

Linking Analytics to Lifting out of Recession

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The scope of higher education analytics has broadened, dealing with K-20 and workforce issues and comparisons. Moreover, the stakes are higher, as well. Analytics will be critical to higher education as never before. This paper provides more detail on the types of actions, supported by analytics, needed by higher education to lift out of recession and establish programmatic and financial sustainability. We present the following sections:

- I. **Three Basic Premises for Lifting out of Recession**
- II. **What Are Action Analytics?**
- III. **Higher Education's Current Responses**
- IV. **Higher Education's Future Actions**
- V. **Leveraging Disruptive and Dislocating Events**

Greater details can be found on our blog, "Linking Analytics to Lifting out of Recession." Check it out at <http://donalddmnorris.blogspot.com>.

I. Three Basic Premises for Lifting out of Recession

The impact of the collapse of the capital and real estate markets precipitated a recession that has had major impacts, direct and indirect, on institutions of higher education. There is no need to dwell on the details and dimensions of the immediate problem, but we do need to focus on responses, actions, and solutions. We begin with three premises.

Premise #1: The current recession requires decisive action: both immediate cutbacks and longer-term innovations and reinventions. Higher education's pain is caused by a perfect storm of financial woes: reductions in state appropriations for public institutions, dramatic cuts in investment income that are most impactful on private institutions, and traumatic declines in the capacity of parents and students to pay for higher education, today and continuing into the future. The affordability crisis will likely continue and perhaps worsen, even after the current economic conditions improve.

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We are all familiar with the short-term adjustments pummeling campuses today: financial rescissions, travel freezes, short-term fixes, competing for and leveraging stimulus money, lay-offs, furloughs, pay cuts, creative approaches to financial aid, continuing to increase tuition to fill the gaps, compressing the time for an undergraduate degree from four (or more) to three years, and enrollment shifts to less-expensive institutions. In the short-run, financial exigency and expediency seem to be trumping innovation. But campus financial officers anticipate worse budgetary challenges in two to three years, when stimulus money is gone. Moreover, demands for transparency and accountability are growing. To reclaim financial sustainability in the future, institutions will need to pursue aggressive, mixed strategies of operational efficiency, innovation, reimagined processes and practices, and fresh revenues.

In the literature on responding to recession, writers from other industries emphasize innovation and preparing to compete in the post-recession economy. Higher education must do the same.

Premise #2: A new generation of emerging analytic capabilities will enable even greater accountability and performance improvement. Next gen analytics are driven by two factors: 1) the skyrocketing demands for accountability by higher education's publics, and 2) the proliferation of Web 2.0 tools and practices. Some practitioners refer to these new practices as business intelligence, higher education informatics, or performance measurement and improvement. We prefer the term *Action Analytics@* to describe the next generation of analytics practices, so powerful that they don't just enable action, they demand it.

The new generation of analytics will not be broadly distributed, overnight. Technology is just part of the issue. Building organizational analytics capacity requires changing the behaviors of leaders, faculty, staff, students, and other stakeholders, as well as reshaping institutional culture. Already underway before the recession, the emergence of a culture of performance improvement must accelerate. The need to establish financial sustainability now demands it.

Premise #3: In order to lift out of recession, higher education needs to discover, demonstrate and deploy a more vigorous combination of solutions based on: 1) operational efficiencies, 2) collaborations and innovations, 3) reimagined processes and practices, and 4) fresh sources of revenue. Institutional leaders will need to develop their capacity to pursue an active portfolio of efficiency, innovation and reimagination initiatives, supported by analytics. Action analytics will prove critical to improving and demonstrating high education's value propositions to its publics. Comparative measures are emerging that focus on access, convenience, affordability (total time and cost of education), and success (completion, employment, and satisfaction with outcomes and experiences). The public will eventually demand these key measures, and more; they will also expect greater transparency from institutions. Options for accelerated completion, greater convenience, and programs better aligned to workforce needs will be valued. The availability of these programs will be broadly publicized, thus differentiating and rewarding innovators.

For more perspectives on these premises, check out our blog on "Linking Analytics to Lifting out of Recession" (<http://donaldrmorris.blogspot.com>).

How Sustainable Is Educational Funding? In our view, American higher education's funding models and performance are unsustainable. What are the various facets of unsustainability?

- McKinsey reports that the persistent gap in academic achievement between children in the US and their counterparts in other countries deprives the US economy of as much as \$2.3 trillion dollars in economic output in 2008. This is a tremendous drain on our international competitiveness and cannot be sustained in the face of global competition.
- The high attrition, failure, and remediation rates in American high schools and colleges is wasteful and unsustainable; in many American community colleges, even those being fed by "high

performing” school districts, it is not uncommon to see rates of students requiring remediation in the range of 60-75%. This wasteful “redoing” of what should have been achieved in high school is unsustainable.

- Retention rates at American colleges and universities vary dramatically, but are very high in many institutions, representing a waste of effort and resources; institutions with serious retention improvement programs have demonstrated these rates can be improved substantially.
- Public universities have gone through a roller coaster ride of budgetary ups and downs, achieving new funding during good economic times, then experiencing mid-year rescissions, cutbacks, and retrenchment during periodic recessions. This repeating cycle has completely disrupted consistent funding and nurturing of innovations and initiatives that might change and has diminished capacity and sapped the energy of institutional leadership. This model is unsustainable.
- Public financing of higher education continues to decline as a percentage of state budgets; public institutions’ percentage of support from state appropriations as a percentage of their total budgets has declined to 10-15% for many flagship universities. Many of these institutions have accepted lesser funding to achieve greater flexibility in setting tuitions and other measures that would establish for them greater sustainability and predictability in budgets.
- On an enterprise level, higher education and health care institutions have used technology in ways that often raise the overall cost of service. Even successful innovations, like the efforts of Carol Twigg at the widely recognized National Center for Academic Transformation (NCAT) <http://www.center.rpi.edu/> to reinvent course practices using technology, resulting in dramatically reduced cost and enhanced performance, have not been widely replicated, at scale, across institutions. This sort of failure to elevate innovation to the enterprise level is unsustainable.

