

Educating for the Twenty-First Century

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Abstract

In his first inaugural speech, President Obama declared that “our schools fail too many” and an essential component of laying “a new foundation for growth” will be “to transform our schools and colleges and universities to meet the demands of a new age.” Concerns about our nation’s position in the global education race have led to a focus on college completion. Policymakers and foundations are setting goals for degree completion and are pressing colleges and universities to shorten the degree programs offered, address the barriers to degree attainment, rethink how best to help underprepared students be successful in postsecondary education, and make it easier and less expensive to obtain a college education.

While this new emphasis on increasing the educational attainment of our citizenry has clearly caught the attention of leadership in higher education as well as policymakers (National Governors Association 2010) and Foundation officers (Lumina Foundation 2012), a focus on degree completion alone is not likely to prepare students for life and work in the twenty-first century and advance our nation’s interests in the midst of a rapidly changing world order. The metrics proposed by the National Governor’s Association can work within a relatively settled context where students either attend a single institution to obtain their degrees or transfer easily from a two-year college to a four year institution while guided by effective articulation agreements. In such a context, it is possible to follow the path that students take and keep track of their progress toward a degree. These measures include degrees and certificates awarded, graduation rates, transfer rates, and time and credit to a degree. Nowhere in this report will you find any reflection on what students might actually learn or what we should expect of a college graduate.

The emphasis on quantitative measures does not get at the underlying questions that we must understand if we are to be an educated nation. We must first figure out WHY we are failing so many students and do something about it. Only then will the completion rates will go up. We also must explore what it means to be educated in today’s world and how our graduates will use their knowledge and manage their own learning in an environment where continuous learning is essential. To explore these questions, we can turn to the experiences of our nation’s metropolitan and urban universities. These institutions have operated in a swirling and complex environment for many years and we can learn a great deal from studying those enrollment patterns and how these colleges and universities have sought to offer their students a guiding hand as they pursue educational paths.

A Twenty-First Century Education

What kind of education makes sense in today's world? How we might go about educating in ways that truly prepare the kind of educated citizenry that we need? The answers are surprisingly simple in the abstract, but it is not as easy to work out how best to design a pathway to the kind of education that most observers think will serve each of us well.

One of the best descriptions of what it means to be educated was produced by William Cronon (1999). An educated person can be described fully by how they interact with other people as by what they know. In Cronon's list of traits, a clear portrait emerges of educated people who (1) listen and pay attention to the ideas of others; (2) read and understand; (3) can talk with anyone; (4) can write clearly, persuasively, and movingly; (5) can look at something complicated, figure out how it works, and how to respond to complex and changing problems; (7) focus on other people's ideas, dreams, and even nightmares, not just their own mental landscape and practice humility, understanding, and self-criticism; (8) know how to get things done in the world and will leave the world a better place; (9) enjoy nurturing and encouraging other people and appreciate the value of being a member of a community; and (10) above all, follow E. M. Forster's injunction from *Howards End*—"Only Connect"—by which Cronon means the ability to see the connections that enable us to make sense of the world and to act within it in creative and responsible ways.

Kim Stafford (2003, 61), in his reflections on the writer's craft, summed up these ideas in his own way. He wrote, ". . . a new connection among a constellation of dispersed facts is always original. There lies the pleasure of discovery and creation." Reading the world in this way, according to Stafford, "honors an old paradox about reading, for the verb 'to read' originally meant both to decipher a text and to explain a mystery" (Stafford 2003, 77). In his article in *Forbes Magazine*, "What Does It Mean to Be Educated?" Steve Denning (2011) came up with another similar description of an educated person:

"A demonstrated ability to listen carefully, to think critically, to evaluate facts rigorously, to reason analytically, to imagine creatively, to articulate interesting questions, to explore alternative viewpoints, to maintain intellectual curiosity and to speak and write persuasively. If we add to that a reasonable familiarity with the treasures of history, literature, theater, music, dance and art that previous civilizations have delivered, we are getting close to the meaning of educated."

To complete the portrait, consider the overview of a baccalaureate education first offered by "Greater Expectations" in 2002 and then developed into a prospectus by the Association of American Colleges and Universities (AAC&U 2002) in their Liberal Education and America's Promise initiative and captured in a set of Essential Learning Outcomes (AAC&U 2007). The path of an education that addresses these goals can be documented and assessed using a set of VALUE Rubrics.

The “Essential Learning Outcomes” closely align with both the Cronon (1999) recipe for an education and the more recent posting by Denning (2011). AAC&U (2007) outlines four sets of Essential Learning Outcomes.

