What Should All Students Learn?
Towson University
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Thank you for inviting me. I’m honored that you’ve asked me to participate in the very important conversation you are having as a campus—what should your students learn in their time with you.

There couldn’t be a more significant time for this conversation. We’re in a period of greater change in higher education than any since the decades immediately after World War II, when, first with the GI Bill, then with the Baby Boomers becoming college age, there was an enormous expansion of American public higher education. Indeed, Towson participated in that expansion, changing from a teacher’s college to a comprehensive state college, and quadrupling its enrollments in the middle 1960’s.

Now we’re experiencing change of a very different sort, in the most volatile environment I’ve ever experienced in higher education. Before I talk about liberal education, and what all students should learn, I will take a few minutes to characterize the current landscape.

Three sets of trends are creating the volatile, fast-changing environment we inhabit in higher education—what many pundits call a crisis.

The first set of trends are financial. Whether public or private, universities and colleges are experiencing financial stress, as the financial models on which they’ve relied for decades no longer seem to work.

The privates have long operated on the principle of high tuition, high aid, with the assumption that those who could afford to pay would do so, and financial aid would cover college costs for those who could not. But the percentage of families able and willing to pay the $60,000 per year it costs to send a child to a private college is becoming smaller. When I was at Smith, we made a rough calculation that those families were in not the famous top 1% but the top 5%. In bidding wars to attract relatively affluent students, colleges increasingly offer so-called merit aid—really enrollment incentives—in the form of discounted tuition, not only for those who can’t afford to pay but those who can. Colleges get caught in a downward spiral, increasingly discounting their prices until they can’t cover their operating costs.

The average discount rate among first year freshman at private liberal arts colleges reached 48% in 2014, and is projected to continue increasing.
Meanwhile, almost half of these colleges missed their enrollment targets. This is the Sweet Briar dilemma.

The financial challenge in public colleges and universities is different. As states increasingly withdraw support from higher education, more of the tuition burden falls on students and their families. And the increased tuition rarely makes up for the reduction in state support.

Thus both publics and privates, in the current landscape, face financial challenges.

And of course it’s not just colleges and universities that are facing financial challenges but students and their families, who struggle to meet the rising cost of higher education. Student debt levels have increased dramatically, leading to greater cost and price sensitivity. Every U.S. presidential candidate in the current very crowded primary field has a plan to control the cost of higher education.

These challenges are exacerbated by a second set of trends—demographic trends. In the past three decades, enrollment in higher education has doubled. Although the rate of increase has now slowed, enrollment is still projected to grow, but the largest increases will occur in populations with both lower college-going rates, and fewer economic resources—Hispanics, African-Americans. In other words, we will see a needier student population. The student population is now older, more diverse, more female, and needier. And trends both in income inequality, and the stagnation of middle class incomes will increase financial need. Since 2000, the real median income of families with a 19 or 20 year old—a good proxy for families with a child in college—has fallen by 16%

Finally, there are a set of revolutionary trends in information technology. Probably most of you have a smart phone in your pocket or your purse. It provides as much access to information as many libraries. We live in a world of ubiquitous, portable, wireless connectivity, with the potential to revolutionize higher education. The title of Richard Katz’s book, The Tower and the Cloud, provides an apt set of images for this change. The tower represents the traditional architecture of the university, built around a clock tower, a chapel tower, a library tower, reflecting the need for students to share the physical location of books and faculty; the cloud, of course, represents the cloud of information technology.

The move from the tower to the cloud makes possible an unbundling of the parts of higher education, allowing a more discontinuous experience, with courses taken from multiple providers. In DIYU (Do it Yourself University), journalist
Anyanka Kamenetz imagines a future in which students will be able to put together their own degrees, of courses taken from multiple providers.

When you take all these trends together, you have something of a perfect storm, in which the public is asking, with more urgency and insistence than I’ve known in my career, what am I getting for my investment? While there is more consensus that a college education is necessary for a financially secure and successful future, there is much less consensus about what that college education should convey, what it should teach, how it should prepare students for employment. Thus the context—the landscape of higher education—gives the questions you’re asking at Towson particular importance and urgency. What do we want every student to know, when she walks across the graduation stage, shakes the president’s hand, and gets her diploma? What should a college education be in the 21st century? Are the liberal arts still a valuable and relevant core for an education? How is liberal education connected to more focused professional goals?

Before I give you my answers to these questions, let me remind you that there’s never been a time in the history of American higher education when people were not debating the nature of the curriculum, the definition of the liberal arts, and their relationship to professional study. Thomas Jefferson and Benjamin Franklin disagreed about this issue, Jefferson believing a liberal education was the necessary foundation for citizenship, Franklin being of a more practical turn of mind. When the great land grant universities were founded after the Civil War, to teach “such branches of learning as are related to agriculture and the mechanic arts,” many states debated the relative prominence that so called classical learning should have in these new institutions. The history of American higher education contains a continuing and repeated conversation about the relationship of professional and liberal learning; the question is not which to choose but how to balance the two.

