

## Chapter 23

# New DNA

The things we've seen in our exploration of higher education's past and current competitive realities indicate the need for most traditional universities to genetically reengineer themselves. In the roughly seventy-five years during which Charles Eliot, A. Lawrence Lowell, and James Conant presided over Harvard, its DNA was set. Since the 1950s, when Conant left to help in the reconstruction of Germany, that DNA has remained largely unaltered, even as it has been widely copied. Universities have grown larger, more complex, and more expensive, but their basic character still reflects decisions made in the late nineteenth and early twentieth centuries. The times now require additional evolutionary adaptation. Because of the pace of change around them today, university communities must respond quickly.

### Assessing Capabilities and Making Choices

The starting point is an honest assessment of a university's most valuable assets: its faculty and its physical campus. With these assets in mind, the question to ask is, "How good are we *really*—not just relative to other institutions, but in terms of meeting the needs of the students, governments, and other constituencies we serve—at doing the jobs of discovery, memory, and mentoring?"

To the extent that the answer vis-à-vis any of the three jobs is “not very good,” the members of a university community need to assess their choices of students, subjects, and schol-

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arship. Because so many institutions have adopted the Harvard DNA without the financial resources to sustain that model, in many instances it will be necessary for the university community to make tradeoffs, hard choices about shifting the emphasis of their activities and even ceasing some things altogether.

The prospects for making such decisions in higher education have historically been poor. Faculty members reasonably expect to have a say in matters that affect the quality of the university's activities. Many have chosen academic life and a particular academic institution over higher-paying opportunities and with a sense of commitment that goes beyond what the typical company can expect. The quid pro quo for this faculty commitment is voice in the decisions that affect not only their work but their professional lives.

Historically, faculty members have sought to preserve institutional support for their individual activities and for the traditional university model that has proven so successful in performing the jobs of discovery, memory, and mentoring. The university's departmental structure has—in a way analogous to the federal structure of American government, in which even a small state has some say—ensured the university's commitment to a broad range of academic disciplines.

Now, however, the external pressures on universities require many to respond in ways that go beyond incremental, across-the-board budget reductions. The viability of the whole institution is at risk, and with it the ability of individual faculty members to make the kinds of contributions for which they joined the academy—or simply to keep their jobs. Realizing their collective and individual ambitions will

require all members of the university community to consider changes in the ways they pursue the mission of higher education.

## Prerequisites for Successful Conversations about Tradeoffs

Each institution will need to make unique tradeoffs, and some members of the university community will be affected more than others. Several principles for success, though, apply generally. One is that the institution must put questions of people ahead of questions of strategy. That may sound un-businesslike, but it is in fact a key conclusion reached by business researcher Jim Collins in the study that led to his book *Good to Great: Why Some Companies Make the Leap... and Others Don't*. Likening a business organization to a bus and its strategy to the destination of the bus, Collins says, "Leaders of companies that go from good to great start not with 'where' but with 'who.'"<sup>1</sup> According to his research, the most successful businesses make sure that they have the right people on the "bus" before they decide where the company is going. These must be people who are both capable and committed to "A-plus effort."

Traditional universities benefit from having invested heavily in getting the right people on the institutional bus. The tenure process ensures intellectual capacity and work ethic, and the compensation level means that most professors have put the love of discovery, memory, and mentoring ahead of financial wealth. Though organizational structures and systems may promote defensive and even self-serving behavior, the typical university has a team of remarkable capability and commitment. Its potential for innovation is vast.

However, maintaining individual commitment while changing fundamental aspects of the university's DNA requires an equally high level of commitment from the institution. Particularly with tenured positions in many fields at a low ebb, faculty members cannot be expected to vote themselves "off the bus." Innovation may require them to alter their activities, but no meaningful discussion of change

can be undertaken without assurances that capable members who commit to innovating can remain with the community.