Lifting out of recession is all about building competitiveness and rediscovering financial sustainability. These two factors are intertwined.

Without profound innovation, merely increasing access and student affordability will be institutionally unsustainable. Access without success is not acceptable.

Changing Practices and Achieving Sustainability. Financial sustainability *can* be achieved, but only by changing current practices – substantially – in K-12, postsecondary education, and workforce-based learning. New enterprises will emerge, exercising ever-greater influence, but traditional learning providers will also have to change their ways.

How can we do it? Institutions can pursue a combination of operational efficiency and leveraging of existing assets and practices, reimagining and innovation, and active pursuit of financial sustainability. Performance metrics, accountability and action analytics will be critical to this quest.



II. What Are Action Analytics?

Analytics are processes of data assessment and analysis that enable us to measure, improve, and compare the performance of individuals, program, departments, institutions or enterprises, groups of organizations, and/or entire industries. Today, leaders in higher education are using analytics to understand the performance of K-20 education, workforce organizations, transitions between learning and work and back again, and related issues. Improving the performance of education and workforce development in ways that are financially sustainable is critical to America's global competitiveness, as we lift out of recession.

What Are Action Analytics? The term *action analytics* refers to analytics capabilities and practices that are powerful, immediate, and useful to a wide variety of stakeholders. But most importantly, action analytics can only happen in enterprises and environments that are genuinely committed to measuring and improving productivity, innovation, and performance. These organizations must actively build the capacity and cultivate the behaviors to do so. Achieving action analytics is more about leading and navigating organizational change than technology. It is about redirecting our direction to improving performance and optimizing value.

Analytics That Demand Action. In such environments, *action analytics* don't just enable actions; they demand them. Actions in the form of judgments, decisions, choices, and interventions. Actions that shape and refine policies, processes, procedures, practices, and, ultimately, performance. Actions expressed through innovations whose successes can be scaled across entire educational and workplace enterprises. Actions intended to continuously improve value and performance in education, training and workforce development. And actions that make performance transparent to stakeholders, including learners and their families.

Analytics in a Culture of Performance Measurement and Improvement. *Action analytics* are made possible by a combination of four elements: 1) technology and tools; 2) processes; 3) skills of administrators, faculty, and staff; and 4) organizational culture. In many ways, organizational culture is a useful metaphor for understanding the state of analytics development in higher education. Traditionally higher education has been a culture of reporting. We are in the process of evolving into a culture of evidence; eventually we will achieve a culture of performance measurement and improvement.

Focusing on Value. The simple point is, most college and university communities and institutional leaderships are committed to "quality," but not "performance." For many institutions success is measured in traditional ways: 1) benchmarking against a group of peer institutions, 2) copying successful programs and practices, and 3) targeting comparative levels of resources, faculty salaries, and other traditional measures of quality and success. In this framework, the driving force is quality, equated with the prestige achieved by securing high placement within academic rankings, the U.S. News and World Report ranking system, and/or similar rating schemes.

Quality is often measured in terms of resource inputs. William Bowen observed that colleges and universities "raise all the money they can, and spend all the money they can raise." In today's resource environment, with heightened expectations and reduced levels of resources, such definitions of quality are not at all helpful.

Another way of looking at performance is to focus on "value" rather than "quality". Perceptions of value are based on three factors: 1) the nature and quality of outcomes, 2) the essence of the experiences through which those outcomes are achieved, and 3) the cost/price. A focus on value is a dialogue between each stakeholder and the institution. As we use analytics to highlight institutional performance, we should focus on the value propositions fulfilled by higher education. Our goal should be to optimize the value delivered and to reimagine our processes and practices for optimizing value in a continuing environment of resource scarcity.

III. Higher Education’s Current Response

How have higher education’s leaders responded to the current budgetary crises? Figure 1 summarizes the short-term actions being taken by institutions across the land. It compares these short-term actions with the longer-term challenges that must be addressed over the next two-to-three years.

Figure 1: Higher Education’s Current Responses

Short-Term Actions	Actions to Address Longer-Term Challenges
<ul style="list-style-type: none"> • Institutional leaders pursue a full spectrum of cutbacks and short-term fixes in response to budget rescissions and claw backs: <ul style="list-style-type: none"> - Lay-offs, furloughs, pay cuts - Hiring and travel freezes - Reductions in operating funds - Accounting and budget gimmicks - One-time, one-year fixes • Leverage stimulus money already received, compete for additional stimulus funding. • Financial exigency trumps innovation, many institutional leaders find they are hibernating instead of innovating (in the short run). • Creative approaches to financial aid and student support needed to maintain enrollments and reduce the effect of “leaky pipelines” • Continue to increase tuition charges to plug funding gaps. • Support the potential promise offered by numerous Obama programs and figure how they can contribute toward financial sustainability in the longer term: <ul style="list-style-type: none"> - PK-12 reinvention - “Race to the Top” - Online courseware initiative - Financial aid increases – Pell grants - Proposed tax credits for tuition - Funding for community colleges - Goals to increase college-going and levels of degree attainment - Stimulus funding for colleges and universities • Utilize Obama stimulus and strategic initiative funding to prepare for the transition to addressing longer-term challenges. Shape the organizational narrative to prepare for a combination of immediate action and continuing reimagination in pursuit of financial sustainability. 	<ul style="list-style-type: none"> • Shift gears from short-term actions to meeting longer-term challenges. Plan for harsh budget situations in 2-3 years when stimulus is gone and for accelerated demands for transparency and accountability. • Redirect the institutional narrative and conversation toward the need to take aggressive action to rethink value propositions in quest of financial sustainability. • Set the stage for serious consideration of more radical and sustainable innovations and systemic transformation: <ul style="list-style-type: none"> - Eliminate low-demand programs and academic offerings in areas in which institutions are not distinguished, then share online offerings with other institutions to fill the gaps. - Establish college and work readiness as the mandatory high school curriculum and monitor adequate progress towards college/work readiness with appropriate assessment, intervention and progress-to-success metrics. - Establish powerful K-20 collaboratives to co-create innovative and transformative learning agendas and initiatives. - Dramatic PK-20 initiatives – longer school year, bridging programs, reduced remediation, teacher-to-faculty alignment of college/work readiness expectations, improving middle school to high school success, consider anew model for grades 11-14. - Increase # of 2-year and 4-year degrees to levels of international leadership. - Pursue workforce and productivity changes through achieving Web 2.0 versions of education, R&D, healthcare. - Reduce the cost of online learning, using open resources and e-learning offerings from providers that have achieved world class standards of consistency and price. - Reduce time to degree as an option; three-year degrees; full-year calendar for K-20 - Talent and competitiveness networks and communities - perpetual competence - Reduce historic but low-value reliance on campus facilities and the need to come to campus, maximizing time on campus for team projects, advising, and mentoring - Unbundling learning, demonstration of competence, and certification • Take immediate actions to pursue efficiency, innovation, and transformation opportunities