Knowledge of Human Cultures and the Physical and Natural World

- Through study in the sciences and mathematics, social sciences, humanities, histories, languages, and the arts

Focused by engagement with big questions, both contemporary and enduring

Intellectual and Practical Skills, Including

- Inquiry and analysis
- Critical and creative thinking
- Written and oral communication
- Quantitative literacy
- Information literacy
- Teamwork and problem solving

Practiced extensively, across the curriculum, in the context of progressively more challenging problems, projects, and standards for performance

Personal and Social Responsibility, Including

- Civic knowledge and engagement—local and global
- Intercultural knowledge and competence
- Ethical reasoning and action
- Foundations and skills for lifelong learning

Anchored through active involvement with diverse communities and real-world challenges

Integrative and Applied Learning, Including

- Synthesis and advanced accomplishment across general and specialized studies

Demonstrated through the application of knowledge, skills, and responsibilities to new settings and complex problems

Pathways to a Twenty-First Century Education

It is relatively easy to create a portrait of what it means to be educated in our rapidly changing social, cultural, and economic environment, and to articulate what knowledge as well as qualities of thinking and responsiveness to other people will serve us well in today’s world. In today’s unsettled environment of postsecondary education, it is quite another thing to create the capacity to educate in a way that is informed by these goals. To contribute to our thinking about this challenge, it may prove helpful to explore what our nation’s urban and metropolitan universities are

experiencing, the kinds of students they are serving, and how they are going about managing the complex ways that students participate in higher education, who teaches them, and what kinds of educational opportunities these students are offered. Given the many roles that urban and metropolitan institutions play in their communities, the diversity of students they serve, and the pathways that students take on their way to attaining their educational goals, it is often the case that problems will one day appear on the doorstep of other institutions, become important, and demanding earlier in our nation's diverse cities and metropolitan areas.

Near the end of the twentieth century, Cliff Adelman (1999) compiled an impressive array of statistics on patterns of participation and readiness for college-level work. The patterns were already extremely varied even then. Few students of traditional age (18–26 years) were obtaining their education from one institution. The statistics are revealing and illustrate the challenge of creating a coherent experience for students.

57 percent attended more than one school as undergraduates.

35 percent crossed state lines to do so.

20 percent earned acceleration credits by examination or dual enrollment while in high school or college.

62 percent attended during summer terms.

22 percent stopped out and 14 percent were enrolled for less than a year before stopping or dropping out.

The actual patterns of attendance included a mix of two-year and four-year institutions, sometimes sequentially and sometimes through dual enrollment.

I recently returned to an urban setting after a fifteen-year absence. From 1990 to 1997, I served as president of Portland State University in Portland, Oregon. After retiring from my third presidency in May 2012, I chose to return to Portland, where I am now president emerita and distinguished professor of public service. I teach as an adjunct in the civic leadership minor offered by the Mark O. Hatfield School of government in cooperation with faculty in two other colleges. In the fall of 2012, I taught my first civic leadership class at the senior undergraduate level. As a latecomer on the class schedule, I attracted only seven students but in that small sample, I saw a reflection of the larger pattern of enrollment and participation in postsecondary education that can make the offering of a coherent, integrated, and purposeful education so difficult. Only one student was completing his entire undergraduate experience at Portland State. The rest either had started their college experience at one of the regional community colleges and had just transferred to Portland State or were coming back to school to complete a degree they had begun some years ago. Several of the students were, in

other words, “stop outs” who were now returning to the classroom. All of these students were highly motivated; all of them knew why they wanted a college degree and had plans for how they wanted to use their college education; each worked at least part-time. Several were very active in their neighborhoods or communities. All except the one continuously enrolled “native student” found the plunge into a demanding upper division class to be challenging but by the end of the term, each student, in his or her own way, had figured out how to be successful.

It is tempting to read too much into such a small sample but, in fact, this small group reflected the larger “swirl” pattern across multiple educational settings very well. “Swirl” can be defined as

“. . . the pattern in which students’ enrollment in institutions changes across sectors at least twice. The patterns include transfer from a two-year institution to a four-year institution, then back to two-year as well as from a four-year institution to a two-year institution and then back to a four-year. “
(Educational Research and Data Center [ERDC] Research Brief 2012-05-1)

These patterns of enrollment match up with other conditions that are changing the landscape and expectations of postsecondary institutions. The country’s demography is shifting dramatically as we become an ever more diverse nation. At the same time, we continue to have significant gaps in the participation and achievements of many students, especially students from the least affluent socioeconomic groups and from minority communities. According to the most recent data issued by the U.S. Department of Education (2012), in each year between 1975 and 2010, the immediate college enrollment rates of high school graduates from low and middle income families were consistently lower than those from high school graduates from high income families. In the year for which we have the most recent data (2010), low-income students enrolled at a rate of 52 percent, middle income students at a rate of 67 percent and high income students at the highest rate of 82 percent (National Center for Education Statistics 2012). None of my students were high-income students. In fact, most were the first in their families to attend college.