That principle guided Charles Eliot, who implemented tenure at Harvard, as he undertook the innovations that established the great American university. It has likewise been a principle of innovation at BYU-Idaho. Throughout its history of ups and downs, including the reversion in the 1950s from four- to two-year status and the elimination of intercollegiate athletics in 2000, the institution has protected the employment of individuals capable of and committed to its mission. No one's seat on the bus is guaranteed, and some, such as the coaches who left BYU-Idaho instead of taking teaching positions, have chosen to get off rather than change seats. But the institution's innovations have been premised on the bus being big enough for its current riders.

Taking that position, especially in difficult times, requires university leaders to have faith not only in their people but in the institution's future. But even if the faith in the future is nothing more than that—an inchoate sense of what the institution is capable of—there is no other place for university leaders to start. The university's people, especially its faculty members, are both the bus's engine and its brakes. Before any new direction is charted, they must be assured of their voice and safety in the journey.

## **Different Types of Tradeoffs**

The choices that each university community makes should be unique, driven by its aspirations and capabilities. In general, though, universities need to become more focused and realistic about what they can achieve. Most need to narrow their choice of students and subjects and to deemphasize discovery scholarship in favor of other forms.

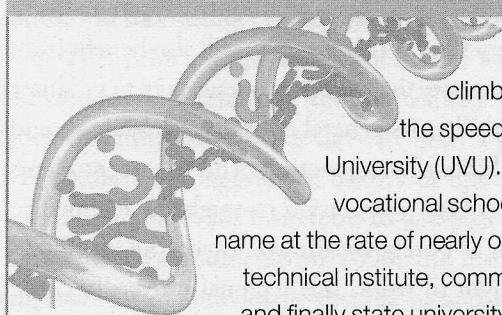
Consider the case of a regional university that has ascended quickly to that status and is financially overextended by the costs of its new graduate and athletic programs, as well as decreased faculty teaching loads designed to allow time for scholarship. To increase its

prospects for long-term success, this school might choose to refocus on its undergraduate students and on subjects leading to employment in fields such as business and teaching. The university will also benefit from modular curriculum that decreases the time its students take to graduate and increases their employability. Its general education module should be designed with liberal ambitions but a practical bent, to serve students who have come with poor college preparation or might be inclined to view their higher education as purely vocational. Given the likelihood of its graduates' going straight to work, this regional university could benefit from an alumni-supported internship program.

Consistent with those choices of students and subjects, this university might emphasize the scholarship of integration, application, and instruction; given its relative lack of institutional prestige and inability to draw new students on the basis of its name alone, this university could benefit particularly from scholarly efforts to demonstrate learning outcomes. To the extent that discovery research continues, undergraduate students should be involved.

Very likely, this regional university will need to reduce its operating costs by consolidating or eliminating some departments, majors, graduate programs, and athletic teams. It should explore the potential to serve students more cost effectively through year-round operation and online learning. It should also scale back its investment in merit scholarships and higher-than-average pay packages for faculty scholars.

Obviously, faculty members will be impacted by these changes, and their support and leadership will be crucial. In addition to shifting the focus of their research—and perhaps having less time for it—some will need to accept assignments to teach a greater proportion of introductory courses than before. However, there will be opportunities to play challenging and potentially rewarding new roles in developing new curriculum, especially online courses, and in mentoring online faculty in their teaching and students in research. As the university's summer offerings fill, the university may be able to increase faculty compensation. And, as the size of the student body grows, there will be increased opportunities to teach advanced courses.



Few institutions have climbed the Carnegie ladder with the speed and success of Utah Valley University (UVU). Founded in 1941 as a state vocational school, the institution took a new name at the rate of nearly one per decade—trade tech, technical institute, community college, state college, and finally state university. In the process, its student body grew to nearly 33,000 students, equaling in size the state's flagship research institution, the University of Utah. To the technical certificates originally offered have been added associate's, bachelor's, and master's degrees, and a school that started with no athletic program currently competes at the NCAA Division I level.

