change. A shift is occurring that involves new design and renovation strategies that emphasize easily reconfigured, multi-user spaces to enhance learning opportunities. Even with the growing role of virtual learning, place-bound campuses and their physical spaces will remain relevant in the future. However, in order for facilities to contribute to the ongoing health of higher education, they must provide the flexibility, comfort, and atmosphere where deep and meaningful learning can take place, particularly given the learning styles evidenced in the millennial generation of learners.

Significant as this shift is, it is but one of many challenges facing higher education planners as they review their current facilities inventory. Competition for students and resources is forcing most colleges and universities to sharpen their brands and identities, and to distinguish themselves in new ways. They will be expected to deliver more education in less space – to increase their "learning per square foot." Health and safety concerns arising from classes and laboratories conducted in older facilities, as well as emerging issues such as sustainability and greening the campus are becoming more prevalent in planning discussions.

But campuses are not just greening – many of them are also graying, causing more renovation and remodeling projects to emerge. The golden age of the 60's, when it seemed like a new college was opening every few weeks, is long past, and these once new facilities are now showing their age. Publicly funded colleges and universities, faced with aging facilities and overstressed infrastructure, must deal with stagnant funding from both federal and state sources, causing tuition to rise, belts to tighten, and maintenance to be deferred.

It is clear that new ways of thinking, new forms of collaboration, and new approaches to campus life are very much needed. When presented with the rare opportunity to build new instructional space or renovate existing facilities, campus planners must rethink traditional approaches to their role in order to accommodate a radically different educational landscape.

It is doubtful that the current infrastructure of higher education can support the massive influx of a multigenerational, technologically sophisticated student population.

It is doubtful that the current infrastructure of higher education can support the massive influx of a multigenerational, technologically sophisticated student population seeking learning from degree, noncredit, and certificate programs, as well as short-term training. New ways to produce learning, not just more of the same approaches, must be developed to meet enrollment projections. While colleges and universities can always defer expansion, can they afford to hang out "no vacancy" signs when more and more Americans want learning? It is time to rethink our educational spaces to assure a productive future.

7 ▶▶ The next tidal wave of new students will be our former students.

While the greening of America may be a welcome movement, the graying of America has both positive and negative aspects. As we grow as a nation, we also age. The fundamental age distribution in our population is changing at a brisk pace. In 1900, only 13% of the population was age 50 or over. In 2000, it was over 27%. And in ten years, it will be over 39%.

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. In 2000, 13% of the workforce was 55 and older. By next year, it will rise to 17%, almost 27 million workers. By 2015, nearly one in five workers will be 55 or older. Conversely, during that time, the number of younger workers, those aged 25-44, will actually decrease. The result? There will be a critical shortage in the pipeline of new workers, causing continued reliance on older workers.

Furthermore, the so-called "baby boomers" (those born between 1946 and 1964) have 77% of the financial assets and 57% of the discretionary income in our economy. They see retirement as a transition rather than a termination. According to AARP, 8 out of 10 baby boomers plan to work at least part-time, 5% anticipate working full-time at a new job or career, 35% will work mainly for interest and enjoyment, 23% will work mainly for the income, and 17% envision starting their own business. They realize they have an opportunity to keep themselves employable as they get older. Recently, a collaborative pilot project, "Making Age an Asset," as been launched to provide workforce and job search assistance to 50+ workers in Kentucky. AARP Kentucky, the Kentucky Community and Technical College System (KCTCS), and Education To Go (ed2go) have developed a blended online course which provides access to 50+ format. Given their commitment to staying active, this aging population wants to enhance their skills and competencies as well as energize their interests and passions. This means keeping up with the latest technologies, being willing to learn new skills, and being adaptable to work in new environments, performing functions they may not have done in previous jobs.

This is a potentially huge lifelong learning and retraining population that the marketing and recruitment mechanisms of our colleges largely ignore. We already know that participation rates and student age distribution statistics have changed significantly with the increasing influx of adult learners. The average age of the student body continues to increase. 39% of students enrolled in degree-granting institutions are above age 25, including 18% over 35.