IV. Higher Education's Future Actions

A Portfolio of Future Actions. Figure 2 illustrates the portfolio of measures – efficiency enhancement, innovation, and transformation – that will be necessary for institutions to make a serious effort at achieving sustainability. We have assembled this list from examples already underway, from extrapolation of the potential impact of President Obama's stimulus and strategic initiatives, and from innovative and transformation proposals that have been waiting for the right moment to become possible. Many institutions have existing initiatives that can be redirected and enhanced to these ends.

Shifting Gears. In our conversations with institutional leaders across the country, most leaders have grasped the fact that they need to shift gears immediately from reaction to proactive engagement. They need to plan and act decisively over the next several years, guided by emerging visions of what their institutions should look like in 2020. Many such planning, visioning, and executing activities are smoldering and will catch fire on campuses this fall.

Several obstacles confront these efforts:

- Institutions are not well organized to engage in serious reinvention efforts that affect academic and administrative productivity and require changes in basic models of behavior and practice; much of the energies of presidents are committed to acquiring external resources, not internal performance improvement;
- Even more to the point, most faculty do not understand the nature of the sustainability trap; they simply want to be given the resources to do their jobs in the way they learned from their mentors, in pursuit of quality;
- Many faculty don't recognize there is a problem; some will resist the notion of performance improvement; and collectively organized faculty have opposed many of the sorts of changes in practices that will be necessary to establish financial sustainability;
- Many significant change initiatives in higher education have been through "skunk works" operations where new approaches could be developed and tested using willing faculty; today's efforts need to reach broader cross-sections of faculty and staff;
- For serious change to occur, campus communities must go through cascading cycles of engagement, conversation, and storytelling about successful innovations; these processes have not begun on most campuses; and
- Large-scale change in higher education requires a crisis to succeed; today's resource crisis has not yet been translated into an imperative for reimagination and persistent performance improvement. This saga is still being written and translated into language that colleges and university communities can understand.

In Section IV, "Leveraging Disruptive and Dislodging Events in Higher Education", we discuss the events that can be used to demonstrate the dimensions of the current crisis and make certain it is not wasted.



Figure 2: Higher Education’s Future Actions

<p style="text-align: center;">Enhancement of Efficiency and Effectiveness</p>	<p style="text-align: center;">Innovation and Transformation</p>
<p>1. Improve Management and Resource Flexibility. The 2009 Recession has dramatically reduced short-term flexibility; internal sources of organizational slack have been eliminated. Fresh approaches are needed:</p> <ul style="list-style-type: none"> • Public and private institutions need to improve the capacity-development and high-value outcomes of their internal resource allocation processes; and • They must focus on making resources available for developing new revenue opportunities and growth in existing streams, productivity enhancement, and succession planning. 	<p>1. Substantially Increase Management and Resource Flexibility. This is a critical action for public institutions and includes several elements:</p> <ul style="list-style-type: none"> • Trade reductions in the level of state funding for management flexibility in setting tuition and liberating the institution from state-level micromanagement. Today, this is often called “privatization” and is typically limited to research universities; • Establish new, long-term levels of “sustainable funding,” utilizing a new “base plus increment” model of funding where increments reflect both enrollment changes and inflationary forces but are not so tightly tied to either that they compromise academic mission; • Develop the programmatic capacity for institutions to meet growing demand, even in times of recession, by using hybrid/online course and support structures where the marginal costs of additional students are equal to tuition.
<p>2. Improve Internal Funding Processes. Internally, funding and resource allocation and reallocation need to be made more flexible, focusing on fresh appraisals of value propositions and leveraging relationships and other assets.</p> <ul style="list-style-type: none"> • Institutional resources are stretched to the limit, yet institutions need to find ways to fund new innovations and turn those innovations into greater efficiencies and new revenues; • Funds for reallocation could be freed up by eliminating low-demand programs and course offerings, focusing on academic strengths, and establishing collaborative relationships with other institutions to provide on-line and hybrid offerings to complete the disciplinary portfolio; and • Release time for non-sponsored research and for committee work and faculty governance could also be reduced or eliminated. 	<p>2. Innovate and Transform External Funding Models and Processes. The major innovations and transformations in funding will come from external sources. Options include:</p> <ul style="list-style-type: none"> • Provide greater federal funding for targeted areas like community colleges, K-12 Race to the Top, increased financial aid (Pell Grants), tax credits for education, federal funding for research, and such; • Create funding innovations that span K-20, such as funding that “follows the students” spanning K-20. This will enable colleges and universities to offer courses in K-12 and for K-12 taught courses to receive college credit. It would also enable public institutions to charge tuitions that cover the marginal costs of new, technology-enabled modes of learning; and • Consider tighter focusing of research funding.
<p>3. Facilitate Financing of Education by Individuals and Families. In the short-term, learners and their families are having trouble securing financial aid. And the amount of aid still leaves significant gaps in many cases. In the long-term, affordability will become an increasing problem. Institutions need to:</p> <ul style="list-style-type: none"> • Be certain students receive all the aid for which they are eligible; • Simplify the financial aid application and award processes; • Provide creative financial aid options and nimble packaging to enable students to come to college in spite of recession and the diminishment of family finances; and • Develop long-term provisions for continuing diminishment in family finances. 	<p>3. Transform the Way Individuals/Families Finance Their Education. The cost and debt burdens of professional education have distorted labor markets and practices. Transformative solutions can eliminate these.</p> <ul style="list-style-type: none"> • For example, governments could create new, pay-for-service options in which targeted professional populations such as teachers, doctors, lawyers, social workers, and other professionals serving public needs would have their debt burdens fully paid after working and paying for five years in service. These programs could be calibrated as part of cost reduction efforts in health care reform. • Create a national clearinghouse for service opportunities eligible for debt forgiveness.

