

Shift Happens! Voluntarily?

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Higher Education Must Remain America's Competitive Advantage

The political philosophy (from the Declaration of Independence) that “all men are created equal” succinctly captures American higher education’s *raison d’être* and phenomenal successes. First public elementary and secondary education and then public support for the expansion of higher education significantly actualized and scaled the constitutional principle that every person is entitled to an equal playing field. The deepest commitment to fair play today is affordable access to a higher education which offers the opportunity to discover knowledge, envision and pursue a rewarding and better future, and learn to condition the “pursuit of happiness” by a commitment to the common good.

Elementary and secondary education has become an entitlement in each state, though not at a common inter- and intra-state level. In contrast, higher education is not an entitlement at any level of government. A myriad of national reports nevertheless argues that higher education must continue to be an affordably accessible opportunity for all Americans as the basis for a national competitive edge in the hypercompetitive global knowledge economy.

The public agrees, according to researcher/pollster Frank Luntz, who reported at the National Governors Association 2007 Winter Meeting that the NGA’s “Innovation America” initiative strongly resonates with the electorate and its educational aspirations for future generations. Speaking at the NGA’s opening plenary session, both John T. Chambers (Chairman and CEO, Cisco Systems, Inc.) and Robert E. Ruben (Director and Chairman of the Executive Committee, Citigroup, Inc.) also responded positively to the governors’ “Innovation America” initiative by citing the innovative role of IT in improving productivity and operational excellence, the keys to global competitiveness. Other speakers and discussion sessions addressed the need for self-innovation within higher education as the means to improve productivity and, thus, the affordability of access for future generations, while also improving and accounting for academic outcomes.

Citizens’ respect and aspirations for postsecondary education and public revenues allocated to higher education, however, are on different trajectories. The proportion of higher education’s revenues from public sources has been decreasing relative to the proportion from private sources—a trend to be elaborated in a later section. For all but the relatively few “well endowed” institutions, growing dependence on private revenues translates directly into a greater drain on students’ own private resources, thereby putting affordability of access at risk for those students least able to pay and/or the families and employers supporting them.

Higher education accordingly is lobbying for increased public revenues, but is doing so while the federal debt, deficit, and commitment to defense are burgeoning and contributing to a diminishing federal per-capita contribution to help states fund federal mandates and entitlements. Prudence suggests that higher education not only seek increases in public per-student revenues, but also help assure the affordability of access for future generations by pursuing innovations designed to reduce per-student operating expenses—thereby hedging a risky bet on future increases in tax-based revenues.

The affordability of access is surely a key reason, along with the lack of transparency in reporting per-student expenses and learning outcomes, why higher education now faces a host of external policy pressures.

The External Call for Measurable Performance Improvement

The primary external pressure facing nonprofit higher education for the foreseeable future is the call to improve and account for institutional performance in publicly transparent and measurable terms.¹ Focusing primarily on undergraduate and professional education, for example, Secretary Spellings' Commission on the Future of Higher Education (the Commission) invoked the quantitative connotation of "performance" in offering nonprofit higher education this advice:

*"To meet the challenges of the 21st century, higher education must change from a system primarily based on reputation to one based on performance."*²

The Commission argues the case for measurably improving and accounting for performance—in student learning, in the timing and capacity to meet market demand for degree and certificate programs, in responding to student requirements for flexibility, and in containing per-student costs and the net tuition prices they drive. Such pressures are often described using terms such as "affordability," "accountability," "accessibility," accreditation," "productivity," "return on investment," and "institutional effectiveness." Two of these terms, "accountability" and "accessibility," can each be thrice parsed to capture all of these external policy pressures as six overlapping performance expectations which are arguably *performance obligations* for public institutions and, by choice, also mission-critical obligations for many private institutions:

- » Learning Accountability: Measure and openly report learning outcomes in ways that permit comparisons among peer institutions.
- » Program Accountability: Respond rapidly to economic development and workforce needs with appropriate degree and certificate programs.
- » Expense Accountability: Reduce or stabilize per-student operating expenses (to increase institutional productivity).
- » Affordability of Access: Reduce or stabilize inflationary increases in net tuition borne by consumers (to keep college affordable to all qualified students).
- » Convenience of Access: Offer students convenient, flexible options for completing a degree or certificate.
- » Capacity for Access: Manage enrollment capacity in response to demand.

Prestige Rankings for the Few, Mission Performance Measures for All

A full reading of the Commission's report reveals that the word "reputation" in the above quote connotes "prestige" or "selectivity." By virtue of having to respond to governance and revenue models intrinsically oriented toward effectiveness and efficiency, community colleges and market-focused for-profit institutions are predisposed to earn a reputation for effective and efficient performance. Many other nonprofit institutions, however, aspire to earn reputations for "prestige"—and a few have done so. Prestige is typically earned and ranked on some combination of the achievement profile of incoming students, the faculty's record of scholarship and research, success in a major NCAA sport, and even grounds and facilities. Prestige can be as readily assessed today by a proxy metric, the size of annual endowment earnings relative to total annual operational expenditures, as by any direct metric for student learning outcomes. Significant endowments are no longer the sole domain of prestigious private research universities and "national" liberal arts colleges. Check out the endowed wealth of U.S. News & World Report's top-ranked public universities.

¹ William H. Graves, Improving Institutional Performance through IT-Enable Innovation, EDUCAUSE Review Vol. 40, No. 6 (Nov./Dec. 2005), 79-98, <<http://www.educause.edu/ir/library/pdf/erm0564.pdf>>. Written prior to the creation of the Commission on the Future of Higher Education, this article argues the imperative for measurable performance improvement in nonprofit higher education.

² Secretary of Education Margaret Spellings' Commission on the Future of Higher Education, A Test of Leadership: Charting the Future of U.S. Higher Education, Final Report, September 2006, <<http://www.ed.gov/about/bdscomm/list/hiedfuture/reports/final-report.pdf>>

Because only ten institutions make it into any top-ten ranking and significant endowments are not easily developed, pursuing prestige is a high-risk aspiration for most institutions. The Commission is advocating for a more attainable meaning of reputation, one based not on absolute rankings among peer institutions, but on zero- to four-star external stakeholder satisfaction ratings with how well a nonprofit institution performs against the measurable mission obligations and aspirations that are its stated 501(c)(3) charitable purpose. The future reputation of American higher education may depend less on its internal expert quality reviewers than on those who “consume” it and those who help fund its consumption. That is why, to their credit, the Council for Higher Education Accreditation (CHEA) and its network of advisors and accreditors are currently engaged in dialogues structured to discover new ways through self-governance to respond to reasonable calls for increased and more open accountability.³

Higher Education’s Response to External Policy Pressures

Some higher education leaders have publicly opposed various Commission perspectives and recommendations. They argue, for example, that the Commission’s recommendations could indirectly lead to government-controlled standardized testing or to governmental intrusions into privacy and into current self-governing accreditation processes. On the other hand, other leaders have advocated a voluntary, proactive response to many of the Commission’s recommendations and to other external calls for measurable performance improvement and voluntary standards for publicly and transparently reporting performance. In addition to the aforementioned work in progress through CHEA, for example, the National Association of State Universities and Land-Grant Colleges, with participation from the American Association of State Colleges and Universities, has drafted a Voluntary System of Accountability for consideration by member institutions.⁴

Enter IT

Voluntary or not, any systemic performance improvement and accountability effort will have to rely on information technology (IT) not only as a tool for collecting and reporting accountability data, but as a tool for innovatively redesigning academic, student, and administrative services to improve mission outcomes and operational excellence (productivity). Two parables, one from today’s global economy and the other from the 16th century, illustrate the catalytic and transformational role that technology often plays in major socio-economic shifts. Yes, shift happens! This author’s hope is that shift will be voluntarily catalyzed and supported from within higher education.