In 2010, though, the UVU community and its new president, Matt Holland, stood at a crossroads. Holland's academic résumé includes the names Duke and Princeton, creating the natural expectation among many faculty and alumni of a continued Carnegie climb. But in addition to double-digit enrollment growth, UVU had been hit by double-digit state funding cuts. Rather than competing head-to-head with the five Utah universities on the ladder ahead of UVU, Holland and his colleagues determined to create a university that is both academically "serious" and "inclusive" of all types of students and the surrounding community.

UVU's strategy for pursuing serious scholarship while still remaining open to all high school graduates is built on the new Carnegie classification, Community-Engagement. UVU has used a \$400,000 Carnegie grant to stimulate programs for student internships, community projects, and faculty research collaboration. That faculty research emphasizes the nontraditional elements of scholarship suggested by Ernest Boyer: integration, application, and instruction.<sup>2</sup> UVU is also expanding its online curriculum, the key to serving more students in its resource-constrained environment.

The choices of an elite liberal arts college could be different. Its lack of graduate programs and Division I intercollegiate athletics, along with its higher tuition, might reduce the need for efficiency measures such as year-round operation. Likewise, its selectivity may produce a student whose solid preparation for college and intention to attend graduate school diminishes the need for an integrated GE program and modular majors tied to internships and professional certifications. Still, the high tuition of elite liberal arts colleges creates an expectation that every activity will be student oriented. Faculty scholarship, for example, should involve students.

The hundreds of less well-endowed private colleges need to take another tack. For them, online learning is a critical tool, particularly in hybrid form. For example, a course with four face-to-face classroom sessions per week can be redesigned to have only half as many professor-led discussions, the balance being replaced with online student-to-student learning led by a skilled but less expensive adjunct instructor. The full-time professor is thus freed up to serve more students or engage in more scholarship.

At the same time, all liberal arts colleges must preserve their advantages in memory and mentoring, two of the primary reasons for which students and their parents are willing to pay a premium price. The instruction of the liberal arts college should remain predominantly face-to-face and its curriculum cross-disciplinary, like that of Salt Lake City's Westminster, where online learning is part of a "high-tech/high-touch" education. The liberal arts college should also encourage interactions among professors and students that are personal and inspiring, like those between Mark Hopkins and James Garfield during the time they shared as teacher and student at Williams College.

### **General Genetic Recommendations**

Though unique choices are critical, because many universities have overextended themselves in a common climb up the Carnegie ladder,

in pursuit of Harvard and its peers, many of the genetic changes they need to make are similar. Table 23.1 shows the changes that most institutions should consider.

Some of these genetic alterations could be made at a stroke, as was the case when the new BYU-Idaho eliminated competitive athletics. More realistically, the changes will take time, as they did when Kim Clark called for a new learning model and general education program. Particularly in the case of academic programs, the faculty must lead the effort, and their deliberative process will be time consuming.

<b>TABLE 23.1</b> Recommended DNA Alterations	
<b>Traditional University Traits</b>	<b>Recommended Alterations</b>
Face-to-face instruction	Mix of face-to-face and online learning
Rational/secular orientation	Increased attention to values
Comprehensive specialization, departmentalization, and faculty self-governance	Interdepartmental faculty collaboration Heavyweight innovation teams
Long summer recess	Year-round operation
Graduate schools atop the college	Strong graduate programs only Institutional focus on mentoring students, especially undergraduates
Private fundraising	Funds used primarily in support of students, especially need-based aid
Competitive athletics	Greater relative emphasis on student activities
Curricular distribution (GE) and concentration (majors)	Cross-disciplinary, integrated GE Modular, customizable majors, with technical certificates and associate's degrees nested within bachelor's degrees
<i>continued</i>	

**TABLE 23.1** (Continued)

Traditional University Traits	Recommended Alterations
Academic honors	Increased emphasis on student competence vis-à-vis learning outcomes
Externally funded research	Undergraduate student involvement in research
Up-or-out tenure, with faculty rank and salary distinctions	Hiring with intent to train and retain  Customized scholarship and employment contracts  Minimized rank and salary distinctions, consistent with a student-mentoring emphasis
Admissions selectivity	Expansion of capacity (for example, via online learning and year-round operation) to limit the need for selectivity