The phrase “liberal arts” is often misunderstood. Sometimes people assume that the word liberal carries its political connotation of progressive or left wing; others assume that the liberal arts include only the humanities and exclude the sciences. But the term liberal, in its classical origin, referred to those subjects or skills thought necessary for a free person to fulfill his responsibilities in society; in other words, it is essentially connected to citizenship. And the term arts in its classical context is far more capacious than our current sense of the word, meaning academic disciplines, not just as subjects of study but as modes of inquiry and practice—mathematics, rhetoric, music, astronomy. I notice that you use the term “liberal education” at Towson, avoiding at least one misunderstanding that often occurs with the term “liberal arts.”
Whatever the term—liberal arts, liberal arts and sciences, liberal education—,
many question the relevance of a liberal education in the 21st century, believing it
to be insufficient preparation for today’s labor market. The criticism reflects an
economic anxiety, a concern that investment in education have a demonstrable
return in employment prospects and career trajectory. Hence the pendulum, at
the moment, swings toward the professional and vocational, rather than the
liberal arts. This is both an irony and a paradox, for most young people today
will have not just multiple jobs but multiple careers in the course of their
working lives. How can you best prepare a young man or women for so many
changes, so many different kinds of work, for jobs that haven’t yet even been
imagined?

I believe—and I trust you do too—that the liberal arts with their emphasis upon
developing capacities of mind, a broad understanding of different modes of
inquiry is the best preparation for a future that will require flexibility, creativity,
and continual intellectual growth. In a recent survey that the American
Association of Schools and Colleges conducted of business and not-for profit
leaders, employers repeatedly stress the importance of skills and capacities
traditionally the goal of a liberal education:

- Nearly all those surveyed (93 percent) say that “a demonstrated
capacity to think critically, communicate clearly, and solve complex
problems is more important than [a candidate’s] undergraduate
major.”
- More than 9 in 10 of those surveyed say it is important that those
they hire demonstrate ethical judgment and integrity; intercultural
skills; and the capacity for continued new learning.
- More than 75% of employers say they want more emphasis on 5 key
areas including: critical thinking, complex problem-solving, written
and oral communication, and applied knowledge in real-world
settings.
- Employers endorse several educational practices as potentially
helpful in preparing college students for workplace success. These
include practices that require students to a) conduct research and
use evidence-based analysis; b) gain in-depth knowledge in the
major and analytic, problem solving and communication skills; and
c) apply their learning in real-world settings.
- The majority of employers agree that having both field-specific
knowledge and skills and a broad range of skills and knowledge is
most important for recent college graduates to achieve long-term
career success. Few think that having field-specific knowledge and
skills alone is what is most needed for individuals’ career success.
- 80 percent of employers agree that, regardless of their major, all
college students should acquire broad knowledge in the liberal arts
and sciences.

One of the most compelling defenses I know of the value of a liberal education is an essay by the eminent chemist, and former president of the Howard Hughes Medical Institute, Thomas Cech, “Science at Liberal Arts Colleges: A Better Education?” Cech asks why it is that so many leaders in contemporary science completed their undergraduate education not at universities but at liberal arts colleges. He hypothesizes that a broad education across multiple disciplines creates not just cultured individuals—biologists who like going to opera and art museums—but better scientists because of what he calls “intellectual cross training.” Here’s what he says: “Just as mathematics is considered to be good exercise for the brain, even for those who will never use calculus in the future, so the study of great books, history, languages, music, and many other non-science fields is likely to hone a scientist’s ability to perceive and interpret the natural world. More specifically, in history, literature, and the arts, one is presented with diverse, often mutually contradictory “data”—different points of view due to incomplete knowledge or the different backgrounds of those doing the viewing. One learns to distill the critical elements from the irrelevant, synthesize seemingly discordant observations, and develop a strong argument. While scientific data are commonly thought to exist on a different plane—absolute, precise, unambiguous, and above reproach—such is rarely the case. Scientists need the same skills as humanists to cut through misleading observations and arrive at a defensible interpretation, and intellectual cross-training in the humanities exercises the relevant portions of the brain.”

So if you agree that liberal education is a valuable preparation for educating young men and women for work in the 21st century, how would you go about structuring such an education? Higher education in America developed an unusual model, in which students, unlike their European and Asian counterparts, take only about half of their coursework in a field of specialization; the other half is devoted to so-called general education. How might that half of a student’s program be structured?