Long-Term Success = Operational Excellence + Model-Breaking Innovation

A recent article in Time magazine describes how “smart companies are using the environment not just to seem virtuous but to crush their rivals.”⁵ Time’s language may be unnecessarily violent, but Toyota, for example, is emerging as the global leader in the mass-marketed automobile industry and for a clear reason. While many of its largest competitors ignored the ethical need for innovative, “green” automotive technologies and instead continued to focus on their high-margin, high-emission gas-guzzlers, Toyota competed and increased market share by applying two strategies simultaneously. First, Toyota focused on operational excellence in order to maintain price competitiveness while improving customer satisfaction. The company applied IT to drive out costly waste in production, supply chain, and inventory processes in order to improve productivity and reliability, which also resulted in a standardized platform for entering the “luxury”

³ CHEA has formed and is engaging with the CHEA Tenth Anniversary Commission, “a distinguished group of leaders from higher education, accreditation and the public appointed by the CHEA Board of Directors to reflect on the current and future role of accreditation in serving students and society.”

⁴ Peter McPherson and David Shulenburg, Voluntary System of Accountability, draft of 08/31/06, National Association of State Universities and Land-Grant Colleges, <http://www.nasulgc.org/vsa-8-31-06%20_7_%20_2_.pdf>

⁵ Bryan Walsh, How Business Saw the Light, Time, January 15, 2007, 56-57

market with a new brand (Lexus) at competitively low price points. Second, Toyota simultaneously embraced the green imperative by developing an innovative, clean hybrid power train and offering it to a receptive public in the Prius and other Toyota and Lexus models. By embracing paradigm-shifting, voluntary change to meet environmental imperatives and simultaneously improve quality, competitiveness, and operational unit costs, Toyota is succeeding in a climate of increasing regulatory attention while many of its competitors struggle on the brink of bankruptcy and layoffs that need not have been.

Reform, or Be Reformed

The word “reform” brings to mind the 16th-century Protestant Reformation, which was enabled in no small part by the then relatively new technology of the printing press. The Protestant Reformation realigned religious and political affairs across Europe and even spawned significant internal reform within the Catholic Church—the Counter-Reformation. As the most influential and entrenched European institution of the time, the Catholic Church begrudgingly adjusted to new externally led and technology-enabled relationships among church, state, and individual.

Long immune to the winds of change and admired for its role in the American success story, U.S. higher education faces an externally led reformation enabled by the relatively new technologies of the Internet. The Commission and the political and policy leaders who regulate and help subsidize higher education understand the “flattening” role of technology and its use to increase productivity, and they accordingly are sowing seeds of reformation in higher education. Can nonprofit higher education avoid a reformation by charting an actionable path forward with a voluntary, preemptive counter-reformation? Yes, but only by embracing the systemic need to stabilize or reduce per-student operating expenses along the way and the necessary, enabling role of technology in doing so—an imperative for IT-enabled academic innovation in service to improved institutional productivity.

Productivity = Quality + Affordability of Access + Expense Accountability

“Cost” and “price” are seldom used with clarity in higher education. Costs might refer to institutional operating expenses, for example, or might instead refer to the tuition expense borne by students (as net price) or by taxpayers (as public investments in student grants and institutional subsidies). Confusion arises because public and, to a lesser extent, private nonprofit higher education tend to conflate revenues and expenses as “the budget.” The distinction between revenues and expenses, while clear in for-profit higher education, therefore deserves elaboration in nonprofit higher education.

The annual, recurring revenues collected by higher education and used to pay annual, recurring operating expenses derive almost entirely from some combination of two public and two private revenue sources:

- » Public revenues directed to an individual student in the form of a tuition grant, such as a Pell Grant or a Hope-like scholarship grant
- » Public revenues directed to an institution in the form of enrollment subsidies, typically via a per-student-FTE formula.
- » Private out-of-pocket investments in tuition and fees by a consumer (a student or the student’s family or employer, for example)
- » Private earnings from a charitable investment fund, such as an institutional endowment or a private scholarship fund

The revenues available to higher education, however, are being rebalanced away from public tuition grants and public per-student subsidies and toward private consumer and charitable revenues. For example, the inflation-adjusted national average of per-FTE state funding for public higher education is at a 25-year low and trending downward.⁶ The proportion of state revenues allocated to higher education is also trending

⁶ Paul E. Lingenfelter, David L. Wright, and Takeshi Yanagiura, State Higher Education Finance 2005 – Executive Summary, State Higher Education Executive Officers, 2006, <http://www.shceo.org/finance/shef_sv06_v2.pdf>

downward in response to state revenue trends projected to create structural revenue shortfalls in every state by 2013.⁷ Similar trends are evident at the federal level.

At current per-student expenditure rates, the revenue rebalancing trend increases higher education's dependence on consumer and charitable revenues. Relatively few institutions, however, have direct control of enough recurring charitable revenue to cover a meaningful percentage of their operating expenses. If these relatively "unendowed" institutions—most institutions—compensate by increasing per-student out-of-pocket revenues to cover constant or increasing per-student operating expenses, then they will compromise affordability of access. Their alternatives are to 1) reduce expenses on a per-student basis in proportion to declines in public revenues, or 2) bet that public revenues on a per-student basis will increase (contrary to the aforementioned trends strongly suggesting otherwise).

Indeed, higher education is currently lobbying for increased public per-student revenues—larger Pell grants, in particular—and that is reasonable according to the Commission's recommendations. Lobbying may be more politically effective, however, if undertaken in parallel with systemic efforts to reduce or stabilize operating expenses on a per-student basis. In any case, prudence suggests that most institutions begin a systemic effort to reduce or stabilize per-student expenses in the interest of maintaining the affordability of access.

For most institutions, then, the challenge of maintaining or improving the affordability of access is the challenge of stabilizing or reducing operating expenses on a per-student basis, while simultaneously maintaining or improving the quality of academic outcomes. When improved simultaneously, effectiveness (in achieving measurable quality norms) and efficiency (in per-student operating expenses) amount to increased productivity. The national affordability of access imperative and reasonable policy expectations for more transparent accountability, taken together, are creating an imperative for transparent productivity. The affordability of access will increasingly depend not only on accounting for operating expenses on a per-student basis, but also on reducing them while simultaneously and measurably improving quality outcomes.

"Per-student" has been used here to signify the importance of various numerical ratios that represent averages in which the denominator is total student FTEs, total student headcount, total credit hours granted, total course enrollments, total number of students taking a test, total graduates, or other such aggregations measured over a period or snapshot in time, such as a term, an academic year, or a drop/add date. Such ratios can be useful in establishing a dialogue that focuses, not on absolute expense reductions, but on strategies for tracking and improving institutional productivity over time. To amplify this idea, the six-point performance taxonomy in the second section includes both "expense accountability" and "affordability of access."