Figure 2: Higher Education’s Future Actions (Continued)

Enhancement of Efficiency and Effectiveness	Innovation and Transformation
<p>4. Reduce the Cost of Course Materials. Institutions can accelerate existing mechanisms to reduce costs – used book or book-rental programs, course packs, and on-line repositories of resources – to make the cost of course support materials affordable.</p> <p>Many of the providers of used and on-line materials are currently working hard to support such efforts.</p>	<p>4. Transform the Cost of Course and Competence Building Materials. Significant communities of practice are fundamentally reinventing the use and cost of course materials using open educational resources (OER). Content will be free for many courses in future.</p> <p>In professional fields like medicine, learners and practitioners are being provided with perpetually refreshed practice guides to refresh and extend competences.</p> <p>Reinvention of courses should examine the total cost structure and deal holistically with it.</p>
<p>5. Improve Academic Productivity Incrementally. Institutions can review and refine academic offerings and processes within existing academic paradigm:</p> <ul style="list-style-type: none"> • Eliminate low-demand/quality courses and degrees; utilize online collaborative arrangements with partner institutions; • Develop allocation models that allow for sharing of resources within partnership arrangements; • Review and refine course offerings, eliminating vanity courses, eliminate and/or combine small sections, manage assignments more effectively (most institutions have already taken variations on these measures); (technology tools can serve as a backdrop to improve course management) • Progressively focus program and course offerings on areas of strength; in other areas, offer specialty courses, online, from other institutions; use online courses to assure students stay on degree schedule; • Review the course load policies of tenure track and adjunct faculty in all academic disciplines and adjust to market realities (some institutions with 2+2 semester course workloads are considering moving to 2+3 or even 3+3 in some disciplines); • Utilize non-tenure track, performance-contract faculty in appropriate settings and contexts; and • Recalibrate the relative balance of different types of faculty positions in view of future needs: research, tenure track, adjunct, lecturer, fixed-length performance contract, and so forth. 	<p>5. Transform Academic Productivity. Examine all aspects of academic work (teaching, administration, etc) to see which processes and tasks can be reinvented.</p> <p>Carol Twigg’s course reinvention methodologies, developed and offered through the National Center for Academic Transformation (NCAT), have shown how to reinvent individual courses (changing the mix of faculty/academic staff, enhanced use of technology) to reduce cost and improve outcomes. NCAT’s current work is extending course reinvention to entire institutions and even systems (Hawaii).</p> <p>Dramatic and long-lasting enhancements in academic productivity can be achieved by a combination of strategies:</p> <ul style="list-style-type: none"> • Collaborative course reinvention using the NCAT model at the individual course, enterprise, and system level (innovation at scale, enterprise-wide); • Make a national utility of online, open educational resources available to all types of institutions; use this repository to reinvent the dynamics of course interactions (Combination of best aspects of University of Phoenix model and Western Governor’s University model). This model would be especially attractive to community colleges, public four-year institutions seeking a lower-cost option (tuition > marginal cost of additional learners), and some proprietary schools; • Deploy specific online courses from on-line providers achieving world-class standards of consistency, competence development, and price; use these courses to fill disciplinary holes or to provide excess capacity necessary to meet peak demand so students can stay on their graduation schedule or accelerate completion; • Push remediation efforts into K-12, providing online materials and standards to require students to achieve performance levels before graduation (and parents to be aware of performance standards that will be required for college-level work, not watered-down state standards of learning).
<p>6. Improve Retention and Student Success. Systematically address remediation and retention using analytics, intrusive intervention, and proven mentoring techniques for at-risk populations. Utilize cross-institutional comparison to promote performance improvement.</p> <p>Improve student degree planning and pathways programs; use online courses, even if provided by other institutions, to assure students can always enroll in courses that are part of their approved degree plan. Where possible, enable students to “lock into” a full-year completion schedule.</p>	<p>6. Dramatically Reduce Remediation, Boost Retention and Student Success. Undertake fundamental PK-20 reinvention, using a combination of:</p> <ul style="list-style-type: none"> • Longer school years for K-12 – and perhaps for post-secondary education; • National standards consistently applied, performance pay, and innovation funding tied to willingness to transform; • Bridging and pathways programs reaching into high school in particular disciplines, then generally; and • Establish robust success pathways for middle school to high school transitions, consider merged grades 11-14 for improved college success.