Baby boomers are leading a demographic revolution that is changing the way we think about aging, as well as a consumer and workforce revolution that is changing the way America will ultimately do business. They have money, taste, and time on their hands, and community colleges are a logical and economical place for them to learn, relearn, and retrain. But there is little evidence that they want to go through the hassle of pursuing another degree. They've been there, done that, and with the aid of technology, and courted by a new crop of educational competitors, they are seeking an active mental and physical lifestyle that community colleges may not be able to address with their semester length courses, Carnegie unit scheduling, and long periods of downtime. They will want learning and training at their own pace and quite possibly, at their own location.

Community colleges are looking at the possibility of serving, perhaps for the second or third time, a generation of adults who are informed consumers – and voters.

Not only are the baby boomers leading a demographic shift that is changing the way we think about aging, they are also leading a seismic shift in society and the workforce. Community colleges are looking at the possibility of serving, perhaps for the second or third time, a generation of adults who are informed consumers – and voters. They present a diversity of interests, goals, and attitudes not easily accommodated by our current educational model or calendar. It is a relatively new and potentially huge market. Can we deal with it?

8 ▶▶ Declining funding will require colleges to seek new revenue streams to assure sustainability.

In September 2006, the Commission on the Future of Higher Education released its much-anticipated report, *A Test of Leadership: Charting the Future of U.S. Higher Education*, which called upon the nation's colleges and universities to be more efficient, cost effective, flexible, and innovative. Just a few years later, with an economy reeling and the prospect of increased support for education unlikely, the call for fiscal efficiency has a renewed urgency.

Gravely concerned with the rising cost of tuition and the lack of meaningful accountability measures in higher education, the report's authors asked educational leaders to recommit their institutions to their core public purposes and serve the changing educational needs of a knowledge economy. Among their recommendations, the Commission urged colleges and universities to propose cost cutting and productivity improvements through the development of new performance benchmarks. The report also asked higher education to heed the call of business and industry leaders to provide lifelong learning opportunities for workers at all stages of life, so they can continually update their knowledge and skills. Unfortunately, there was no offer of increased funding to match the request to serve the country's workers and citizens.

A heightened focus on America's workforce is currently celebrating its tenth anniversary, marking the implementation of the Workforce Investment Act. With that piece of legislation, America's institutions of higher education were given a mandate to take more responsibility for the economic development of their communities. With decades of experience training and retraining local workers and executives, the nation's community colleges are arguably better positioned than most four-year colleges and universities to bring significant and lasting economic value to the places they call home.

How does a community college meet the expanding needs of its local workforce when traditional funding is designed to reward seat time and academic credit?

But there is a clear dilemma: How does a community college meet the expanding needs of its local workforce when traditional funding is designed to reward seat time and academic credit? The answer is inescapable: In the face of fluctuating or declining financial support, the college must find a way to increasingly fund itself. The best way to ensure fiscal health is to move beyond the cost recovery mindset, to actively go after new revenues from non-traditional sources. In order to work with business, it may be necessary to act like a business.

While some educators are skeptical about applying business practices to academia, progressive colleges view being profitable as a way to support the college's academic mission. As funding sources are becoming increasingly static, revenue generated from local business and industry becomes vitally important as a needed supplement to the annual college budget. Serving the business community and generating profits is not incompatible with the larger mission of a community college. Many of the benchmarks currently used to measure success can be achieved while at the same time providing real value to business and industry, including market penetration, attention to special populations and minority participation

Elsewhere in this paper, we've referred to the student as a customer. But is it possible that a college has more than one type of customer? It could be argued that the most important factor in providing economic value to the community is viewing employers - not students - as the college's primary customers. A college can build capacity and revenue if it provides viable programs tailored to the needs of local business and industry. Only then will it help create real value for area employers, jobs for its students and needed revenue.

Constant changes in the workplace and an aging population of boomers have created major new opportunities in adult education. This new market is already significantly larger than the for-credit higher education market, and demand for adult education and training will continue to outstrip supply for some time. But many states continue to fund community colleges using outdated funding models that essentially measure attendance rather than accomplishment. For the most part, funding formulas for non-credit workforce development are either nonexistent or so convoluted that they are difficult to understand, much less address effectively. It is therefore not surprising that colleges place emphasis on marketing to and recruiting new students rather than on retention and customer satisfaction. Too many colleges mistake seat-time funding as being revenue when it is more like subsidy.

