

PARCHMENT SUMMIT

ON

INNOVATING ACADEMIC CREDENTIALS

The Coming Transformation of the Credit and Degree System in American Higher Education: An Historical Perspective

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Today, it is tempting to think that the university, and the credentials it issues, are in the midst of massive disruption. But a closer look at history tells us that shifts in credentialing are a normal, even predictable, phenomenon. Changes in the university follow the major economic and social developments in our nation. The more profound the change in the country, the more dramatic the changes in higher education credentialing that occur in its wake.

FROM CLASSICS TO CREDITS

The first significant shift in credentialing began in the first decades of the nineteenth century, a time in which America was making a transition from a local agrarian to a national industrial economy.

The first American college—Harvard—was founded in 1636 and for close to two centuries, collegiate education changed very little. Institutions stuck closely to the classical curriculum of the medieval European universities, focusing instruction on the Bible, ancient languages including Greek, Aramaic and Hebrew, and subjects such as rhetoric and arithmetic. There were no

courses—every student had the same schedule, studying one subject per day from 8 in the morning to 5 at night.

Then came the Industrial Revolution, which in the decades before the Civil War saw the rise of canals, steamboats, the first water-powered factory in 1790 (140,000 factories by 1860), railroads, mechanized farm equipment, and the telegraph. These changes in transportation, communication, and production caused a massive migration of the population from farms to cities, east to west, from abroad to the U.S. They knit the country of localities into regions and ultimately into a fledgling nation.

Even as the Industrial Revolution transformed the economy of the country, higher education defended its classical curriculum, eschewing change. In fact, after years of criticizing Yale University for the irrelevance of its curriculum, the State of Connecticut cut off funding. Yale responded, as colleges do when facing trouble, by appointing a committee. In 1828, Yale issued a report (surprisingly called the Yale Report of 1828) which defended its classical curriculum for

providing students with discipline and furniture of the mind—teaching them how to think and providing the knowledge to think about. It dismissed vocationalism, partial courses of instruction, and practical education as training and lesser forms of education.

Nonetheless, there were experiments and reforms in higher education—some succeeded, but most failed. Among the ill-fated initiatives were attempts to introduce graduate education at the University of Michigan, scientific schools at Harvard and Yale, and wholesale program redesign at Brown, including electives, modern language and science instruction, partial non-degree programs and a new non-classical studies degree. Enrollments declined, causing the president of Brown to lament they couldn't even give collegiate education away.

But in the aftermath of the Civil War, as industry continued to boom, the founding of new institutions led to a sea change in the postsecondary landscape. We saw the establishment of universities like Johns Hopkins, Cornell, and University of Chicago, which offered advanced studies, provided professional education in Industrial Age fields like engineering and business, and conducted research on important economic and social issues. Industrial technology schools like MIT emerged. Land-grant colleges, straddling the agrarian and industrial worlds, and innovative two-year institutions expanded access to more students seeking advanced training. Where there had once been a single pathway for all students, specialization and variation emerged. We saw several major innovations: the classical curriculum was broken into smaller curricular units called courses, specialized majors emerged, and elective courses individualized the curriculum and gave students choice.

With these expanded options came new degrees—the baccalaureate became a Bachelor of Arts and Bachelor of Science and a host of new master's and doctoral degrees emerged.

A new course-based assessment system was needed, which, after much experimentation, resulted in A to F grading. A new course-based accounting system was required to determine academic progress and degree attainment, based on numbers of courses or credits completed. Here too a multiplicity of different approaches were tried.

In the face of this extraordinary variation in practices, professional associations and regional accreditors like the New England Association of Schools and Colleges

KEY DATES IN EDUCATION INNOVATION

- » **1636:** Founding of Harvard; beginning of higher ed in America
- » **1828:** Yale Report defends classical curriculum in higher ed
- » **1870s:** Credit system introduced
- » **1878:** Harvard introduces A-E (later A-F) grading for courses
- » **1906:** Carnegie Unit established for course-based accounting
- » **2015:** Carnegie Foundation report laments over-reliance on the Carnegie Unit as a measure of student learning

called for standardization. The decades of experimentation led the Carnegie Foundation to establish the Carnegie Unit in 1906, which quickly became the gold standard for course-based accounting. The structure of education came to resemble one of the industrial era’s most successful technologies: the assembly line. Though the specifics differed from institution to institution, students were required to complete fixed numbers of courses or credits to enter college and to earn a degree. The time and process of the education experience were fixed, and progress was measured by seat time.