Figure 2: Higher Education’s Future Actions (Continued)

<p style="text-align: center;">Enhancement of Efficiency and Effectiveness</p>	<p style="text-align: center;">Innovation and Transformation</p>
<p>7. Reduce Time-to-Degree and Total Cost of Learning. Provide options that deliver those outcomes:</p> <ul style="list-style-type: none"> • “No frills” degree (Arizona State University) provided at centers in the community(Pell Grant cost); • “Design-to-value” options suggested by Center for College Affordability and Productivity; • Allow students to use lower cost online learning from other institutions to ensure students can get the courses they need to graduate on time; • Three-year degree achieved by year-round operation and compressing curriculum (Hartwick College); • Provide stackable degree/career ladders (MnSCU); and • Advanced degree planning and “electricity grid for e-learning” where online courses used to fill gaps (MnSCU). 	<p>7. Reduce Time-to-Degree and Total Cost of Learning. Leverage PK-20 reinvention and analytics-based learning support to raise student success</p> <ul style="list-style-type: none"> • Early College High School programs providing high school degree and associate degree (Bard College); • Establish grades 11-14 Middle College models; • Three-years-to-baccalaureate, one-year-to-associates degree, not as experiments, but at scale. Substantially increase bridging, pathways, and concurrent/dual enrollment models figuring out how to distribute financial resources. Schools in some states experimenting with associates degree from high school (Utah); and • Even more aggressive completion times for exceptional students (two-year bachelors, four-year masters).
<p>8. Use Campus Facilities More Efficiently. . Especially in metropolitan areas, use “hybrid” offerings to:</p> <ul style="list-style-type: none"> • Enable learners to come to campus less often for routine things –say once a week; • Improve flexibility and convenience for adult learners – serve much larger learner populations with existing facilities; and • Support concurrent enrollments in high school to accelerate completion and reduce remediation. 	<p>8. Use Campus Facilities in Innovative, Transformative Ways. Leverage the campus’ iconic role as “great, good public places” for use by other publics, (See Donald M. Norris, “Space: The Final Frontier,” <i>On the Horizon</i>, 1999 for ideas on campuses and learning centers as parts of “great, good public places”).</p> <ul style="list-style-type: none"> • Utilize campus as a destination for corporate groups; • Attract international groups, vacation and self-improvement, green and sustainability education and demonstrations; and • Create new revenue streams relating to the campus as “great, good public place.”
<p>9. International Education. Attract international students of all kinds for immersive US experiences</p> <ul style="list-style-type: none"> • Export the US brand to other countries; and • Make better use of campus facilities - maximize onsite learning environment and experiences 	<p>9. International Education. Make global, international experiences broadly available to US students in new ways:</p> <ul style="list-style-type: none"> • Combinations of on-site and on-line (Communities of Practice, forged during visits); and • Additional certificates and credentials for international/ global experiences.
<p>10. Enhance Academic Revenue Streams. Search for new clientele and offerings using existing models and practices:</p> <ul style="list-style-type: none"> • Work to tailor and embed current academic programs and degrees into enterprise settings (contract learning for community colleges and universities); • Green careers as variation to traditional career pathways in engineering, manufacturing, biosciences, architecture and building construction, business administration, energy, agriculture, and other disciplines. • New post-baccalaureate certificate programs. 	<p>10. Enhance and Transform Academic Revenue Streams. Develop new and transformation academic revenue streams:</p> <ul style="list-style-type: none"> • In partnership with professional societies and trade associations, develop community-of-practice, competency-based approaches to learning in the professions and post-baccalaureate experiences; • Unbundle learning, demonstration of competence, and certification and re-imagine the roles of colleges and universities in these processes; and • Create new career pathways at the lower end of the occupational ladder, pre-associates degree, to create legitimate green career pathways. Leverage stimulus funding in priority areas for workforce development (e.g. weatherization, energy).

Figure 2: Higher Education’s Future Actions (Continued)

Enhancement of Efficiency and Effectiveness	Innovation and Transformation
<p>11. Improve Administrative Productivity. Deploy and leverage analytics to provide “single point of truth” for campus information.</p> <ul style="list-style-type: none"> Evaluate all sub-processes and services for potential outsourcing, process improvement, and/or productivity enhancement; and Utilize proven, “shared services” models (either clusters of institutions or long-distance hosting with “best of breed” providers). 	<p>11. Transform Administrative Productivity. Utilize communities of practice to advance administrative and student support practices. Deploy and leverage analytics:</p> <ul style="list-style-type: none"> Reinvent enrollment management, accounting services, endowment management, purchasing and distribution, construction services, and many more; Use “cloud computing” and “software as a service” to reinvent administrative services and “mash-up” new services.
<p>12. Enhance Energy Effectiveness. Use energy management tools to improve energy efficiency of campus</p>	<p>12. Achieve Long-Term Sustainability of Campus Operations. Create a fully integrated, holistic Campus Sustainability Plan, dealing with all aspects of energy, water, atmosphere, and other material resources.</p>
<p>13. Restore the Vitality of Institutional Endowments. Undo some dysfunctional investment management practices discredited by the run up to the recession.</p>	<p>13. Restore the Vitality of Institutional Endowments. Discover new investment management practices that are sustainable and advance the institution’s interests.</p> <p>Reduce payout formulas for endowment.</p>
<p>14. Improve Learning to Work Transitions. Enhance internship, co-op, and other work schemes.</p>	<p>14. Transform Learning to Work and Back Again Transitions. Reimagine work and learning combinations through communities of practice throughout work and learning careers.</p>
<p>15. Get the Institution’s Money’s Worth Out of Technology. Many institutions are sharpening their pencils and tightening their belts when it comes to technology expenditures.</p> <p>While institutions are continuing to invest in new technologies (security, identity management, analytics) they are questioning value propositions and are demanding that technology be closely linked to functional value.</p> <p>Contract renegotiations with vendors are becoming tougher and tougher.</p>	<p>15. Get the Institution’s Money’s Worth Out of Technology. CIOs and institutional leaders are investigating new approaches to technology solutions and the leveraging of technology to create value:</p> <ul style="list-style-type: none"> Cloud computing, hosted solutions, and software as a service (SAAS) promise reduced costs and greater flexibility; The futures of ERP and LMS systems are receiving serious consideration on all campuses. Current solutions are too expensive; Open architecture solutions are attracting much attention; Future open architecture solutions are being envisioned that would slim down ERP, create powerful and less expensive analytics for the masses, eliminate textbooks and bloated LMS in a combined LMS-light-digital text platform, and generally shake up the technology world for institutions – and the publishing, technology vendor industries; Mash-ups for niche applications, providing best-of-breed functionality, shared across many institutions; and Price points on analytics are being driven down.
<p>16. Utilize public/private partnerships to build new, community-based learning centers, branch campuses, or satellite facilities. Eliminate need for public funding for new community-based facilities. Also for residence halls and other facilities on existing campuses.</p>	<p>16. Utilize public/private partnerships to build new, community-based learning centers, branch campuses, or satellite facilities. Dramatically reduce need for new facilities. Lease flexible, expeditionary space for undertaking new ventures.</p>
<p>17. Establish New Templates/Dashboards to Describe Measures and Targets for Quality, Value, Effectiveness, and Competitiveness. Most current dashboards focus on measures of access, affordability and success and on resource and process efficiency. Some deal with measures of reputational quality. We need to redirect measurement and analytics to deal not just with quality, but with value, effectiveness, and competitiveness. Setting targets for these measures will be key to lifting out of recession.</p>	<p>17. Establish Centers for Higher Education Analytics, Innovation and Value. Institutions need to elevate their game regarding their capacity to focus on value, innovation, and enhancing performance. This will require strengthening institutional capacity in analytics and decision making. National Centers for Analytics, Innovation, and Value may be needed as well.</p>