The same principle of gradual, faculty-led implementation applies to changes such as offering more summer courses and creating new faculty contracts. An across-the-board changeover to a three-semester academic calendar and year-round employment contracts for faculty may be unavoidable for institutions in dire financial straits. For many, though, the shift can be gradual, with summer offerings increased incrementally and contracts changed voluntarily or altered as new faculty are hired.

The important thing to remember, from a compensation standpoint, is that the cost efficiency of these summer offerings is great. There is no new cost for buildings or faculty benefits, and the incremental costs of student support, such as academic advising, is relatively small. This means that faculty compensation can be generous, as long as classes can be filled. At the same time, because a BYU-Idaho-style track system is impractical for most schools, summer offerings will need to be rolled

out gradually, with tuition discounts and other preferences given to attract students.

## **The Benefits of Growth and an Emphasis on Quality**

The university's faculty members hold the key to successful institutional change. One lesson we can infer from the BYU-Idaho experience is that change is more palatable for all members of the university community, especially faculty members, when it occurs in the context of institutional growth rather than shrinkage, and when the innovation emphasis is on quality rather than mere cost reduction. For example, the addition of third- and fourth-year students at the creation of BYU-Idaho helped ensure that former Ricks College athletic coaches could be employed as physical education instructors and student activities leaders; the emphasis in these areas was on improving the quality of the student experiences through application of the Learning Model. The continuing growth of the university and its emphasis on learning quality likewise eases concerns as online course are added. Full-time faculty members need not feel concerned about being replaced by online adjunct instructors, because the demand for face-to-face courses remains high. Moreover, the full-time faculty have a vital role to play in ensuring quality in the course design and delivery process.

For a university facing declining enrollments, the idea that change is easier to effect as part of an overall strategy of growth and quality enhancement appears to present an organizational Catch-22. However, there are opportunities for such a school in a strategy that includes simultaneously focusing its choices of students, subjects, and scholarship and also reaching out to nonconsumers of higher education, as BYU-Idaho and many for-profits are doing, and as Lowell did in creating Harvard's extension programs. In particular, online courses designed to serve students who are not fully prepared for college, such as the Academic Start suite of courses in BYU-Idaho's

Pathway program, create expansion possibilities even in geographic regions of apparently low higher education growth. High schools and community colleges are potential partners in this outreach to non-consumers of university education, especially the many students who currently do not continue after completing a high school or associate's degree.

As noted in the story of BYU-Idaho's Pathway program, established universities have inherent cost efficiencies in serving students via online degree programs. Much of the educational infrastructure—courses, computer systems, advising systems—may already be in place. In addition, traditional

universities have the benefit of their faculty subject matter experts and established reputations, giving them the potential to save costs in course creation and marketing relative to purely online educators. Particularly as the overall demographic trend turns down, strategies for serving college nonconsumers at high levels of quality present an invaluable opportunity for growth and the institutional innovation that will be easier because of it.

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*Our greatest partnership here at Ohio State should be with the community colleges. We're all part of the same mission, which is education from pre-K through life.<sup>3</sup>*

—Gordon Gee, president of  
Ohio State University

## You Get What You Measure

Whether a university is growing or not, a crucial step in changing its DNA is choosing supportive success measures. It will make little difference, for instance, to declare a focus on undergraduate students and hire outstanding teachers if faculty tenure and promotion continues to hinge primarily on research and publication. The university's strategic choices must be supported by the success measures it applies to itself and

to its employees, particularly the faculty. Like other organizations, universities produce the results they do by design. They do not always get what they want, especially when their competitive environment changes significantly, as it is doing now. However, what they want—as manifested by the activities they measure and reward—largely determines what they get, for better and for worse.