The pathways and options available to students have proliferated, but the resulting educational environment is complex, hard to navigate, and often produces a fragmentation of educational experiences and goals as well as different requirements and options available for pursuing a degree. Many institutions are starting to study who their students are today, why they choose to participate in higher education, and are beginning to rethink how they can create what one colleague of mine has called “well-lit pathways” to guide students who might otherwise get lost in the transitions that so many students now make as they move from one educational institution to another. A decade ago, in *Greater Expectations* (AAC&U 2002, 35), we called this concept “Navigating in an Unfamiliar Land” and we likened it to the practice of orienteering where successful path finding requires accurate and detailed maps of the terrain (clear learning goals); a successful orientation to the sport (readiness for college-level work as well as good first year experiences); a clear path (a curriculum

that is coherent and carefully sequenced), based on a variety of ways to reach a particular point on the landscape (taking into account past experiences, personal abilities, interests, and growing expertise); and effective preparation (good information about what postsecondary choices are available and help in mapping out an educational strategy.)

An additional element that needs to be considered in more detail is the growing use of part-time and contingent faculty to offer the curriculum and guide students. Adjuncts or fixed-term instructors may not have a working understanding of what their institution has decided it means to be well-educated, how their own course offerings fit into a larger framework or curricular structure, and how they can contribute to the larger purpose of an educational pathway. In addition, the external environment in many states can make attention to educational quality difficult as budget cuts, political pressures for documentable “performance,” intrusions into campus operations can divert attention time and resources away from educational coherence, and the development of meaningful and cumulative educational experiences for students. The degree completion agenda, driven as it is by policy directives, is moving faster than the efforts to focus on quality and outcomes of an education, which are supported by educational associations and foundations and in some cases, by system offices in the public postsecondary sector.

Mapping Out a College Education

Both “Greater Expectations” (AAC&U 2002) and Liberal Education and America’s Promise (2007) offer some guidance for designing a set of college experiences leading to a meaningful degree in an increasingly complex environment. The swirl of students, combined with the impact of new uses of instructional technology and access to the Internet is affecting what people need to learn, when they need to learn, and where and how they will learn. The response of federal and state policymakers to this growing complexity is to cut through to a set of simple policy objectives—degree completion quickly and at minimal cost. In her article on the completion agendas, Debra Humphreys (2012) offers a reflection on these completion initiatives, all launched during a time of fiscal constraint in our country and all based on the idea that the solution to our need for a better educated citizenry is an unfunded mandate to speed up the process of degree completion. As a counter to this emphasis on speed and cost without a balancing concern for the purpose and actual outcomes of an advanced education, The Lumina Foundation, which also is emphasizing degree completion, commissioned the development of a Degree Qualifications Profile (DQP) as a “new framework for defining the learning and quality that college degrees should signify.” The DQP accompanies Lumina’s Big Goal (2012): “To increase the proportion of Americans with high-quality degrees and credentials to 60 percent by the year 2025.” Motivated by the urgency of preparing for the long-term consequences of a knowledge economy in which degree attainment will play a pivotal role in quality of life, the DQP outlines a set of learning expectations that closely follow the Essential Learning Outcomes developed by AAC&U. The DQP is intended to be used as a tool to help guide the creation of pathways to educational attainment and outlines what we can

expect of a person who holds an associate degree, a bachelor's degree, or a master's degree, regardless of their fields of study.

The DQP assumes that student performance at each level of postsecondary study is both incremental and cumulative and that the desired outcome is to learn how to use an education wisely, responsively, and creatively. The other underlying assumption is that learning can occur anywhere and at any time, and that the DQP framework can chart a course of learning that can include formal coursework, co-curricular experiences, and opportunities to participate in a range of high impact practices that provide opportunities for learners to apply what they are discovering to “real world problems.” In the DQP, the five broad areas of learning are:

- Broad integrative knowledge
- Specialized knowledge in a particular field of study
- Intellectual skills that prepare students to acquire and use knowledge in responsible ways
- Applied learning that offers opportunities to engage in practical problem solving and innovation
- Civic learning that prepares students for responsible citizenship by building healthy communities, both locally and globally.