There are four basic models for general education requirements, or requirements of that portion of a student’s program outside of the major: a core curriculum, completely free electives, distribution requirements, and an emerging model that based upon capacities of mind. (Of course you can combine features of these four.) Let me describe each in turn.

A core curriculum requires a set of specific courses of all students, called the core. The most famous example of a core curriculum is Columbia. Here are the required courses in the Columbia core curriculum:
• Masterpieces of Western Literature and Philosophy
• Contemporary Civilization
• Masterpieces of Western Art
• Masterpieces of Western Music
• Frontiers of Science
• University Writing
• Foreign Language, Global Core, Science, and Physical Education

Notice how western-centric this curriculum is, a feature it shares with many core curricula, reflecting an assumption that there is a canon of western masterpieces of thought, literature, and the arts that all students should know. That assumption—of a clear canon of masterpieces—has been challenged on a number of fronts—that it focuses on the western tradition rather than a global one, that it marginalizes voices that traditionally have not had access to power—women, minorities. Equally problematic is the assumption that students take all their coursework in a single institution; core curricula are very challenging for transfer students because they tend to have a unique design, making fulfilling requirements at another institution very difficult.

The other extreme is a curriculum with no requirements outside of those for the major; Amherst, Brown, and Smith are good examples. Serving students well with a so-called open curriculum requires very good advising, or students wind up with something of a hodge-podge. Even though this was Smith’s curriculum, I don’t think it offers students enough guidance or structure.

The most common way of structuring the curriculum outside of the major is through distribution requirements. Here are Berkeley’s: two semesters of freshman composition; a level of proficiency in a foreign language; and one course in quantitative reasoning, American cultures, arts and literature, biological sciences, historical studies, international studies, philosophy and values, physical sciences, and social and behavioral sciences. Such a structure guarantees a certain level of breadth in a student’s education, but it doesn’t offer any way of relating the courses to one another or seem to have a clear pedagogical rationale other than breadth.

I have increasingly come to believe that the best way of thinking about requirements outside the major (indeed including requirements in the major) is through identifying the capacities of mind and imagination that a college or university believes its students should develop in the course of their undergraduate education. It was conversations with alumnae, when I was president of Smith, that led me to this insight. When I began my presidency at Smith and also began a strategic planning process, I identified the curriculum as something that needed work. Because Smith had no requirements outside of the
major, departments shaped their curricula for their majors. Even though students were required to take half of their units outside of their major, there was little thought given to what those courses might be or what students should learn from them as a group or totality, and there was little thought given to what the college believed all students should learn. I therefore began asking the many groups of alumnae with whom I met what was the most valuable thing they learned in college, what was the educational experience that contributed the most to their future endeavors. Much to my surprise, they almost never mentioned a single course, or even their major. They almost always named what I would call a capacity of mind—I learned to write well; I learned critical thinking; I learned how to do research.

I therefore led the faculty in a deep and far-ranging debate about what capacities of mind they thought were most important for students to develop in the 21st century. We used as the basis for some of our discussions Harvard President Emeritus Derek Bok’s book, Our Underachieving Colleges. This is what Bok defines as the purposes of an undergraduate education:

- Learning to communicate
- Learning to think
- Building character
- Preparation for citizenship
- Living with diversity
- Preparing for a global society
- Acquiring broader interests
- Preparing for a career

Faculty agreed with some of Bok’s objectives more readily than others. They quickly came to consensus that learning to communicate, learning to think, living with diversity, preparing for a global society, and acquiring broader interests were essential to an undergraduate education. But they debated long and hard about building character and whether developing the capacity for ethical reasoning was a legitimate aim of an undergraduate education. They initially felt that ethical considerations were foreign to a number of disciplines—chemistry, math—and that they were not in the business of telling students what values they should hold. But they came to realize that there are standards of ethical practice in every discipline. Paradoxically, it was the engineers that led the way with their insistence that ethics had a critical place in the engineering curriculum. I still remember one rather crusty historian talking about the insight that engineering students brought to his history classes; they understand, he said, the importance of precision, or being right.
After more than a year of debate, the following are the capacities that the Smith faculty determined should shape the curriculum and, more importantly, advising. They agreed that each student should

- Develop the ability to think critically and analytically and to convey knowledge and understanding, which require
  - writing clearly
  - speaking articulately
  - reading closely
  - evaluating and presenting evidence accurately
  - knowing and using quantitative skills
  - applying scientific reasoning
  - engaging with artistic creation and expression
  - working both independently and collaboratively

- Develop a historical and comparative perspective, which requires
  - learning foreign languages
  - studying the historical development of societies, cultures, and philosophies
  - understanding multi- and inter-disciplinary approaches

- Become an informed global citizen, which requires
  - engaging with communities beyond Smith
  - learning tolerance and understanding diversity
  - applying moral reasoning to ethical problems
  - understanding environmental challenges

Berkeley has also started moving in the direction of defining the objectives of a college education through capacities of mind. Berkeley distinguishes between what it calls competencies and dispositions. It believes each student should have the following competencies: she should be Literate, Numerate, Investigative, Creative. And each student should have the following dispositions: she should be open-minded, worldly, engaged, disciplined. These are clearly very general, and don’t have obvious curricular implications.