In many respects, the traditional university has chosen success measures that are not only inconsistent with the jobs of discovery, memory, and mentoring but work in opposition to them. Traditional institutions of higher education are in dire straits today not just because of the general tendency to emulate the activities and copy the traits of the elite research universities, which themselves struggle under the financial burden. The typical university both organizes itself like these hard-to-copy standouts and also adopts their success measures and incentive systems. The result is a higher education sector enacting poor strategic choices with uniformity and dogged consistency.

Much of the problem lies in the chosen indicators of success. For too long, traditional universities have been more concerned with measures of what they do and what they consume than with measures of what they produce. Accreditation teams, for example, historically worried about the percentage of faculty holding doctoral degrees, the adequacy of physical facilities and financial reserves, and the number of classroom hours required to graduate. Ranking agencies still reward the universities that turn away many applicants, pay their faculty well, keep classes small, and win the respect of peer institutions. Tenure committees count publications and seek stars in narrowly defined fields. Alumni expect bowl and tournament berths.

Only recently have government regulators demanded accountability for the educational benefits universities produce and the efficiency with which they produce them: What does college cost? How many students are admitted? How many graduate? How long does it take them to graduate? How many get good jobs? At the same time, accrediting bodies have changed their measurement emphasis from inputs

and activities to outcomes. This plays to the strengths of the for-profit educators, who have made a science of measuring learning outcomes.

## Meaningful Success Measures

To compete in this environment, the traditional university must change what it has historically valued and measured. At a minimum, that will mean voluntarily embracing many of the criteria that the Spellings Commission would have forced on it, such as creating performance benchmarks for productivity and efficiency.<sup>4</sup> The successful university will take its measurement efforts further, by developing a report card like BYU-Idaho's that is customized to the university's strategic choices and incorporates performance statistics defined with those choices in mind.

As in the case of re-engineering the DNA, the emphasis on various success measures will differ among institutions. However, several general guidelines apply.

One is to shift the emphasis from things that matter to scholars and ranking agencies to things that matter to stu-

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*By ... establishing new criteria for success, we are choosing not to participate in a race that has already been lost.<sup>5</sup>*

—Michael Crow, president of  
Arizona State University

dents and governmental bodies; increasingly, the latter define bigger and better differently than the former do. In the past, students and governments placed great value on prestige. They were also willing to let presumed experts, academicians and the creators of rankings, determine the meaning of prestige for them. Today, with higher education costs escalating and academic prestige becoming more difficult to trade on in a competency-oriented marketplace, students and governments want to draw their own conclusions about what their universities are doing for them rather than what scholars and ranking agencies have valued.

Rankings, for example, reward schools for enrollees with high SAT and ACT scores. Students, by contrast, pay tuition with the expectation of earning a degree that can be completed in four years with a bearable debt load; they also expect to receive a credential meaningful to employers and graduate schools. In their "ranking," the measures that matter are time-to-graduation, tuition cost, and career placement or graduate school admission rates.

There is a similar disconnect between the success measures of scholars and those of governments. Scholars value publications and prizes. Governments, by contrast, fund universities primarily to produce capable, civic-minded graduates and economy-stimulating innovations. These outcomes are manifested in high salaries and rates of civic participation among graduates, as well as company creation. Publications and prizes may correlate with these outcomes, but they do not ensure them.

Another guideline for measuring success in this new environment is to invest in qualitative assessments as opposed to purely quantitative ones. Many of the things that matter most to students and employers can currently be assessed only qualitatively. For example, the highest forms of student competence, such as creativity and judgment, are hard to quantify. That may change as learning measurement technologies advance. However, in the near term universities need to invest in making qualitative assessments of their students' performance, just as they do in peer reviews of faculty scholarship. Though it is easy to identify the number of majors and courses a university offers, more important to students and society is the quality of those offerings. Likewise, a professor's academic credentials, which can be assessed with relative certainty, matter less than his or her ability to create effective learning opportunities.