IT-Enabled Innovation: The Key to Improved Productivity

While some changes to the current higher education model, such as reducing the amount of coursework required for a baccalaureate degree, could structurally increase productivity, a more systemic productivity lesson lies in recent trends in the national/global economy. Companies and most nonprofit organizations have embraced IT as the primary tool available for innovatively redesigning production and business service processes to become systemically and simultaneously more flexible, more effective, and more efficient—more productive. These advances in the services sector would have been impossible without a high-performance IT organization and executive leaders who embraced and managed the discipline required for the IT-enabled redesign of service processes, including service delivery options and business models.

Improved productivity requires, but does not result solely from high-performing, well managed IT services. In his "flat-world" book, Thomas Friedman put it this way:

⁷ Dennis Jones, *State Shortfalls Expected to Continue Despite Economic Gains: Long Terms Prospects for Higher Education No Brighter*, Policy Alerts, February 2006 (The National Center for Public Policy and Higher Education), <http://www.highereducation.org/reports/pa_shortfalls/State_Shortfalls.pdf>

*“Introducing technology alone is never enough. The big spurts in productivity come when a new technology is combined with new ways of doing business.”*⁸

In other words, IT is a necessary but not sufficient ingredient in any systemic attempt to improve productivity. In higher education, IT must be used innovatively to displace old ways of operating and substitute more productive ways of operating which also yield equal or better mission outcomes.

Friedman also argues from compelling examples that competitively innovative “new ways of doing business” typically incorporate some combination of eight IT-enabled external sourcing models: outsourcing, insourcing, open sourcing, offshoring, supply chaining, in-forming, work flowing, and steroiding (IT “doping”). A recent report recommending radical change in the K-12 system recognized the value creation enabled by these various forms of external sourcing with this observation:

*“Today, the United States is once again a leader, this time in the deconstruction of the vertically integrated firm. Corporate analysts identify each step in the process and ask whether the firm is the leader in that step, and, if not, who in the world can do that step at the needed level of quality at the lowest possible cost. The firm then contracts with the best providers of each of those services and keeps only those functions it can do best. ... Firms that do not do this will inevitably be put out of business by firms that do.”*⁹

The new, IT-enabled **external sourcing strategy** described above can increase expertise, nimbleness, effectiveness, and efficiency, especially when combined with, or incorporated into, two other core IT-enabled higher education service process redesign strategies: They are the **flex strategy** and the **common course strategy**, both described in an earlier paper which includes an accounting of how the common course strategy applied systemically can reduce annual institutional per-student operational costs by 8-10 percent for many institutions.¹⁰ The common course strategy was pioneered by the National Center for Academic Transformation, and the strategy’s history and methodologies are described by Carol A. Twigg in an article accounting for how IT has been used at a significant number of institutions, both to improve learning outcomes and to reduce per-enrollment expenses in the high-enrollment courses taught in common at almost all institutions.^{11, 12}

The outcomes of the flex strategy are signified by online self-service public institutional websites and individualized web portals, which are still in the emergent stages at many institutions. The enrolled student’s ideally individualized portal is a one-stop, integrated, virtual service center where the student can accomplish self-service (asynchronous) transactions and interactions with instructors, fellow students, student-service professionals, and the institution. The flex strategy, whether applied to a program and its courses or to the support services required for student success and institutional competitiveness, eliminates or substantially reduces the inconvenience of scheduled real-time interactions, both those requiring a physical meeting place and those taking place online or the phone. The flex model, however, still must provide, at the student’s discretion, real-time access to expert help from faculty and staff professionals through toll-free 24x365 call centers and online-chat or walk-in sessions which are unscheduled or scheduled during business hours. Flex academic programs also may include scheduled real-time clinical and lab experiences or other key academic real-time experiences that are necessary, not gratuitous. Nothing in the flex model prohibits engaging

⁸ Thomas L. Friedman, *The World Is Flat: A Brief History of the Twenty-First Century*, (New York: Farrar, Straus and Giroux, 2005, revised 2006)

⁹ The New Commission on the Skills of the American Workforce, *Tough Choices or Tough Times: Executive Summary*, The National Center on Education and the Economy, 2007, <http://www.skillscommission.org/pdf/exec_sum/ToughChoices_EXECSUM.pdf>

¹⁰ William H. Graves, *Improving Institutional Performance through IT-Enable Innovation*, *EDUCAUSE Review* Vol. 40, No. 6 (Nov./Dec. 2005). 79-98, <<http://www.educause.edu/ir/library/pdf/erm0564.pdf>>

¹¹ National Center for Academic Transformation, <<http://www.theNCAT.org>>

¹² Carol A. Twigg, “Improving Learning and Reducing Costs: New Models for Online Learning,” *Carol A. Twigg, EDUCAUSE Review* Vol. 38 No. 5 (Sep./Oct. 2003), 28-38, <<http://www.educause.edu/ir/library/pdf/erm0352.pdf>>

exchanges between students, instructors, and other support personnel, whether practiced within a residential student experience or provided to students who cannot or will not participate in traditionally delivered programs and services—flex students.

An institution can combine the flex, common course, and external sourcing strategies in institutionally unique projects to create engaging and effective student learning experiences that will remain affordable for generations to come. The table below indicates (by a check mark) which of the six performance obligations described in the second section can be measurably and favorably affected by each of the three redesign strategies outlined above—after broadening the common course strategy to apply to any course and parsing the flex program and service strategy to distinguish academic degree and certificate programs from the support services they require.

Mapping IT-Enabled Redesign Strategies to Institutional Performance Obligations

<i>Performance Obligation</i> \ <i>Redesign Strategy</i>	Common Course	Common Course	Flex Program	Flex Service	External Sourcing
Learning Accountability	√	√			√
Program Accountability			√	√	√
Expense Accountability	√		√	√	√
Affordability of Access	√		√	√	√
Convenience of Access			√	√	√
Capacity for Access	√		√	√	√

Scenarios and Examples

Improving and accounting for the quality of academic outcomes, while also reducing per-student operating expenses in the interest of the affordability of access is a tall order requiring disciplined leadership. Most performance challenges, moreover, do not present themselves neatly packaged in the language of the six-point performance taxonomy above. Consider, for example, the performance challenges outlined below and how IT-enabled redesign strategies apply to them.

1. Two- and four-year public institutions in high-growth states and communities often face capacity of access challenges and related program accountability and learning accountability obligations. Some institutions react as though they are being forced to:
 - a. Cap enrollments among existing and would-be students in high-enrollment, required and elective general education and developmental courses and also in required courses in high-demand majors. Such courses are the common courses taught at most institutions around content and learning objectives that vary little from institution to institution.
 - b. Turn away qualified applicants to nursing, teacher education, and other professional and workforce programs aimed at producing the graduates most needed for the societal and economic advancement of the nation, the states and local communities.
2. Two- and four-year public institutions in a number of states and communities face learning accountability and program accountability obligations. For example, some are being asked to:
 - a. Improve the college-going rate among high school graduates.
 - b. Improve retention rates.
 - c. Increase the proportion of degree-holders in the citizenry.
 - d. Help students who stopped short of a degree complete their degrees.
 - e. Increase the supply of graduates in programs aimed at workforce and economic development goals—nurses, teachers, science and technology professionals, and so on.