The situation is complicated even further by an institutional culture in which the needs of area employers are not the highest priority. To truly serve their communities, colleges need to do a better job of analyzing current trends in the regional and global economy and accurately assessing local business and industry needs driven by those trends.

But adding new programs and services is a daunting prospect when facing budget deficits. Colleges starting late in developing online programs may find developing new courses in a complex technical environment to be overwhelming. Administrators typically must develop and support talented online instructors, not to mention graphic designers, HTML programmers, software engineers, database analysts, system administrators, student support reps, teaching assistants, and other technical and administrative personnel required to support those instructors. Approaching the challenge through a partnership with an established online company may be an attractive alternative for colleges, enabling them to join an established network of course providers. Collaborating and brokering with other educational institutions is another option. Examples of such collaboration include the formation of the Global Corporate College, the League for Innovation's S.A.I.L project, and numerous federally funded grants which have multi-state involvement among community college, universities, and private sector employers.

While some may see revenue generation outside of traditional sources as an unrealistic goal, it is the only way to ensure the college's sustainability. Developing a profit- rather than subsidy-oriented mentality will require a great deal of individual and institutional courage to confront the risk-averse culture of higher education. On the other side of the challenges, opportunity awaits. Innovative community college leaders, in order to make payroll and pay the bills, will not see a conflict between honoring the long-standing mission of their institutions and managing for a sustainable, profitable future.

9 ▶▶ Today's classrooms are showing their age.

It is doubtful that the planners of today's classrooms had innovation and change on their minds when facilities were on the drawing board long ago. It's more likely that durability, usability, and cost effectiveness were the driving principles. Colleges hope for a long life for instructional facilities and they usually get what they hope for.

However, while a building may last many decades, its mechanical, electrical, and other infrastructure functions will need replacement long before the building's useful life is over. Cabling, conduits, pipes, wiring, and IT hardware have a shorter shelf life than the buildings that house them, becoming obsolete or failing due to wear and tear over time. Due to budget constraints furniture, décor, variable lighting, and flexibility are often afterthoughts in the design process. State regulations mandating lowest bidder awards sometimes insure mediocrity. Often missing in the planning process are questions on the multiple pedagogical approaches to take place in a given space, its layout, functionality, flexibility, access to technology, and the human needs of the room: lighting; temperature; acoustics; adaptability; and comfort.

How important is a purpose-designed environment in fostering deep learning? The National Survey of Student Engagement (NSSE) is an annual assessment of information on student participation in programs, supplied by colleges and universities. Since the inception of the survey, more than 844,000 students at 972 four-year colleges and universities across the country have reported their college activities and experiences to the NSSE, making the program a voice to be heard on topics like the improvement of undergraduate education, enhancing student success, and promoting collegiate quality. Among its most recent findings: the single best predictor of student satisfaction with a college is the degree to which students perceive the college environment to be supportive of their academic and social needs.

Another recent study of the impact of facilities on recruitment and retention of students gave some clues about the growing emphasis on the quality of learning environments. The research, published by the Association of Higher Education Facilities Officers, looked at factors that impact a student's decision to attend or not choose a particular college or university. The research was conducted among the organization's member institutions and included a total of 16,153 students responding from 46 institutions across the U.S. and Canada. Two-thirds of the respondents indicated that the "Overall Quality of the Campus Facilities" was "Essential" or "Very Important" to their decision.

In recent years, the concept of the learning studio has gained attention in educational circles through its focus on leveraging of physical space, actively engaging stakeholders, and a desire to make faculty and students unencumbered by either the space in which they interacted or the technology in use. Featuring ergonomic furniture, wireless technology, mobile teaching stations, multiple wall writing areas, and informal learning spaces easily created within the formal instructional setting, the learning studio need never have the same configuration in any two classes. Due to its variable geometry, flexible seating arrangements, and use of enhanced technology, the studio concept allows for a variety of pedagogical options. A room with no front engenders creative reconfiguration. Classes with moveable furnishings can be spontaneously reconfigured the spaces to match the day's subject matter and presentational style. Contemplation, engagement, collaboration, and reflection are all possible and encouraged. The resultant learning is dynamic rather than static.