Expressed in this way, the five broad areas can guide learning in any context and at any time, and offer a way to promote a meaningful course of study within the ongoing swirl that characterizes the learning life for the majority of today's students. Lumina has funded several large-scale projects to test the value of this framework as a way to address such issues as transfer from one institution to another, to design the overall pathway to a degree at each level, and to create more meaningful remedial or developmental educational opportunities for students who are not well-prepared for college-level work. The goal is to provide a guide for creating coherent educational pathways leading to meaningful degrees and credentials that do not depend upon students remaining with a single institution throughout. With this approach, accommodations can be made both for part-time and intermittently enrolled students, part-time and contingent faculty, and the impact of so-called disruptive technologies on how students pursue their educational goals.

By itself, the DQP cannot accomplish all of these goals without a number of related efforts. Students need to learn how to monitor and assess their own knowledge and competency. For example, they may well know that they should learn to write well, but they may not really know what it means to write well, how they know if they are doing so, or how to go about learning to do it. Transfer students often get lost in transition due to confusing or poorly aligned pathways between and among institutions. Many students have never had the experience of being taken seriously or offered the chance to explore ideas and experiences in depth.

A number of experiments are underway to address these problems and to smooth the way for students to pursue a postsecondary education. At Salt Lake Community

College, for example, students prepare general education e-portfolios to document the learning outcomes that the faculty developed for the general education curriculum (Salt Lake Community College 2012). The e-portfolio requires documentation and signature assignments that demonstrate learning in critical thinking, quantitative literacy, learning outside the classroom, effective communication, working with others, civic engagement, computer and information literacy, and lifetime wellness. Students are advised to use reflection throughout their e-portfolios to make connections across disciplines, illustrate how a particular assignment addresses key learning outcomes, and to think out loud about their own thinking and learning processes.

In California, campuses in the California State University System are working with partner two-year institutions to design clear and navigable pathways from two- to four-year programs by giving meaning and consistency to the general education curriculum and by using sequences of related courses in thematic areas such as Sustainability, Social Justice, and The Global Village to bring a coherence to general education but also, with a suitable additional course of two, to make it possible for transfer students to complete a minor in the thematic area after they transfer to a cooperating four-year university. This path development is underway between Pierce College and California State University-Northridge. The faculty at both institutions who are involved in this program are excited about the opportunity this opens up for their students, and students have expressed their interest in the new meaning that this path model provides. Adult returning students, in particular, can have difficulty seeing how a distribution requirement makes sense when they already know what program of study they want and why. The path helps provide that meaning. In addition, faculty members at both institutions are using gateway courses as a way to introduce students to the idea of a path sequence. The result is that the core principles recommended by Complete College America (2012) and its allies is being introduced as a critical design element from the very beginning.

Disruptive Technology

In a recent article in *The Chronicle of Higher Education*, Carlson and Blumenstyk (2012, A1), reported on what has happened since a national conference held in 2011 in Washington D.C. to discuss the “dysfunction and disruption in higher education” that “was just heating up.” The “leading lights” who came to the gathering spoke with enthusiasm about how a traditional college education could be taken apart and “rebuilt,” and how much money could be made by the private sector as they design and offer new for-profit approaches to providing credentials, badges, and other indicators of skill and competency. Other articles in recent months have focused on the wave of developing online courses, especially Massive Open Online Courses (MOOCs) (Daniel 2012). The form and expectations of MOOCs continue to evolve rapidly, but in mid-fall 2012 the common elements were a course offered on a large scale to participants worldwide through open access via the web. Such offerings are not yet easily available for credit from an accredited institution, but students seeking certification can apply for assessment of their learning. Sir John Daniel (2012) provides a thoughtful exploration of what is developing in the world of MOOCs, the

underlying motivations for providing these large enrollment courses, and some of the challenges associated with the tenuous relationships between an instructor and his or her students in these courses.

Paul Lingenfelter (2012) has pointed out that the concept of disruptive technology, developed from studies of the computer industry by Christianson, may not really apply to the higher education enterprise. As Lingenfelter (2012) points out, the process of educating is increasingly a collaboration between the students and the educators who work with them. The “product” of higher education is, in Lingenfelter’s words, “unbounded,” and the most valuable outcomes are evidenced in the response to unexpected and emerging problems. Education relies on complex human relationships—“inspiration, emotional support, skillful coaching, and challenging interaction”—that add in meaningful ways to the educational experience itself and the outcomes of an education. In addition, the higher education enterprise is not hierarchical or corporate in character and, “disruptive thinking and behavior are part of our DNA” (Lingenfelter 2012). We may be well on the way to reinventing the concept of college and the ways we educate, but these actions are integral to our nature and not disruptive in the same way that a new technological innovation might change the competitive environment of older and more established companies.