An additional measurement priority is ratio analysis. For example, the cost of a traditional university education has grown so great relative to new alternatives that the discerning student and legislator must consider not only how good an educational offering is, but how good it is for what it costs. That kind of price-to-value analysis has long been applied by prospective students as they decide whether to attend

a public university or a private one. Today, with the potential to obtain an online degree at a fraction of the cost of one offered even by a public institution, the price/value tradeoff becomes all the more relevant. Students want not just high-paying jobs, but an acceptable ratio of starting salary to student debt. Governments likewise care not just about the number of graduates but the total cost of producing each graduate. In other words, efficiency measures matter.

One way to envision \_\_\_\_\_  
the kind of success measures *Efficiency measures matter.*  
needed in the future is to  
compare them with those of the past and present. Depending on the  
strategic choices of an institution, the shift may look like this:

### *Students*

#### Traditional Success Measures

- Number of students enrolled
- Average SAT/ACT Score
- Number of National Merit Finalists
- Number of Rhodes/Marshall Scholars
- Number of advanced degrees granted
- Ratio of undergraduates to graduate students

#### Additional Success Measures

- Number of graduates per year\*
- Percentage of students graduating within six years\*
- Institutional cost per degree granted\*
- Student cost per degree earned\*
- Average time to graduation\*
- Average debt load of graduates\*
- Graduate school admission rate\*
- Board certification pass rate\*
- Job placement rate\*

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\*Note: An asterisk in the list denotes the need to track a measure by major and/or department

- Average starting salary of graduates\*
- Alumni satisfaction\*

### *Subjects*

#### Traditional Success Measures

- Number of courses offered
- Number of majors offered
- Number of graduate programs
- Number of academic centers/departments/colleges
- Number of tenure track faculty
- Percentage of faculty holding terminal degree in field
- Number and size of libraries

#### Additional Success Measures

- Quality of general education program
  - Integration of disciplines
  - Practical applications
  - Values orientation
- Quality of majors
  - Modularity
  - Cross-disciplinarity
  - Connection to the workplace
- Degree of student engagement in learning\*
- Degree of curricular outcome orientation\*
- Student learning outcomes\*
- Percentage of courses offered both face to face and online\*
- Quality of internship and other extracurricular learning opportunities\*

### *Scholarship*

#### Traditional Success Measures

- Number of publications via prestigious journals and presses
- Number of scholarly citations
- Number of Ph.D. students supervised
- Number of scholarly prize-winning faculty
- Regional and discipline-based accreditation

- Membership in the Association of American Universities (or similar domestic organizations outside the United States)
- Quantity of external research funding
- Number of patents and quantity of revenue derived from university intellectual property

#### Additional Success Measures

- Degree of student involvement in scholarly activities\*
- Degree of inclusion of scholarship in the curriculum\*
- Tendency of scholarship to strengthen interdisciplinary and interdepartmental ties\*
- Influence of scholarship on practitioners\*
- Influence of scholarship on teachers\*
- Number and strength of new company spinoffs

Notable in these lists of success measures is a shift from quantity to quality and from simple outputs to efficiency and effectiveness ratios; the words *number* and *quantity* are often replaced with the words *degree* and *quality*. Also pronounced is the shift from what students give the university to what they get from it. In the case of scholarship measures the movement is toward an inclusion of forms of scholarship other than discovery research.

Many of these additional measures are likely to require new data-gathering efforts; an example is the influence of a university's scholarship on practitioners, an outcome of secondary concern to many scholars today. Some other measures will resist efforts at precise quantification; the degree to which students are actively engaged in learning is one example. However, the value of these measures lies as much as anything in the conversations they trigger. In the beginning, they require members of the university community to agree on what measures matter most and what level of success is acceptable. On an ongoing basis, they provoke debates about whether success is being achieved. It is the measurement process more than the measurements themselves that shape the institution and guide its members' activities. The right success measures provoke the right kinds of conversations. Ultimately it is those conversations that keep the university evolving adaptively.