Here are some examples of what colleges and universities are doing to transform the traditional classroom. At the University of Dayton, the Ryan C. Harris Learning Teaching Center has developed an experimental classroom and laboratory for inquiry-based teaching, a place where faculty can try new pedagogies and share their experiences with other faculty in a collaborative and supportive setting. The aim is to stimulate a community of practice among participating faculty around teaching and student learning. With mobile furniture and white boards on ceiling tracks, the room can be quickly configured to small-group discussion, then back to full-class presentation. Wireless technology enhances the connectivity of all participants.

MIT's TEAL classroom (Technology-Enabled Active Learning) is another case in point. The TEAL format in an introductory physics class in electromagnetism, combining lecture, recitation, and hands-on laboratory experiments into one classroom experience. To successfully accomplish this, the classroom had to be rethought. Through imaginative positioning of tables, projection screens, white boards, laptops, an instructor's station, and discussion areas, active-engagement methods such as desktop experiments and collaborative exercises are incorporated into the traditional college curriculum.

The SCALE-UP project at North Carolina State University goes after a different target - large-enrollment classes. SCALE-UP stands for Student-Centered Activities for Large Enrollment Undergraduate Programs, and seeks to deliver a learning environment that is highly collaborative, hands-on, computer intensive, and interactive. Rather than being seated in a large lecture auditorium, students face each other across small tables. Instead of standing behind a lectern, the teacher roams the room, answering questions, monitoring progress, occasionally giving a mini-lecture among, instead of in front of, the class. Students share laptops, complete impromptu assignments, and collaborate on projects.

Data compiled from over 16,000 NCSU students over a five-year span from 1997 to 2002 showed impressive results. Overall, students were nearly three times as likely to fail in a traditionally taught section as in an equivalent SCALE-UP section of the course. The SCALE-UP Web site summarizes their findings as follows: "in the studio environment, ability to solve problems is improved, conceptual understanding is increased, attitudes are improved, and failure rates are drastically reduced, especially for women and minorities. A change in the classroom translated into a dramatic increase in student success".

As colleges and universities recognize the need to revitalize the learning environment, they are revisiting the comfortable paradigms of the conventional classroom. New design and renovation strategies are emphasizing easily reconfigured, multiple-use spaces to permit small-group discussion, collaborative learning exercises, and maximum individualized interactions with faculty who have appropriate presentational technology to enhance their efforts.

We know that technology has significantly affected our world, and its presence is strongly felt in education. 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 is small. Instead, institutions must find ways to respond to critics by demonstrating that deep and meaningful learning takes place in their facilities. It's time to transform the twentieth century classroom into twenty-first-century learning environment.

10 ▶▶ Online learning will continue to grow, providing opportunities as well as challenges to traditional education.

In recent years, online learning has grown faster than overall higher education enrollments. A Sloan Foundation study entitled *Staying the Course – Online Education in the United States* found that almost 3.94 million students were taking at least one online course during the fall 2007 term, a 12.9% increase over the previous year. That growth rate for online enrollments far exceeded the 1.2% growth of the overall higher education student population. How big a market is it? Over 20% of all U.S. higher education students were taking at least one online course in the fall of 2007.

Community colleges lead the way among all sectors of higher education, accounting for over half of all online enrollments in the last five years.

However, the growth is not uniform across the educational spectrum. Community colleges lead the way among all sectors of higher education, accounting for over half of all online enrollments in the last five years. As indicated elsewhere in this paper, non-traditional students outnumber traditional students on community college campuses. Their unique needs may explain the appeal of online instruction as colleges design offerings to increase access to courses and stimulate growth in continuing and/or professional education.

Online education is not evenly spread across the academic landscape. Approximately one-third of higher education institutions provide three-quarters of all online enrollments. It is estimated that future growth will come predominately from these and similar institutions as they add new programs and grow existing ones. According to the Sloan report, most institutions that plan to offer online education are already doing so. A solid majority of academic leaders believe that student demand for online learning is still growing and they expect their online enrollments to increase in coming years. Some colleges, while seeing the potential growth in enrollments and revenue, are still hesitant after calculating the initial costs for online development and delivery. As there is evidence that some institutions will not pursue online education in any meaningful way, future growth in online enrollments will most likely come from those institutions that are currently the most active. Recent concerns about fuel costs combined with more adults seeking cost-effective skills upgrades in an uncertain economy may lead to further increases in online enrollments.