V. Leveraging Disruptive and Dislodging Events in Higher Education

Dr. Robert Zemsky posted an August 7, 2009 Commentary in *The Chronicle of Higher Education*, "Will Higher Education Ever Change as it Should?" His points were taken from his new book, ***Making Reform Work: The Case for Transforming Higher Education***.

Dr. Zemsky regards the Bologna Process as an excellent example of transformation, but thinks the 50 states would have great difficulty working together to create a Bologna-like solution. And private education would argue that the higher education marketplace should be allowed to sort things out – even though the marketplace is distorted in many ways. Looking at past reform, he posits that previous reform efforts have taught us that:

- Strong rhetoric changes nothing;
- Demand for reform must be internal – faculty must at least see the reform as a means to a desired end;
- Like outside reformers – state agencies cannot prescribe change unless they are prepared for long exhausting battles, but must create the conditions that makes change possible; and
- It's best to focus on systemic change – the nature of the academy makes it possible to suck the air out of piecemeal reforms.

Zemsky makes the point that for true reform we need events that will change institutions, simultaneously. What is needed is what he calls "dislodging events" – powerful disruptions that catalyze change because our institutions are linked together, even if they have the capacity to act independently (for example, to resist change if coerced, but to imitate others if they see a practice they like – and copy). He asked friends and colleague to envision several such dislodging events, and they suggested three:

- **Dislodging Event #1:** Congress could dramatically change today's federal student aid program, turning the experts loose to create a system that supports participation, invests in motivation, and rewards institutions that use money effectively. Such a system would link K-20 more effectively and get students and parents involved in college saving, earlier. Jonathon Grayer, former CEO of Kaplan Inc has suggested giving every sixth grader a \$10,000 stake in a 529 plan, to provoke early and sustained interest in saving and preparing for a college education.
- **Dislodging Event #2:** Congress could require college endowments to pay the same taxes on their endowments as other hedge funds – unless the proceeds are used for education and research. This would encourage wealthy institutions to spend far more on educational and research endeavors, which would certainly favor those institutions, but could indirectly disadvantage other parts of higher education.
- **Dislodging Event #3:** What would happen if a Bologna-like process concluded that the standard undergraduate degree should be three years in the United States, as in Europe. This would require devoting the senior year, much of which is now largely a waste, to developing college-ready skills. The new three-year option would require all teaching and learning issues to be on the table and would engage all faculty in reconstructing practices to fit the new model. Performance measures would be needed to assure that the three-year degree was delivering the goods, and technology would be an instrument of change rather than an add-on cost.

But why discuss hypothetical? The following discussion describes how the current disruptive forces in education, the economy, and the governmental response could dislodge the status quo and unleash transformative change.

Dislodging Event #1: A multi-faceted injection of federal assistance in the community colleges, contingent on innovation and changing practices. President Obama's proposal to raise community college enrollments by 5 million is key to his overall plan to restore America to global leadership in college degree completion by 2020. Policy proposals that directly or indirectly support community colleges include increases in Pell Grant funding, a new proposed "American Opportunity Tax Credit," the Community College Partnership Program, the DREAM Act, Workforce Education Legislation, and a proposed "Make College a Reality" initiative that will increase by 50% the number of high-school students taking college-level credit.

President Obama's proposal to spend \$9B in grants to community colleges will come with strings attached. Applicants would have to set goals tied to program completion, work force preparation, and job placement, much in the fashion of Achieving the Dream. The previously mentioned recommendation to invest \$500 M in open educational resources ("Obama's Course Giveaway") would spur innovative applications in the community colleges and their bridging/pathways/concurrent enrollment programs with high school. These could result in improved retention, decreasing time to degree, and reduction in the total cost of education.

These course materials could also be used to reduce the remediation needs of entering community college students. They will be effective to this end only if they are made available to students in K-12, and their parents, and actively used. The simple fact is that the parents of K-12 students are often oblivious to the extent to which their students are unprepared for college-level work, in spite of good grades and passing scores on state standards of learning tests. The remediation epidemic can only be cured by active intervention and engagement, K-20.

The community colleges are currently facing a tidal wave of new students due to the impact of the recession, the demands of students unable to afford four-year colleges, and/or student's perceptions that community colleges are a high-value alternative. Community colleges are the value-based choice for many learners, including the working learner who is a displaced worker.

Rufus Glasper, Chancellor of Maricopa Community College, says they are confronting enrollment leaps of 40% at the same time that tax revenue supporting their operation is in jeopardy. Many of the new federal resources will go to students or will be insufficient to counter increases in student enrollments and declines in public tax support. As a result, community college leadership will need to deploy new, even more flexible, technology-supported approaches that reduce or control costs and create even better value propositions. (Note: define value proposition early in paper and repeat the context here.) In an environment of dramatically increasing enrollment and public attention, community college faculty can be engaged to refine work rules and bargaining agreements and the colleges must achieve improved financial sustainability.

Put simply, community colleges will become increasingly important in lifting out of recession. They should and must be a focal point for disrupting and dislodging actions.