3. A number of private and public institutions are facing declining enrollments and/or are looking for innovative ways to increase “profitable” enrollments in high-demand niche markets in order to:
 - a. Survive and grow as a tuition-dependent, private or public institution.
 - b. Retain or increase the current level of per-student-FTE-based public funding.
 - c. Increase out-of-state or other profitable tuition revenues as a public institution.

The flex strategy, when applied to services and selectively to common courses and high-demand programs, increases *convenience of access* and, with it, student options and satisfaction. It can reduce or eliminate the need for new classroom capital expenses and reduce the capacity strain on the existing classroom plant, thereby improving the *capacity for access* and the unit-cost basis for *expense accountability*. It also can improve i) the *affordability of access* for students by eliminating or reducing any on-campus living expenses and travel expenses, and ii) *program accountability*, because much of the most pressing program demand and access need is from flex students who cannot or will not participate in traditional instruction. When combined with the flex program strategy, the common course strategy can measurably improve learning, thus, *learning accountability*, while simultaneously increasing the faculty dimension of capacity (student-to-instructor ratios), thereby directly reducing per-enrollment costs to improve *expense accountability* and the *affordability of access*. So, all six of the institutional performance obligations outlined in the second section can be addressed by the flex strategy with reinforcing help from the common course strategy, and some institutions are doing so. In the examples below, each institution also selectively applied the external sourcing strategy through a commercial partner.

The goals for the ***Tennessee Board of Regents Online Degree Programs & Online Continuing Education - Workforce Development*** (RODP/ROCE, <http://www.rodop.org/>) were precisely those described in scenario 2. RODP offers well articulated online degree programs, professional/continuing education certificates, and workforce development training collaboratively developed and delivered by TBR’s 6 universities, 13 community colleges, and 27 technology centers. RODP first enrolled students in the fall of 2001 and was an instant success, as evidenced by the immediate and ongoing need to cap enrollments in order to ramp up faculty capacity to accommodate today’s approximately 15,000 annual for-credit enrollments. An RODP student must select, qualify for, and be admitted to a “home” TBR institution from which to earn a degree. An institution’s RODP student may enroll in and transfer credits from RODP courses taught by other TBR institutions. All of the student’s course tuition goes to the teaching institution, and for any course the student pays an additional 40% of tuition as a course fee to be split between the home institution (30%) and TBR (70%). The 70% share pays for system wide library databases, hosting, help desk, IT upgrades, course management and development, training, professional development, and operations—all to support and sustain the collaboration and achieve economies of scale. The RODP collaboration among TBR institutions reduces program and service duplication across the system and optimizes the use of public resources—system leverage at its best.

Broward Community College (FL) and ***Ocean College*** (NJ) now offer flex nursing programs and have reduced their backlogs of nursing applicants while increasing the supply of degree-holding nurses in their local communities, all in response to some of the issues in scenarios 1 and 2.

The ***University of Baltimore*** (public) turned around a pattern of decreasing enrollments by offering one of the first AACSB-accredited fully online MBA programs. The University has met its financial and enrollment-increase goals, and is now offering additional flex programs. ***Benedictine University*** (IL) has similarly increased its profitable enrollments with a flex MBA offering. Both of these examples fit the framework of scenario 3.

The ***Community College of Southern Nevada*** has had to cap enrollments in a number of common courses and turn away applicants to its AA program and a number of other high-demand programs. In response, it is redesigning those common courses and high-demand programs for flex delivery, improved learning outcomes, and reduced direct per-enrollment expenses. The College is going for the scenario-1 jackpot by attempting to improve institutional metrics for all six performance obligations.

Culture of Performance = Actionable Evidence + IT-Enabled Innovation

Institutional leadership and disciplined innovation through IT-enabled service process redesign are the main ingredients in the secret sauce for improving productivity and mission outcome performance. Leaders must align a well-managed institutional IT organization with academic and other service goals in order to redesign programs and services for measurably improved outcomes while stabilizing or reducing their per-student expense. But the discipline required to undertake and complete service redesign projects requires timely access to consistent institutional information within a culture of evidence having the leadership capacity to act on the evidence.

Higher education leaders recognize that IT already plays an enabling role in accounting for performance. The bulk of institutional data, after all, is stored in an institutional ERP transactional system. Many higher education executives, however, bemoan both the lack of “cleanliness” of institutional data—disparate answers to a common query—and the flood of reports that result more in confusion than in insights into performance. Their frustrations typically arise from “shadow” systems maintained at the departmental level in order to avoid relying on a common institutional system or granting open access to department-level data (which legally can and should be shared more broadly). Even the latest ERP system, the cleanest data, and the best of executive intentions, while enabling, are not sufficient for reporting performance in ways that are customized to meet the needs of each level of management and functionality. In contrast, effective *performance reporting and analytics* draw upon the ERP system and other sources of institutional or external benchmarking data to:

- » Rescue chief executives from a flood of data reports that are difficult to develop and ultimately not of much use at the cabinet level.
- » Extract select longitudinal data into an institutional data warehouse modeled around a few strategic performance objectives and indicators.
- » Provide flexible, ad-hoc (anytime) performance reporting and predictive analytics, both at the operational and longitudinal (trend) levels.
- » Provide configurable, flexible scorecards (executive level) and dash boards for monitoring key performance indicators at the institutional and departmental levels and for exposing the departmental dependencies underlying those indicators in order to identify trends and provide actionable insights into remediation strategies and futures planning.

Implementing and evolving performance reporting and analytics begs some critical questions. What key performance indicators should be tracked and reported to whom on what longitudinal schedules? Who should have ad-hoc access to these indicators and the data and analytics that determine them? A cabinet-level group of administrators and academic leaders—a “performance council”—should tackle these and other key questions and not leave decision making solely to the IT and institutional research staffs. Operating under a name appropriate to the institution and with the “ownership” and monitoring participation of the chief executive, the performance council, perhaps with help from expert consultants (external sourcing strategy), must initially identify key performance indicators and thereafter continue to engage in *performance planning and management processes* designed to:

- » Align mission goals with measurable objectives and their key performance indicators.
- » Translate the results of this process to the technical and institutional research teams responsible for implementing and evolving performance reporting and analytics.
- » Guide the creation of institutional performance management processes that are open and evidence-driven.
- » Align service redesign strategies with key performance indicators requiring improvement.
- » Form redesign teams to apply the IT-enabled redesign strategies described in the preceding section to improve upon those key performance indicators.

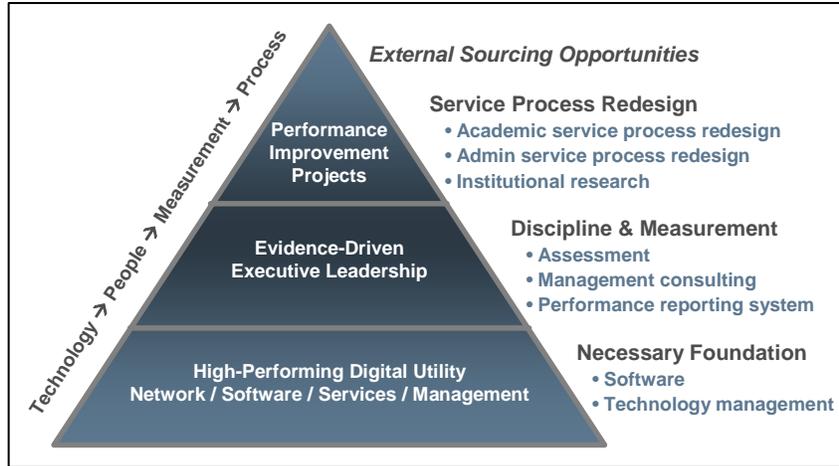
- » Prioritize and secure resources for the redesign teams’ performance improvement projects, and for making the institution more productive.

