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GOT SKILLS?

Why Online Competency-Based Education Is the DISRUPTIVE INNOVATION for Higher Education

By Michelle R. Weise

There's an elegance to the term *disruptive innovation*—an elegance that also, unfortunately, leads to broad misuse of the phrase. It's no wonder that former Intel CEO Andy Grove advised Clayton Christensen—who coined the term in his 1997 book *The Innovator's Dilemma*—to instead name his theory "the Christensen Effect."[1]

So, what exactly is disruptive innovation? A disruptive innovation explains why many companies have difficulty sustaining success. In business, companies tend to innovate faster than their customers' needs evolve. Most of them thus end up producing *sustaining innovations* in order to drive up prices by making better products or services for the best customers. The countervailing disruptive innovations, meanwhile, drive prices down. In aggregate, these two vectors—sustaining innovations and disruptive innovations—keep prices in line.

Higher education, however, has historically experienced only sustaining innovations. Particularly over the last few decades, traditional higher education institutions have invested substantial resources in competing with their fellow institutions. In a race to move up in the rankings—similar to what we see in industry after industry that has experienced disruption—most colleges and universities have focused their efforts on sustaining innovations: enhanced technology in teaching, improved classrooms, more faculty research, and better residence halls and dining facilities. Such amenities add significant cost, leading to increasing prices; and although they serve traditional, campus-based students well, these sustaining

■ Only 11 percent of business leaders "strongly agree" that students have the requisite skills for the workforce, whereas 96 percent of chief academic officers believe that their institutions are "very effective" (56 percent) or "somewhat effective" (40 percent) at preparing students for the work world.[5]

■ McKinsey & Company analysts estimate that the number of skill sets needed in the workforce has increased from 178 in September 2009 to 924 in June 2012.[6]

A growing number of students are becoming cognizant of the blurring lines between learning and work. These are career-oriented students who are seeking

their existing or most desirable and demanding customers. Funding flows to innovations that fit and sustain the existing business model. Established institutions see the disruptive entrant making its way into the market, but they cannot do anything other than develop sustaining innovations. So whether institutions like it or not, students are now beginning to question the return on their higher education investments, particularly as the price of a college degree continues to rise and as the gulf continues to widen between degree holders and the jobs available today.

The Innovation Most Likely to Disrupt
Disruptive innovations must find their footholds in nonconsumption. As

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innovations do not necessarily help *non-consumers* of higher education.

Who are the nonconsumers of higher education? They include the nearly 71 percent of U.S. college-going students who do not participate in the residential college experience.[2] Most of them commute, work part-time, have family commitments, and/or do not have the luxury of majoring in a field that has no direct relevance to their future goals. Consider these numbers:

■ The National Center for Education Statistics projects that by 2020, 42 percent of all college students will be 25 years of age or older.[3]

■ According to the 2012 Cooperative Institutional Research Program (CIRP) Freshman Survey, 87.9 percent of college freshmen cited getting a better job as a vital reason for pursuing a college degree—approximately 17 percentage points higher than for the same survey question in 2006.[4]

more direct pathways to and within the workforce. Many of them, needing to "skill up," search for a cost-effective and streamlined program to move them ahead in their working lives. More time spent in college or graduate school is not often the answer, however, since many traditional institutions do not even offer majors or programs in the areas in which these students are looking to skill up.

Despite these trends, few colleges or universities are changing their ways. They continue to bundle together all of the amenities, services, and social experiences in traditional brick-and-mortar institutions. They may be well aware that the demographic of college-going students is shifting, but just as in every other tale of disruption, established institutions are asymmetrically motivated to pursue sustaining innovations only. It makes little economic sense to pursue the bottom end of the market, for the business model of incumbent institutions inevitably steers leaders to invest in improvements that affect only

colleges and universities have turned away from career-oriented training, they have unwittingly left unattended a niche of nonconsumers—people who are overserved by traditional forms of higher education, underprepared for the workforce, and seeking lifelong learning pathways. These potential students are looking for a different value proposition from higher education, one that centers on targeted and specific learning outcomes, tailored support, and identifiable skill sets that are portable and meaningful to employers.

In contrast to other recent trends in higher education, particularly MOOCs (massive open online courses) with their tremendous fanfare, online competency-based education (often shortened to "CBE") stands out as the innovation most likely to disrupt higher education. It serves as the missing link between learning outcomes and industry needs. A true workforce solution, competency-based education has the potential to bridge the widening gap

between traditional postsecondary education and the workforce.

Clearly, workforce training, competency-based learning, and online instruction are not new phenomena; it is the combination of all of these into one learning pathway that shows true disruptive potential. Online competency-based education marks the critical convergence of multiple vectors: the right learning model, the right technologies, the right customers, and the right business model. It fuses mastery-based learning with modularization, leading to pathways that are more agile and more adaptable to the changing labor market.