CREDENTIAL INNOVATION TODAY

Now, in the 21st century, the United States is once again undergoing an economic transformation. This time the shift is from a national, analog, industrial economy to a global, digital, information economy. In terms of education, the industrial system focuses on the amount of time students are taught. The information economy focuses on learning, what students know and can do. Time is variable, mastery is the constant.

This is a revolutionary change. It means that the current degree, assessment, and accounting systems won’t work any longer. Despite their extraordinary success for more than a century, they have become obsolete, being based on time, not student learning. In a 2015 report, the Carnegie Foundation put it this way: “The Carnegie Unit sought to standardize student exposure to subject matter by ensuring they received consistent amounts of instructional time. It was never intended to function as a measure of what students learned.”

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sors—having to invent a new model of credentialing, assessment, and accounting. I believe this strongly enough that the organization I lead, the Woodrow Wilson National Fellowship Foundation, is creating a competency-based and time-variable graduate school of education, awarding degrees and microcredentials.

We can expect credential innovation to follow a process comparable to that of the industrial era transformation:

- » Continued embrace of the current model by most colleges and universities and rejection of the need for change.
- » Experimentation—first small, then increasingly widespread inside and outside the academy.
- » Establishment of new models such as Western Governors University, Alverno College, Southern New Hampshire University—which will grow stronger by successive approximations. Elite higher education, with the notable exception of institutions such as MIT, will legitimate, not invent.
- » Adoption of a multiplicity of different practices for outcomes, assessments, and accounting.
- » Debate and discussion at every stage.
- » Standardization.

ONE FOOT IN THE LIBRARY, ONE FOOT IN THE STREET

Such changes are not fast or easy. Periodic changes in American society have precipitated parallel developments in higher education, and recognizing this can help us to prepare for the challenges and opportunities of a new era in credentials.

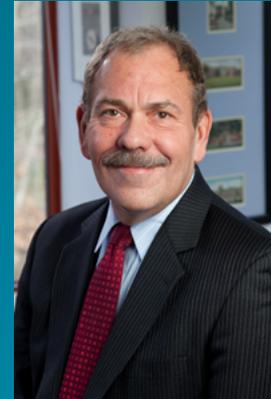
The information age will mark a shift from the time-fixed, process-focused system of industrial era higher education to a learner-centered, more personalized model. But this change does not mean that education must be diminished, diluted, or vocationalized—rather, it can be reimagined for the 21st century. The new industrial era universities did not reduce the quality of the agrarian colleges: they revitalized and enriched them.

Higher education succeeds best when it has one foot in the library, our heritage, and one foot in the street—paying attention to the realities and needs of the real world. In times of dramatic change, higher education tends to lose its hold on the street. Today, as higher education reestablishes its footing in the street, we should not abandon the library—those functions and activities that must be cherished and preserved in higher education, not casually or carelessly unbundled and dispensed with. The question we must ask ourselves as we go forth comes from the Yale report. It asked, should we change fast or slow? A lot or a little? These are the wrong questions, it said. The correct question is what is the purpose of a college. That remains the right question.

LEARN MORE

Dr. Levine was a keynote speaker at the inaugural Parchment Summit on Innovating Academic Credentials in February 2016. Watch his keynote address and learn more about innovating credentials at www.parchmentsummit.com

ABOUT THE AUTHOR



Arthur Levine is the sixth president of the Woodrow Wilson National Fellowship Foundation. Prior to his current appointment, he was president and professor of education at Teachers College, Columbia University. Dr. Levine is the author of dozens of articles and books including *Generation on a Tightrope: A Portrait of Today's College Student*; *Beating the Odds: How the Poor Get to College* (with Jana Nidiffer); *Higher Learning in America*; *Shaping Higher Education's Future*; and *Why Innovation Fails*. Dr. Levine has received numerous honors, including Carnegie, Guggenheim, and Rockefeller Fellowships as well as the American Council on Education's Book of the Year award (for Reform of Undergraduate Education), the Educational Press Association's Annual Award for writing (three times), and 25 honorary degrees. He received his bachelor's degree from Brandeis University and his Ph.D. from the State University of New York at Buffalo.