Those performance planning and management processes both inform and are informed by performance reporting and analytics and should result in an institutional culture of evidence. A culture of evidence, however, is not necessarily a culture of performance. Action is required in the form of **performance improvement redesign projects**, which use IT to redesign key academic and other service processes as described in the preceding section. Sample projects include these:

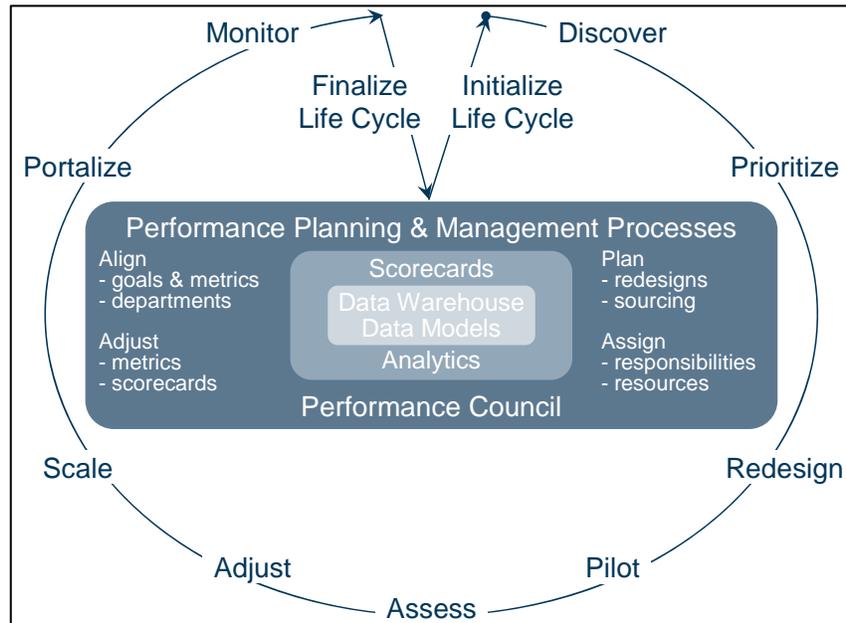
- » Redesign business and student service processes for efficient website- and portal-integrated self-service.
- » Redesign degree programs for “flex” delivery to targeted audiences (the convenience factor of online asynchronous pedagogy).
- » Redesign the cluster of high-enrollment common courses to improve learning and the per-credit direct cost of instruction, thereby also increasing capacity—a reduction in per-credit direct instructional costs usually translates into an increase in the student/faculty ratio.
- » Redesign enrollment management processes for both recruiting and retaining the right students.
- » Source business and student service processes, IT services, and other services selectively from external organizations to avoid new capital and payroll costs, while improving services at reasonable per-student costs.

The first graphic below depicts the necessary technical and change-management dependencies from which a higher performance institution can evolve under disciplined and evidence-driven leadership. The second graphic focuses more on the performance planning and management process and its corollary performance improvement redesign projects.

A Culture of Performance



Performance Improvement (Redesign) Project



Got Discipline?

The reference to leadership and discipline in the preceding section will benefit from the Toyota parable and additional elaboration. Toyota is poised to surpass General Motors as the world’s largest automobile manufacturer because it focused on operational excellence in order to compete on pricing and customer satisfaction and because its relentless focus on reducing production expenses permitted investment in a luxury brand and in the innovation required to develop hybrid technology.

To connect the Toyota parable to the external call for higher education reform, institutional leaders should consider, after a translation into academic terms, the enduring business-guru advice from Michael Treacy and Fred Wiersema:

*“Choose your customers, narrow your focus, and dominate your market.”*¹³

Within the basic educational mission shared by most nonprofit institutions, this advice can be translated as a recommendation to:

Know your mission obligations and mission-consistent opportunities, narrow your focus to these, and, in each, measurably outperform your obligations, goals, and peer norms.

Treacy and Wiersema argue that the key to competitive differentiation and success is the discipline required to focus intensely on one of three possible priority “value disciplines,” while also meeting threshold standards in the other two value disciplines in order to maintain overall competitive positioning within target markets. The three value disciplines are **product leadership** (think Princeton, MIT, Apple, and Toyota’s hybrid technology), **operational excellence** (think University of Phoenix, UPS, Wal-Mart, Dell, and Toyota), and **customer intimacy** (think Williams College, Warren Wilson College, the Mayo Clinic, Lexus, and your favorite clothing boutique or neighborhood restaurant).

¹³ Michael Treacy & Fred Wiersema, *Discipline of Market Leaders*, (New York, Perseus Books, 1995, Reading, MA, Addison-Wesley, 1997 update)

Product leadership tends to focus more on cachet or innovation than on affordability, with pricing sometimes designed for the affluent and often justified by high-end design features, more expensive materials, service extras, or intangibles that exceed broadly acceptable norms of functionality and satisfaction achievable at more competitive price points. Prestige, as captured immediately above in the reference to Princeton (currently ranked number one by the U.S. News & World Report) and MIT (cutting-edge degree programs), is a good translation of product leadership into the higher education context. Prestigious private and public institutions typically practice product leadership as their highest priority value discipline, purposefully or not.

Operational excellence is the foundation for a reputation based on competitive pricing and customer satisfaction. Operational excellence is maintained by improving productivity to compete on price and by continuously improving quality to satisfy customers. In higher education, operational excellence is achieved by focusing relentlessly on per-student expense structures in the interest of maintaining the affordability of access (competitive net tuition pricing), while also assuring that academic programs and other services are as flexibly accessible as possible, perform as promised, and earn satisfaction ratings in the three-star to four-star range from external stakeholders and supporters—students, parents, policy makers, donors, and grantors.

The Commission, in effect, recommends that operational excellence receive immediate attention from all nonprofit colleges and universities. Per-student operating expenses and learning productivity matter! With the possible exception of the few institutions with endowments permitting a priority focus on prestige, most institutions should prioritize operational excellence first and customer intimacy second in their prioritization of the three value disciplines.

Many institutions currently prioritize customer intimacy (as a low student-to-instructor ratio) ahead of operational excellence, yet, ironically, most students will not judge a learning community to be intimate that is not grounded in an integrated set of self-service (online) transactions and human interactions that are today's basic enablers of operational excellence. Pre- and post-Internet customer intimacy are quite different concepts. Today's students expect and demand operational excellence.

Customer intimacy in higher education should be interpreted as a relentless focus on the individual student's success, with learning success being first and foremost. "Learning intimacy" captures the noblest meaning of customer-intimacy in higher education: a learning and support-service experience which is flexibly responsive to the needs of the individual student and which provides engaging opportunities for inspirational, serendipitous, and timely interactions between students and their instructors around, for example, life's big questions or a profession or discipline's core challenges.