You may think from the description of the debate about capacities at Smith that the college moved away from its open curriculum; it did not. But it made three important changes. First, it changed its advising system; what had been pre-major advisors became liberal arts advisors, responsible for leading students in a continuing conversation about how they planned to develop each of the capacities the faculty had identified as critical to their education. Students were required to come to their advising appointments with a set of questions answered in writing about these capacities and their plans for developing them.
Second, it developed more courses of an integrative nature, showing relationships among disciplines, focusing on topics, such as climate change, that required multiple tools for progress.

Third, it created many more experiences that provided opportunities for students to engage in professional and intellectual projects outside of the classroom, in internships, in study abroad, in community-based learning. Perhaps the most exciting of these was a program we called the concentrations. Rather like minors in a field of professional practice, like museum studies or international finance, or archives, they required at least one internship and a capstone project that could be a group project. The inspiration was again, engineering, and the senior design project that was a capstone for all engineering majors.

Admittedly, some of these initiatives were easier to implement on a fairly small campus of 2600 undergraduates and a faculty who all knew one another. But our challenge today in thinking about a liberal education is to move beyond a distributive model to an integrative one, to define the capacities of mind we want our students to develop, and then through a process of reverse engineering, make sure we have designed the curriculum to achieve those results. It seems Towson has an excellent start on this process. The right beginning is determining your objectives: what do you want every student to learn in her time here? But that is only a first step. The next step is even more critical: implementation. A business strategist I very much admire—Vijay Govindarajan—says often that good ideas are relatively common; good implementation plans much less so. In developing an implementation plan, there are two critical questions:

- Is the curriculum design we’ve developed well suited to our students?

I’ve been working with a university that has developed an elegant integrative core curriculum. But they are now discovering that the large proportion of transfer students they enroll, are having difficulty fulfilling the core requirements, with the consequence of decreased yield among transfers and increased attrition. Thus making sure the curricular design you develop is well-suited to your students and enrollment patterns is critical.

Secondly, you need to ask

- What resources are necessary to implement this curricular design and where will they come from?

Colleges and universities tend to be accretive. We’re wonderful at thinking up good new things to do; we’re less good at stopping things. So curricular
redesign requires thinking through not just what new core we’d like to create but what needs to change in accommodate it.

In closing, I return to a point I made briefly earlier in this talk about the relationship of liberal and professional education. Too often, even educators assume they are opposed to one another. But they are complementary. Even Derek Bok, president emeritus of Harvard, lists preparing for a career as one of the objectives of a liberal arts education. We should all be focusing on the skills and knowledge students will need when they move to the workplace. But even the professions that have the strongest and longest identities—medicine, the law, engineering—will see changes we cannot at present envision. A strong liberal education, stressing critical and analytic thinking, writing and speaking, quantitative fluency, the ability to use and interpret data, information literacy, understanding of other times and cultures, ethical reasoning, is critical to the capacity to continue learning, to master new knowledge and skills. Most of the significant problems we face as a nation and a world require the tools of multiple disciplines; intellectual cross-training is critical in such endeavors.

In a history of the Yale curriculum published in 1901—more than a century ago—, John C. Schwab wrote, “The history of the Yale curriculum is the story of a medieval workshop, with its limited range of simple tools, all of which the apprentice learned to master, developing into a modern factory, well equipped with a large stock of tools and machinery, no two of them alike in their construction or use, many of them delicate and complicated, and full of them fully understood or manipulated by all the employees of the shop.” Schwab’s metaphor aptly represents the move from a the classical curriculum of the 18th and early 19th centuries with its uniform requirements for all students, stressing Latin and Greek, to the major and elective system still characteristic of the curriculum today. But I wonder whether our history calls for another metaphor—not a factory, with its specialized functions, but perhaps the worldwide web. The metaphor of the factory implies that you can manipulate your own set of tools without a great deal of concern or knowledge about other tools on the floor. The world wide web requires that you continually change your frame of reference, moving across disciplines and fields of knowledge. We must create a model of liberal education that develops such fluency, intellectual cross-training, to use Thomas Cech’s term, fostering capacities of mind that enable our students to solve not just today’s problems but the problems of the future.