Dislodging Event #2: Federal K-12 transformation initiatives spark innovation and change practices, in ways that span K-20. This dislodging event is similar to Event #1. Investment of federal dollars in K-12, tied to innovation as a condition for funding, can dislodge current behaviors and barriers to change, not just in K-12, but in K-20.

Education Secretary Arne Duncan has announced a \$4.3 B "Race to the Top" Fund that will apply rigorous standards for states applying for these grants, including a fine-grained evaluation process under which the states get points for reforms they have made and changes they promise to make – and conditional funding that will be revoked if they don't achieve them. The system also requires states to craft systems that better evaluate teacher performance, taking student achievement into account. States must also assure that poor and minority students get their share of high-quality teachers.

An important part of this process is replacing the crazy quilt of state-owned performance standards by a coherent national standard, so whatever the state's chosen practices are, they can be measured against a single, globally competitive standard. States that have committed to actions – such as joining the standards commission established by the National Governors Association - will be favored in the competition as will states that develop plans for internationally benchmarked K-12 standards that build toward college and career readiness.

Interventions like Race to the Top, fresh funding, and public pressure are likely to spur states to innovate in standards and methods and to redirect existing initiatives in fresh ways. Most states have K-16 or K-20 initiatives to improve transitions and increase performance of the entire K-20 spectrum and these can be redirected. Some states will lead and others will be followers, but the harsh light of scrutiny can be used to move America forward in reinventing K-12 and K-20, clusters of states at a time.

Dislodging Event #3: The current model for public funding of four-year public universities is broken. The Advisory Committee on Student Financial Assistance released a report in 2008 that contained a troubling statistic: “Between 1992 and 2004, a major shift in enrollment away from public 4-year colleges occurred among college-qualified high school students from low- and moderate-income families...inability to start at a 4-year college decreases considerably the likelihood of earning a bachelor's degree.” Bear in mind the troubling fact that these declines occurred *before* the recent economic events that have truly hammered family finances.

Another fact point: over the past 20 years, public universities have experienced a roller coaster of rising and falling state appropriations (per student). Good economic times enabled gains when state treasuries were full, but recessions and declining state resources brought mid-year rescissions and the need to make rapid cut-backs and adjustments. The recent recession is the latest and worst in a series of such adjustments. This is no way strategically to position public institutions for success. This model is broken.

In a speech entitled “Higher Expectations and Fewer Resources: What's a SHEEO to Do?” at the recent Annual meeting of the State Higher Education Executive Officers, Dennis Jones of the National Center for Higher Education Management Systems laid out the collision of high expectations and the limited financial resources available to state higher education leaders. He suggested there was no way to deliver on President Obama's aspirations to increase the number of college graduates without making significant changes in institutional processes and practices. The money is simply not there – and our levels of per capita expenditures far exceed comparable figures for other nations.

Dr. Jones recommended investing stimulus funding to develop more cost effective ways of doing business and paying for the transition. His recommended portfolio of short-term actions: reallocate faculty time to undergraduate courses, collaborate with other institutions and share, and make sure students are getting all aid for which they are eligible. In the longer term, he recommends investing in more efficient administration and plant operations and investing in reengineering curricula and delivery methods – restructure general education, invest in course redesign, and tackle developmental education on a statewide basis.

It's time to engage university leaders in making these changes. In a speech at the Annual Meeting of the Society for College and University Planning, “Are We Wasting a Perfectly Good Crisis,” George Pernsteiner, Chancellor of the Oregon University System, called for institutional leaders to engage faculty, staff, students, community partners, and business leaders to reinvent themselves and how they do business in order to improve student learning, increase degree production, re-focus research and innovation, and reduce costs. In Oregon, per capita state funding has declined in real terms in 18 of the past 20 years. In this environment, Dr. Pernsteiner thinks faculty may be ready to engage and seriously consider the measures necessary to lift out of the recession. It's time to engage seriously – and dislodge resistance and frozen attitudes.

Dislodging Event #4: Open educational resources couple with Web 2.0 tools and practices to create alternatives to traditional higher education and job creation. In the blog “Who Needs Traditional Higher Education and Traditional Job Training?” we discussed the potential disruptive impact of open resources and Web 2.0 tools and practices. If institutions do not change their practices by incorporating these approaches in courses and traditional certificate degree programs, many learners will seek other options. These disruptive and dislodging conversations are already occurring.

The most transformative impact of Learning and Competence 2.0 will be to create “Community of Practice (CoP)” alternatives to traditional learning. These will enable participants (teaching students, their faculty, and mentors in the schools) to seamlessly blend work and learning, perpetually.

For example, one alternative community of practice approach to teacher education would engage potential teachers (not just teacher college graduates) in the community while they are enrolled in their academic bachelor’s program. They would participate in the community during student teaching, continue with heavy mentoring during their first year of teaching, and receive learning on reflective practice during their first five years, resulting in the equivalent of a master’s degree in reflective practice. From then on, they would sustain and refresh the community by serving as mentors, reflective practitioners, and reviewers.

Currently, innovators are planning/deploying community of practice approaches to continuing professional education in engineering, medicine, and other professions; industry-wide communities of practice in areas such as global food safety; and regional open education experiences linking universities, community colleges, businesses, and other community participants. Such examples will further disrupt existing models.

Dislodging event #5: Green careers pathways and competence building opportunities supported by the stimulus money will generalize to other career pathways building the foundation for new jobs for a new economy. The Obama administration is spending billions of stimulus dollars on weatherization programs that are being delivered through community action organizations and their partner organizations – utilities, contractors, and training organizations. President Obama’s intent is for these entry-level jobs to be the beginnings of genuine green careers. But many of the people hired for these positions will be unemployed after the first round of weatherization jobs are done.