Learning intimacy, to include the quality of learning, is nevertheless currently measured (in inverse proportionality) by the student-to-instructor ratio. There is little, if any, evidence, however, to support the student-to-instructor ratio as an inverse proxy indicator of the quality of learning outcomes. Independent of the student-to-instructor ratios they experienced, many students from all walks of higher education persist to degree and are typically satisfied with, even grateful for their college experience and also successful in their commitments to family, work, and citizenship.

Owing to the high percentage of overall operational expenses consumed by the salaries and benefits of instructional personnel, the student-to-faculty ratio is an excellent proxy measure for productivity and an inverse proxy for per-student expenses. Traditionally focused on decreasing the student-to-faculty ratio, academic logic may therefore conclude that learning intimacy and operational excellence are opposing value disciplines. The Internet generation's cognitive styles and communication preferences provide the foundation for eliminating this false dichotomy. Institutions can focus on using the Internet to redesign their academic, administrative, and student service processes for both mission effectiveness and operational excellence (productivity) while also providing more flexible delivery options for their students. Willing institutions can focus on technology-enabled operational excellence as the most cost-effective "platform" for achieving learning intimacy. The enrolled-student self-service portal becomes a primary medium for learning and service experiences that have been redesigned not only for efficiency and flexibility, but also for effectiveness—for both operational excellence and learning intimacy.

Now reflect again on the Toyota parable. Toyota’s leadership position is the result of a relentless focus on operational excellence which, in turn, enabled a new thrust into customer intimacy (the Lexus experience) and a surging reputation for product leadership through paradigm-shifting innovation (hybrid technology).

Scaling to Achieve Operational Excellence—and More

Within a disciplined culture of evidence and performance, here are some “recipes” for how the three IT-enabled redesign strategies might be used systemically to help achieve operational excellence. Priorities and projects should be guided by relevant performance reporting and analytics in order to scale transparent productivity to new levels.

1. States, systems, districts, other consortia, and individual institutions can systemically apply the common course strategy to replace each current common course by one redesigned course to be universally offered (and cross listed by all participating institutions). The purpose is to achieve the first two goals below and can include the additional outcomes outlined below.
 - a. Improve and account for learning outcomes and retention and graduation rates.
 - b. Reduce, and document the trends in, per-enrollment expenses in each common course and in the aggregate of all common courses.
 - c. Adapt a third-party “exit” assessment (such as the relevant Advanced Placement exam or ETS MAPP content assessment) for each course to document an end-of-course state of learning and lay the foundation for peer benchmarking.
 - d. Require for graduation an external CLA-like assessment of the basic fluencies and critical thinking skills that are one of the major objectives of the cluster of common courses selected for the redesign project. Offer this assessment once each term and, for students who opt to take it early and succeed in meeting the performance standards set by the institution, forgive further course work that is aimed primarily at the basic fluencies and critical thinking skills covered by the assessment.
 - e. Compare the various external assessment results among like partner institutions and, eventually, among other peer groupings nationally.

Commentary

- This recommendation can be pursued by any institution, public or private, or any consortium of institutions. The nature and purpose of a state-wide or other public system or district, however, provide optimum leverage for achieving and accounting for improved learning while also reducing per-enrollment expenses.
 - Using the flex strategy in conjunction with the common course strategy can further reduce per-enrollment expenses and increase the capacity for and convenience of access. The common course strategy, properly applied, will increase the faculty’s capacity to handle more common course enrollments, while the flex strategy will reduce or eliminate the need for physical classroom capacity and increase the convenience of access available to students.
2. Any consortium (as in item 1 above) or institution can use the flex strategy to i) increase convenience of access for students, ii) align program, course, and support service delivery options with today’s expectations for increased self-service, and iii) target flex markets of students who cannot or prefer not to seek a degree requiring significant real-time interactions—all in order to accomplish some of the following performance goals:
 - a. Meet program accountability obligations.
 - b. Increase enrollment revenues on a reduced per-student expense basis.
 - c. Accommodate increased enrollment demand (capacity for access) for programs and enrollment-capped clusters of high-enrollment common courses.

d. Remedy declining enrollment patterns.

Commentary

- The market for flex programs and courses continues to escalate, now at an annual rate of about 35 percent.¹⁴
 - Many institutions have program accountability obligations in teacher education, nursing education, other areas of healthcare professional education, and STEM education. These program obligations often target potential students who cannot participate in traditional classroom-rooted instruction. The flex strategy directly addresses the capacity for access of such programs while meeting the convenience of access needs of their potential students.
 - In all cases, the flex strategy can reduce expenses on a per-enrollment basis over the long term by avoiding new capital classroom costs and by reducing the cost of service through IT-enabled service process redesign.
 - Often overlooked is the expense reduction enjoyed by the student by virtue of reduced requirements for being on campus or meeting other real-time requirements.
3. Institutions and consortia (as in item 1 above) can look for opportunities to apply the external sourcing strategy to academic, business, administrative, and various other support functions in order to i) reduce operating expenses on a per-student basis, ii) acquire experienced expertise without necessarily incurring a long-term commitment to full-time salaries, and iii) increase agility. Beyond the usual auditing, bookstore, janitorial, and food services, other areas for potential external sourcing include the following:
- a. Performance reporting and analytics system solutions
 - b. Performance planning and management consulting
 - c. Academic consulting and support service to assist with common course and flex program projects (as in items 1 and 2 above) and other academic projects that would benefit from course and curriculum development, instructional design, outcomes assessment, and faculty development expertise.
 - d. Enrollment management systems and redesign services addressing the lifecycle from recruiting to admissions to retention to graduation to alumni relations
 - e. Advancement systems and services addressing the lifecycle from prospect to repeat donor
 - f. Business, administrative, and student support service process redesign consulting
 - g. 24x365 IT help desk support services
 - h. Security planning services
 - i. Disaster recovery and business continuity services

By thinking about these strategies and how they might be combined, more strategies will emerge, some representing—like Toyota’s hybrid power train—disruptive, paradigm-shifting innovations. Consider, for example, the *Antioch University Ph.D. in Leadership and Change*. The Antioch program is a “courseless” flex program created around the concept of a learning community and the assessment of student learning outcomes. It combines theoretical and case study readings with group discussions conducted online and in quarterly intensive residencies (three four-day and one seven day)—all in support of the students designing and completing individualized demonstrations of learning that are reviewed, discussed and evaluated online by the program’s core faculty who have expertise in the area of study. In four of the 15 demonstrations of learning, the students often study with and their work is assessed by “Mentors,” who are external practitioners and scholars and work in consultation with the Program’s core faculty members. External

¹⁴ I. Elaine Allen and Jeff Seamans, *Making the Grade: Online Education in the United States, 2006*, The Sloan Consortium and the Babson Research Survey Group (Sloan-C, Needham, MA, 2006), <http://www.sloan-c.org/publications/survey/pdf/making_the_grade.pdf>

scholars, who are not otherwise connected with the Program, are also part of the dissertation review process to assure academic quality. The program achieves individualized learning intimacy in the context of a vibrant learning community by emphasizing a cohort model (based on annual entrance), by three years of required participation in short term intensive face-to-face residencies, and by creating a dominantly online learning community based on weekly on-line group discussions facilitated by a faculty member, individual on-line discussions between faculty members and students regarding their learning demonstrations, and continuous and often very personal e-mail interactions among individual students between the intensive residencies. The model is an exemplar of paradigm-shifting innovations that radically deviate from current learning delivery and degree paradigms. While the Antioch program is at the doctoral level, it is a mastery-learning innovation that can scale into the undergraduate program with the quality-assuring help of external mentors and/or independent CLA-like learning assessments. Indeed, *Westminster College* in Salt Lake City is undertaking a redesign initiative to pilot an Antioch-inspired, paradigm-shifting innovation at the undergraduate level.