In reflecting on this growing excitement about disruptive technologies and models of skill acquisition, Carlson and Blumenstyk ask the pivotal question—“For whom are we reinventing college?” (Carlson and Blumenstyk 2012, A1). To this question we might add a related concern regarding the ways in which the need for approaches to lifelong learning and the growing demand for educational opportunities for those who are not seeking particular educational credentials or degrees may confuse our national exploration of both *what it means to be educated* and *how to acquire and use knowledge responsibly*. It is one thing to provide access to information. Every happy user of an electronic tablet or computer has found much-needed information quickly and easily online. For an experienced user who can draw upon the intellectual skills and habits of mind that can be cultivated by a coherent education, these information sources are invaluable. It does not intuitively make any sense to divide what ought to be a cumulative, integrative, and increasingly demanding set of educational experiences into what might best be described as a set of merit badges. What can enhance productivity and innovation for a well-educated person can remain a set of disconnected facts and experiences for those who lack a context in which to place the new material. The value of frameworks such as Liberal Education and America’s Promise (2007) and the DQP (2011) is that the approach outlines a pathway with meaningful milestones and expected student outcomes (SLOs) into which individual experiences can acquire a context and larger meaning. Although many faculty now define learning outcomes for individual courses, it is the collaborative exploration of a pathway and the gradual accumulation of documentation and reflection, often captured in an e-portfolio design, that can bring greater meaning and purpose as an individual moves through the phases of an advanced education.

Carlson and Blumenstyk (2012, A4) argue that the astute reader of the most recent material about disruptive technologies and models of information delivery will note that the people making these arguments “herald a revolution in higher education that is not for people like them or their children, but for others: less-wealthy, less-prepared students who are increasingly cut off from the dream of a traditional college education.”

Some of the new experiments with online education, badges, certificates of competency, and other documentation of specific skills may very well help higher education address some of its problems and “enrich teaching, add rigor, encourage interdisciplinarity, reinforce education’s real-world applicability, and make learning more efficient” (Carlson and Blumenstyk 2012, A4) but it is clearly important to examine the costs as well as the possible benefits of these ways to convey information and provide opportunities to enrich an educational experience. It also will prove helpful to explore how we can close the significant gap in college attendance and success between students who come from higher socioeconomic strata and those who do not. In a recent report, Complete College America called for a new approach to remedial education. The core principles developed in the report can set the stage for an overall college experience that can lead to a meaningful degree and that will get students, whether already well-prepared for college level work or not, off to a good start. All of the ideas require a coherent, well-designed pathway ahead. New students or returning students should enter a set of gateway courses that align from the beginning with a student’s academic program of study or with a segment of possible study in the form of what the authors call a “meta-major” (principle 7). In addition, academic support should be attuned to the knowledge and skills that a student will actually need to pursue a particular course of study, “a requisite rather than a pre-requisite” (principle 4).

An example of a frequent stumbling block is the acquisition of math skills. Everyone needs to acquire quantitative literacy, but the current pattern of forcing entering students to demonstrate competence in particular courses (such as college algebra) when they might be better served by taking a statistics course or some other sequence can lead to frustration and failure to complete introductory work. In addition, the reliance on placement scores can provide a misleading picture of an individual’s readiness to do college level work. It would be wiser to use multiple measures as an aid to placement of students in gateway courses and programs of study (principle 6). For students who are truly not prepared, accelerated routes into programs of study may significantly improve success rates (principle 5).

Summary

In today’s world, we need as much education as we can get if we are to thrive in the information age. The challenge we must confront is that there are no easy solutions to the problem of preparing all students to learn at an advanced level and to support the acquisition of new knowledge and skills across a lifetime. Setting goals (such as completion goals) will be important, but so will an appreciation for the fact that we must invest in education more generously than we have before, that we must study

early and promising practices, and learn how to adapt these strategies to new settings in order to create the context in which those goals can be realized. Our policy goals must bring together the urgency of encouraging more educational attainment with a thoughtful set of related efforts that will be needed to prepare students to be successful at the college level and beyond and with frameworks that outline the elements of a meaningful education. We must approach this challenge in an integrative way by acknowledging that access and opportunity have many dimensions, that there are many paths toward a meaningful education, and that the uncertainty of our educational environments today calls upon us to think in new and creative ways about what it means to be educated and what we must do to acquire and use knowledge in a thoughtful and responsible way.

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