But the future is not universally bright for online education. There are significant barriers to be overcome. For many faculty, the classroom is a familiar and comforting environment. To challenge the classroom is to challenge not only a location, but also those who reside in it. Older teachers, accustomed to teaching in the same method in which they were taught, do not easily accept the value of online learning, contending that it takes more time and effort to develop and teach an online course. They feel that online students lack discipline. However, as Indiana University's William M. Plater observed at the beginning of the digital revolution:

"The metaphor of the classroom is a powerful one. The most basic and fundamental unit of academic life – the sanctity of the classroom and the authority of the teacher in it – is about to be turned inside out."

That online education has made such gains is indeed impressive when we examine the culture it subliminally challenges. Excessive reliance on time- and place-bound instruction defines much of the virtual architecture of our institutions. Studies have clearly shown that reliance on time and on task is an invalid measure of learning. Instead, the emphasis should be on measuring mastery. Given the tremendous growth of asynchronous learning opportunities, we should question the primacy of the semester or quarter system. Equally worthy of debate is the notion that all subjects fit easily into a three- or four-credit-hour module.

For that matter, we could also question the notion that learning takes place most effectively in a specially designed place called a college, when in fact, most of our standard classrooms are anything but specially designed, and are not the most conducive environments for meaningful learning to occur.

Universally available access to information means that the classroom has lost its place of primacy as the central location where knowledge is acquired.

Today's student has a choice of accessing information anywhere and at any time. The provider of this educational experience can be the local community college or a college thousands of miles away. What competitive advantages do local colleges have when they require students to battle freeways and confront crammed parking lots in order to sit in crowded lecture halls to acquire the same knowledge? Granted, class discussion and interaction are important and valuable. But which of these two options currently available to the student can be more accurately described as distance learning?

It would be prudent to plan for, in a sensitive but comprehensive way, the evolving role of faculty in an age where technology has made information accessible in efficient and cost-effective ways, thereby challenging the unique franchise undergraduate education has enjoyed for so long. Universally available access to information means that the classroom has lost its place of primacy as the central location where knowledge is acquired. This, in turn, forces us to redefine the teacher-student relationship and the traditional geography that houses it.

This is not something to be feared. Technology allows the expansion of instructional design principles and practices, which will allow faculty to employ a variety of presentational styles to match multiple learning styles. Institutional resources must be committed to train faculty on how to understand and utilize the new technology in order to design and implement powerful learning environments. The end result could be the liberation of faculty from the tyranny of the traditional academic calendar and a dramatic increase in meaningful student learning. Institutions must question whether they should continue to rely on a system so narrowly structured that it prevents them from being fully responsive to current and emerging constituencies and technologies.

Conclusion

It was Kierkegaard who said: "We live forward, but we can only think backwards." The comfort level we have with the classroom encounter comes from centuries of complacence and educational monopoly. Today, funding is questionable, facilities and faculty are aging, students are more diverse and less passive, and learning is available anytime and anywhere. It's all happening too quickly.

The ten issues outlined in this paper should cause colleges to initiate serious dialogue about what kind of a future they want for their institutions. Some colleges are already taking steps to address these issues. Here are but a few examples:

- Breaking the traditional business model of community colleges, Miami Dade College now offers 4-year degrees and is the largest institution of higher education in the country, with enrollments over 160,000.
- Abandoning the traditional semester pattern, Rio Salado College in the Greater Phoenix area offers more than 450 courses online - starting every Monday! Academic advisement is offered in person, online, via chat, or by telephone. The college is the number 2 provider of one-year certificates in the country.
- To meet the learning needs of an older generation, Collin College in Allen, Texas targets baby boomers who have been laid off or retired from engineering and technology careers by helping them to get fast-track certification to become high school math and science teachers. The Virginia Community College System launched a recruitment effort to attract more boomers with college degrees to their existing fast-track teacher licensure programs.
- Wake Technical Community College in North Carolina has made a serious commitment to sustainable facilities with completion of two "Green" buildings on their new Northern Wake Campus. The buildings are registered to receive certification through the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) standards.
- To retain relevance and flexibility within its faculty, Anne Arundel Community College in Maryland includes full-time, non-tenure track professional trainers in workforce development as part of its instructional force.