The green jobs career ladder is not well defined for these entry-level workers. Nor are high school vocational programs adequate to the task. Even the option of these entry-level workers going to community colleges to receive associate degrees in green career fields is not the best immediate answer for these workers now. These workers need to receive additional, incremental training, while employed, and gradually move up the green career ladder to installation auditor, manager, and supervisor roles. This could include at some point, certificate and associate degree programs from the community college; then more rigorous technical training in fields like HVAC or wind/solar installation and maintenance; and eventually a bachelor of applied sciences degrees focusing on communication, leadership, team building, and management skills. Or even other combinations that will include continuing learning, while working, in a seamless progression. This is a pattern that can be replicated outside its creation point in green careers.

Across the country, a variety of companies, community action agencies, and other enterprises are prototyping new, community-of-practice-based work and learning environments that will support the development of fresh approaches to green career ladders for entry-level workers, while they are employed. They will have the capacity to mash-up learning offerings from wide ranges of providers. These are the equivalent of **apprenticeship programs**, but apprenticeships that are appropriate to the Web 2.0 age.

Leveraging Disruptions and Dislocations. These disruptive events are all at play today, and they are intertwined. Over the next few months, their impact will escalate as the impact of stimulus funds affects every one of these five disrupters. Institutional leaders need to “connect the dots”, redirecting existing initiatives, engaging their stakeholders, and getting serious about moving beyond quick fixes to aggressive portfolios of action to harvest efficiencies, innovations, and transformations in the way we do business in K-20 and in learning to work and back again...and again.

Analytics will be critical to the engagement, storytelling, and discussion necessary to understand and leverage these disruptions. A crisis – complete with a collection of disrupting and dislodging events – would be a terrible thing to waste.

Who Will Be the Agents of Change in Lifting Out of Recession? A wide range of change agents will continue to play essential roles in leveraging disruptive/dislodging events, deploying comparative analytics, and reimagining processes and practices in higher education. Consider the following cast of characters:

- **Federal Leadership.** The Obama Administrations’ various initiatives combine fresh funding tied to innovation, an emphasis on analytics and accountability, and support for reinvention of K-20 to reclaim America’s competitiveness. They also are supporting workforce development and the linkage of work and learning as necessary to competitiveness, as well. These will prove critical to dislodging existing behavior patterns and institutional inertia.

Institutional leaders should utilize all of the leverage provided by federal programs and stimulus funding in the full range of agencies and programs: Education, Labor, Energy, Commerce, Agriculture, Health and Human Services, and Housing and Urban Development, for example.

- **Higher Education National Associations.** The constellation of associations representing postsecondary education is playing an important role in supporting the leveraging of analytics in higher education to attain new levels of performance. The State Higher Education Executive Officers (SHEEO) has advocated for raising the number of two- and four-year degrees and suggested means for doing so. The National Association of System Heads (NASH) has developed a framework for improving retention and reducing the gap in educational attainment for underserved minorities. The American Council on Education (ACE) and American Association of State Colleges and Universities (AASCU) are promoting approaches to sharing outcome data. These efforts are proving important in the effort to compare and contrast educational attainment.
- **Foundations Supportive of Transformative Change.** Many of the major foundations have played an essential role in funding research and dissemination of findings on topics essential to reimagining education and workforce development. The Hewlett Foundation, Bill and Melinda Gates Foundation, Lumina Foundation, Carnegie Foundation and others have supported open educational resources, transformative programs in K-12, use of technology in learning, workforce development and other topics. They will continue to be critical in stimulating truly transformative initiatives and facilitating their proliferation, at scale.
- **State Higher Education Executive Officers.** In every state, the SHEEO is in a distinctive position to affect the response of public and private institutions to lifting out of recession. SHEEOs can provide incentives to innovation and reimagination and can spur institutional leaders to action. Dennis Jones’ provocative presentation at the Annual SHEEO Conference, “Higher Expectations and Limited Resources: What’s a SHEEO to Do?” outlines the sorts of actions SHEEOs can stimulate in their states.
- **Institutional Trustees.** The trustees of colleges and universities will prove essential to the challenge of reimagining the institutions served by their stewardship. They must avoid the temptation of becoming too deeply involved in the details of the reimagination. But they should

establish firm, challenging performance expectations for institutional leaders, challenging them to undertake the heavy lifting of engaging university communities and taking innovative and imaginative approaches to lifting out of recession. Then they should provide firm support and sustenance to leadership in this difficult task.

- **Institutional Leadership.** Reimagining approaches to lifting out of recession at the same time as they are scrambling for adequate resources will be the most profound challenge in a generation for our institutional leadership teams. The President and Provost will be especially important, but all of the executive cabinet and all of the mid-level managers in all divisions will be critical to discovering and deploying elements of efficiency, innovation, and transformation. Deploying adequate analytics and metrics to support these efforts will be a major challenge. The greatest challenge will be to evolve the institutional culture to a culture of performance measurement and improvement, focusing on value.
- **Faculty, Researchers and Staff at Institutions.** Can faculty, researchers, and staff become agents for change in lifting out of recession, or are they fated to be resisters and defenders of current practices? This issue will likely decide the success of reimagining efforts on most campuses. Many efficiencies and innovations can be undertaken in a “skunk works” mode, utilizing a few willing faculty and staff, and bypassing the need for broad support. But to truly achieve broad realignment and reimagining, faculty, researchers and staff must be turned from resisters into supporters of change. They will need to understand and support the notion of value.
- **Individual Learners and Their Families.** Individual learners and their families will function as a sort of perpetual focus group for institutional leaders attempting to create fast, fluid, flexible, and affordable options to learning and competence building that respond to the challenges and realities of the times. Learners will respond to compelling institutional efforts and will differentiate between institutions, seeking the best value. The competition for students will be aggressive as never before.
- **Employers and Workforce Entities.** Employers and workforce entities will play an important role in articulating for educators the competence needs required of graduates. Like parents and their families, employers and workforce advocates will serve as a sort of perpetual focus group, responding the current and proposed offerings and providing a firm articulation of the skills and competences America needs to be globally competitive.
- **The Public at Large.** The public at large is also a sort of jury on institutional efforts to be responsive and responsible.

Understanding and mobilizing the interactions of these change agents is an imperative for leaders seeking to assure the success of American higher education.