Voluntary Counter-Reform = Leadership + Evidence + IT-Enabled Innovation

The immediacy, scale, effectiveness, and efficiency of the frictionless self-service transactions and human interactions enabled by today's technologies are changing everything. Competition is on the rise and increasingly global in scope. Individuals have never had more options in deciding how to use their time, choose their avocations, and spend their earnings. Service organizations have never had a comparable opportunity to expand their audiences and operate more cost-effectively and flexibly while maintaining or improving quality of service. Most have seized the opportunity by reforming from within to improve productivity and competitiveness (operational excellence). Exceptions in the U.S. are nonprofit higher education, elementary and secondary education, and health care. Higher education policy makers have responded by raising the future bar of performance expectations for academe. Nonprofit higher education's opportunity is to demonstrate that its tradition of innovation, self-governance, and commitment to the common good can be channeled internally to improve learning intimacy, educational outcomes, and operational excellence (productivity). The time is right for a voluntary counter-reformation from within higher education, and some academic leaders are stepping up to the challenge.

Indeed, from this participant's perspective, "voluntary counter-reform" aptly describes the hopeful tone set by the Department of Education during its March 2007 Summit, "A Test of Leadership: Committing to Advance Postsecondary Education for All Americans." Whether the federal government will play a supportive role in voluntary counter-reform prior to the 2008 presidential election may be known by the time this paper is published. Because higher education is not a federal entitlement and because the federal debt is near historic, inflation-adjusted highs, a significant increase in per-student federal support appears unlikely. In contrast, the states are urgently focused and dependent on higher education for regional economic development in an increasingly competitive global economy, and they are not in debt, in spite of the aforementioned trend toward universal revenue shortfalls by 2013. State higher education executives accordingly would be wise to plan for and act soon on local and regional state imperatives for program accountability and, within priority programs, also address learning accountability and the convenience of and capacity for program access—all while seeking one-time state funding for program (and course and service) redesign aimed at increased productivity in the interest of affordability of access. Voluntary program accountability initiatives will be welcomed according to the NGA's Innovation America initiative, and may help position higher education for a renewal of per-student public support at the state level.

This paper has explained why IT-enabled innovation strategies are necessary to any systemic academic reformation. It also outlines how those strategies can help leaders marshal the organizational discipline required to align their IT investments and their reporting and accountability systems with performance planning and management processes for the purpose of measurably improving and accounting for performance.

The materials that follow can help seed a performance dialogue and assess institutional readiness to support a systemic, voluntary effort to achieve measurable performance improvement—to go from “good to great” in the language of Jim Collins.¹⁵

¹⁵ Jim Collins, *From Good to Great: Why Some Companies Make the Leap ... and Others Don't*, (New York, Collins Publishing, 2001)

An External Policy Parsing of Institutional Performance with Goals, Sample Pressures, and Sample Metrics

Learning Accountability	Program Accountability	Expense Accountability	Affordability of Access	Convenience of Access	Capacity for Access
<p>Goal</p> <ul style="list-style-type: none"> • Measure and openly report learning outcomes in ways that permit comparisons among peer institutions. <p>Pressures</p> <ul style="list-style-type: none"> • Many campuses need to improve retention and graduation rates. • Most do not measure learning and benchmark the results with peer campuses, even in the high-enrollment courses taught in common at most campuses. • Policy makers want learning assessed via independent instruments, such as the Collegiate Learning Assessment. • Credit transfer, even for courses taught in common at almost all campuses, is random in its nature. <p>Sample Metrics</p> <ul style="list-style-type: none"> • Peer average rate vs. actual rate for key indicators such as retention, persistence, and graduation • Peer comparisons in the National Survey of Student Engagement, or the Community College Survey of Student Engagement • Peer benchmarking via the Collegiate Learning Assessment, MAPP, or other independent assessments of college-prep courses, college-level basic fluency and critical thinking skills, and some of the highest-enrollment introductory-level disciplinary & professional courses 	<p>Goal</p> <ul style="list-style-type: none"> • Respond rapidly to economic development and workforce needs with appropriate degree and certificate programs <p>Pressures</p> <ul style="list-style-type: none"> • Nonprofit higher education is not offering degree programs at the capacity required to meet local, state, and national needs for school teachers, health-care professionals, engineers, IT professionals, and other immediate and future workforce personnel. • Even public nonprofit higher education is failing the free-market test in which supply and demand tend toward equilibrium. <p>Sample Metrics</p> <ul style="list-style-type: none"> • Percentage of annual student FTE increase directly attributable to programs created to meet identified economic development or workforce needs – for teachers, nurses, biotech workers, etc. • Percentage of annual increase in non-credit enrollments directly attributable to programs created to meet identified economic development or workforce needs • Percentage of all degrees awarded that are directly attributable to programs created or redesigned to meet identified economic development or workforce needs 	<p>Goal</p> <ul style="list-style-type: none"> • Reduce or stabilize per-student operating expenses (to increase institutional productivity). <p>Pressures</p> <ul style="list-style-type: none"> • Per-student operating expenses have been increasing for years at an unsustainable average annual rate in the 4%-5% range. • While productivity has risen for years in almost all sectors of the economy, higher education's productivity has decreased. <p>Sample Metrics</p> <ul style="list-style-type: none"> • Per-enrollment direct instructional expenses • Average ratio of enrollments to instructional personnel FTEs for college-prep and college-level basic fluency courses and some of the highest-enrollment introductory courses • Percentage of change in the annual ratio of student FTEs to instructional personnel FTEs • Percentage of change in the annual ratio of student FTEs to administrative FTEs • Per-student-FTE central IT expense and IT personnel (full-time & part-time) expense • Similar unit expenses metrics in other lines of service 	<p>Goal</p> <ul style="list-style-type: none"> • Reduce or stabilize inflationary increases in net tuition borne by consumers (to keep college affordable to all qualified students). <p>Pressures</p> <ul style="list-style-type: none"> • The average annual increase in net tuition has exceeded the Consumer Price Index for years, making it difficult for students in lower and middle income brackets to afford college. • Higher education tends to focus on revenues, not costs and, so, focuses on replacing public revenue shortfalls rather than increasing productivity in order to hold down per-student costs and, thus, net tuition increases. <p>Sample Metrics</p> <ul style="list-style-type: none"> • Ratio of the annual rate of change in undergraduate tuition/fees to the annual Consumer Price Index • Ratio of per-student-FTE revenues from net tuition/fees to per-student-FTE direct operational expenses 	<p>Goal</p> <ul style="list-style-type: none"> • Offer students convenient, flexible options for completing a degree or certificate. <p>Pressures</p> <ul style="list-style-type: none"> • A growing number of “flex” students can’t or won’t participate in program and service offerings unless they maximize asynchronous online self-service instruction and services, while also providing real-time access to faculty and staff as needed. • Convenience is the primary reason that students, even residential students, expect “flex” programs and services. • Program accountability obligations often dictate flex programs and services. <p>Sample Metrics</p> <ul style="list-style-type: none"> • Percentage of all degree programs which can be delivered asynchronously except for required clinical or lab work • Percentage of all non-credit programs which can be delivered asynchronously except for required clinical or lab work • Annual inventory of services accessible asynchronously via a web portal 	<p>Goal</p> <ul style="list-style-type: none"> • Manage enrollment capacity in response to demand. <p>Pressures</p> <ul style="list-style-type: none"> • Bottleneck courses • Bottleneck programs • Faculty capacity • Classroom capacity • There are more students in the national pipeline today than ever before. • With more “flex” students than ever entering the pipeline, enrollment pressures will continue, especially at public institutions in the larger metropolitan statistical areas. <p>Sample Metrics</p> <ul style="list-style-type: none"> • Percentage of qualified applicants refused admission or admitted with delay • Annual percentage change in total credit hours and in total non-credit enrollments • Total first-term enrollments (credit & non-credit) • Ratio of total first-term credit hours to total first-term instructional personnel FTEs and of total first-term non-credit enrollments to total first-term instructional personnel FTEs • Ratio of total annual enrollments to total seating capacity of the classroom plant