- More and more colleges are partnering with online course providers, such as Education To Go (ed2go) to mitigate resource issues with outdated facilities by providing anytime-anywhere solutions to meet the learning needs of the new generation of students while increasing revenues.
- To secure new revenue streams for colleges, the newly formed Global Corporate College is a network of community colleges throughout the country that pool their curricula and expertise to provide nationwide training to corporations.
- Tompkins Cortland Community College in New York provides "On The Go" information for students, staff, and even parents on their smart phone or PDA. Students can check their grades, class schedule with locations, account balance, and financial aid status, in real-time from their smart device.

This is just a sample of what is happening. But few colleges are attempting to deal with all the issues we have raised. Institutions that attempt to both live *and* think forward must question whether they should continue to bet their future on a system so narrowly structured that it prevents them from being responsive to current and emerging constituencies. As Max DePree once wrote: "We cannot become what we need to be by remaining what we are." Change can be debilitating when it is done to us but exhilarating when done by us. Fast Forward -- now, clearly, is the time to change.

Author's Note

This paper is not a pure work of research. It is, hopefully, a well-reasoned opinion and expression of concern based on 45 years of working in education, filtered through a healthy curiosity of what is happening in our society. There are no graphs, charts or footnotes. Instead I have chosen to identify ten reasons why education must significantly change in the coming years. It is not an exhaustive list, but I believe it raises issues that must be promptly addressed if higher education is to survive the calamitous economy in which we now find ourselves.

The following sources provided information, perspective and ideas for this paper:

Community College Research Center; American Association of Retired People (AARP); American Management Association; National Commission on Accountability in Higher Education; Commission on the Future of Higher Education; U. S. Department of Labor website; Center for Economic Policy and Research; *Eight Strategic Questions for Community Colleges* (monograph published by NCCET and SunGard Higher Education); *How the Irish Saved Civilization* (Cahill); *Leadership Is An Art* (Max DePree); *From Teaching to Learning: A New Paradigm for Undergraduate Education* (Robert Barr and John Tagg); *The Decline of the Knowledge Factory* (John Tagg); various works by Marc Prensky; *Boomers, GenXers and Millenials: Understanding the New Students* (Diana Oblinger); National Center for Educational Statistics; *The American Faculty: The Restructuring of Academic Work and Careers* (Jack Schuster and Martin Finkelstein); National Survey of Student Engagement; Association of Higher Education Facilities Officers (APPA); websites of North Carolina State University, University of Dayton, League for Innovation and MIT; *Staying the Course – Online Education in the United States* (Sloan Foundation); *The Search for the Learning Centered College* (AACC New Expeditions Paper).

Finally, I want to acknowledge the generosity and commitment of Education To Go (ed2go) for underwriting this document. If technology has changed the way in which we offer learning opportunities, then surely ed2go has been pivotal in helping colleges and universities keep their online offerings diversified and effective, both in terms of content and revenue enhancement.

I hope this paper will get you thinking. Feel free – please – to share it with your colleagues and get the conversation started!

About the Author

William J. Flynn has been involved with the National Council for Continuing Education & Training (NCCET) for the past 15 years, serving as State Liaison, Regional Director on the NCCET Board, National Conference Director and Publications Editor. In 1998, the Council gave him its Award for National Exemplary Leadership. In 2001, he became the Managing Director of NCCET, and retired at the end of 2008 with the title of Managing Director Emeritus.

During his 35 years working in community colleges, he served as faculty or administrator at colleges in Maryland, New Jersey, Arizona, Ohio and California, serving for the final 12 years as Dean of Community Learning Resources at Palomar College. He chaired the Coalition of Affiliated Councils of the American Association of Community Colleges for four years, acted as Executive Producer and moderator for two live national teleconferences on PBS Adult Learning Services, produced the annual North American Conference on the Learning Paradigm, held in San Diego 1997 – 2001, and co-chaired the first two Learning Summit Conferences for the League for Innovation in the Community College. He currently serves on the board of directors of the International Adult and Continuing Education Hall of Fame.

About ed2go

Education To Go (ed2go) is the leading provider of turnkey online training and education programs, serving the adult continuing education and corporate training markets. ed2go offers a full complement of high-quality courses and programs through partnerships with thousands of higher education institutions, community organizations, and membership groups. Visit **www.ed2go.com** to learn more.

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