Assessing Institutional Response to External Performance Pressures

For each of the six performance pressures described below, please indicate:

- its importance to your institution (0, 1, 2, 3, or 4 where 0 = not important ... 4 = highly important),
- your institution's current practice of measuring performance or not, and
- your estimate of your institution's current performance (0, 1, 2, 3, or 4 with 0 = poor ... 4 = excellent) (whether or not your institution actually measures performance)

1. Learning accountability

Measure and openly report learning outcomes in ways that permit comparisons among peer institutions.

importance (0-4)___ measures performance: yes___ no___ current performance (0-4)___

2. Program accountability

Respond rapidly to economic development and workforce needs with appropriate degree and certificate programs.

importance (0-4)___ measures performance: yes___ no___ current performance (0-4)___

3. Expense accountability

Reduce or stabilize per-student operating expenses (to increase institutional productivity).

importance (0-4)___ measures performance: yes___ no___ current performance (0-4)___

4. Affordability of access

Reduce or stabilize inflationary increases in net tuition borne by consumers (to keep college affordable to all qualified students).

importance (0-4)___ measures performance: yes___ no___ current performance (0-4)___

5. Convenience of access

Offer students convenient, flexible options for completing a degree or certificate.

importance (0-4)___ measures performance: yes___ no___ current performance (0-4)___

6. Capacity for access

Manage enrollment capacity in response to demand.

importance (0-4)___ measures performance: yes___ no___ current performance (0-4)___

Assessing Institutional Readiness for Systemic, Measurable Performance Improvement

Mark each item 0, 1, 2, 3, or 4 where 0 = serious issue(s) ... 4 = no issue(s)

1. Institutional performance reporting, planning, and management processes
 - *Executive leadership*—executive level agreement on the need for measurable performance improvement
 - *Faculty and executive agreement on the role of IT*—collaboratively aligned to meet measurable performance obligations or objectives through IT-enabled innovation (service process redesign)
 - *Performance reporting and analytics*—have an institutional data warehouse with a customizable, web-based reporting system and customizable scorecards to permit ad hoc queries of key indicators of institutional and departmental performance for tracking progress and analyzing performance issues
 - *Performance planning and management*—have a “performance council” or other institutionally-focused group responsible for developing and maintaining institutional performance goals and indicators used to guide daily work, track progress, and revise goals/indicators based on evidence or changing priorities
 - *Performance improvements*—have experience with IT-enabled service process redesign strategies for improving academic performance and other support service performance while reducing per-student costs
2. Institutional satisfaction with institutional digital utility services
 - *Infrastructure and systems*—wired and wireless network, ERP, CMS, security, backup, disaster recovery, & classroom systems (feel free also to circle any particularly problematic systems)
 - *Reliability*—service-level guidelines and 24x365 monitoring/maintenance of the above systems
 - *Access*—ubiquitous access to the campus network and application systems
 - *Help-desk support and responsiveness*—24x365 help desk for all students and faculty/staff members
 - *Training and hands-on support*—technical training and hands-on help, as required, for the institutionally supported network and all desktop, lab, classroom, and central application systems
 - *Ease and coherence of use*—technical systems integration services to implement and manage an individually-customizable self-service web portal providing single-logon access to a unified set of application services based on the above systems (the basics of a reliable, accurate, and easily accessible information and innovation infrastructure)
 - *Life-cycle updates*—assessment, planning, selection, conversion, and upgrade processes for campus infrastructure and systems, managed within budget and to meet planned schedules
3. Human resource effectiveness within the institutional IT organization
 - *Leadership*—ability to work collaboratively with institutional leaders to help support strategic performance objectives that could benefit from the leverage of IT, and also to work with academic and administrative units to help them accomplish the same objectives from their operational and strategic perspectives
 - *Management*—a professionally managed and governed organization
 - *Service mentality*—friendly and professional service interactions
 - *Staffing effectiveness*—recruiting, expertise, professional development, retention
4. Expenditures by institutional IT organization
 - *Affordability/sustainability*—of institutional IT expenditures from an institutional and student perspective
 - *Predictability*—of institutional (central) IT expenditures from year to year
 - *Peer cost-competitiveness*—see EDUCAUSE Core Data Service for some benchmarks for funding per FTE student, <<http://www.educause.edu/ir/library/pdf/pub8003.pdf>>
 - *Economies of scale*—from, for example, external sourcing or being part of a consortium

About the Author

Dr. William H. Graves, as senior vice president for academic strategy, is a member of the executive team for SunGard Higher Education. He is also professor emeritus at the University of North Carolina at Chapel Hill (UNC) where, with a mathematics Ph.D. from Indiana University, he also served as dean for general education, interim vice chancellor for academic affairs, senior information technology officer, and founder and director of the Institute for Academic Technology (a UNC/IBM alliance).

Starting at UNC and now at SunGard Higher Education, Graves has helped pioneer technology-enabled strategies for measurably improving upon and accounting for institutional performance in higher education, especially academic performance. On this evolving theme, he has published over 80 articles and books, given hundreds of invited presentations, and advised hundreds of institutions.

Graves is a co-founding board member of both the National Center for Academic Transformation and the Alliance for Higher Education Competitiveness, and serves also on the Tenth Anniversary Commission of the Council for Higher Education Accreditation. He participated in the Department of Education's recent national summit, A Test of Leadership, and served on its Enhancing Accessibility, Reducing Costs, and Promoting Productivity working group. He has served on the boards of the IMS Global Learning Consortium, EDUCAUSE, and CAUSE. He helped launch Internet2 and EDUCAUSE's National Learning Infrastructure Initiative (now the Learning Initiative) and chaired the latter's planning committee from 1994-2004.

While on leave from UNC in 1997, Graves founded and directed the nonprofit Collegis Research Institute. He then retired from UNC in 1999 to found and chair the board of Eduprise, an academic technology services firm which subsequently merged with Collegis. The resulting privately held company was acquired in 2004 by publicly traded SunGard Data Systems and is now part of privately held SunGard Higher Education, the world's largest technology-related business focused solely on higher education. The company provides institutional software solutions, technology management solutions, and a range of consulting services designed to meet academic and business needs specific to higher education.