Modularization

When learning is broken down into competencies—rather than by courses or by subject matter—modules of learning can be easily arranged, combined, and scaled online into different programs for very different industries. For this reason, online competency-based education providers have a leg up on the various community colleges, regional schools, and offline competency-based education providers that already partner with companies to mitigate workforce shortages. Those programs require substantial resources to replicate or tailor

programs for different companies and industries, whereas the powerful integration of robust technologies enhances the ability of online competency-based education providers to modularize the learning process. Modularization is the key to narrowing the skills gap in ways that traditional forms of postsecondary education cannot duplicate.

For those unfamiliar with competencies, the premise is simple: most colleges and universities depend on the credit hour, meaning that a student progresses based on units of time. Built into a three-credit course is the assumption that each student will spend nine hours per week in class or doing homework for

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each course. After accumulating 120 of these credits (40 three-credit courses), a student can presumably earn a diploma. Competency-based education flips this on its head. Instead, students gain mastery of a subject regardless of the time needed to get there: learning is fixed, and time is variable. This format acknowledges that students come to a subject like sociology with different levels of understanding and sets of experiences—which, in part, lead to their learning at different rates.

In the end, rather than a transcript that lists courses and letter grades, a

portfolio of competencies enumerates precisely what a student can *do*: this student can evaluate web resources; this student can sift through various sources of information and create an ethical argument; this student can use data as evidence in a research-based argument; and so on.

Some people may wonder: Don't all postsecondary institutions engage in competency-based education? The answer is "no." Competencies have a unique architecture as they break learning into discrete modules that are not inextricably tied to courses or topics. Time-based courses are the main currency in traditional higher education institutions, and in general, excising a week of learning from one class and inserting it into another course in an unrelated field is nearly impossible. In an online competency-based environment, however, all learning materials are tagged and mapped. Competencies are composed of series of learning objectives, and in many cases, students can draw on resources from various subject areas to achieve their learning objectives in order to master a competency. Because learning is not broken down by subject matter, an online competency-based education provider can easily combine and stack learning modules together in different ways for various students. A student in an MBA program and another student in a nursing program might have similar learning objectives but draw on different content and materials to achieve those learning objectives.

This flexible architecture, which technology enhances, enables online competency-based education providers to create and scale a multitude of stackable credentials or programs for a wide variety of industries, all while simultaneously driving down the cost of educating students for the opportunities at hand. The price point of online competency-based degree programs is

already comparable to or lower than that of community colleges. Most of the former offer simple subscription models in which students pay a flat rate for a certain period of time and can complete as many competencies as they want: College for America (CfA) at Southern New Hampshire University charges $2,500 per year; Patten University, part of the UniversityNow (UNow) network, charges $1,316 per four-month period for undergraduates and $1,996 per four-month term for graduate students; University of Wisconsin's UW Flexible Option offers an all-you-can-learn option at $2,250 for a three-month period; Capella University's FlexPath costs $2,000 per quarter for a bachelor's degree; Brandman University's competency-based BBA degree costs $2,700 per six-month session; and Western Governors University (WGU) charges $2,890 for six months for most undergraduate programs. To put this in perspective, most two-year MBA programs cost around $150,000 (executive MBAs are often more expensive). If a student, however, took the full two years to complete an MBA through Patten University (and the student could, in all likelihood, finish even more quickly), then he/she would pay only $11,976.

It's no wonder that competency-based education has been trending on Capitol Hill. In July 2014, a bipartisan piece of legislation, the Advancing Competency-Based Education Demonstration Project Act, unanimously passed in the U.S. House of Representatives; the U.S. Department of Education announced that it was establishing experimental sites on college campuses for competency-based education and other innovative practices; and nearly thirty traditional higher education institutions gathered in Washington, D.C., for back-to-back conferences—many of them in the nascent stages of implementing competency-based learning on their campuses.[7]

Nevertheless, it is important to underscore that online competency-based education is foremost about rigor. For students, this educational model is hard. They are not able to get away with a merely average understanding of the material; they must demonstrate mastery—and therefore dedicated work toward gaining mastery—in any competency.

Through frequent online assessments and low-stakes exercises, online CBE platforms can capture, in very precise ways, a student's mastery of concepts and learning objectives.

Redefining High-Touch

The online competency-based education providers who are in the vanguard are redefining what it means to be high-touch. They are developing technology to ensure that learning is fixed and that time is truly the variable factor: assessments are built in to the system to verify students' proficiency; often students can take assessments multiple times in order to master the competency; and instructors can rely on an analytics dashboard and, like a personalized tutor, can cater to students' needs when necessary.

These advancements defy caricatures of online learning—images of a student alone with a computer, away from vibrant in-person classroom interactions between faculty members and other students. By contrast, technology can enable instructors to monitor students' participation better than they might be able to do in a classroom setting. Indeed, there is nothing innately personal about a professor lecturing to a classroom of students or leading even the smallest of seminars in which any number of students can drift off or get away with being inattentive or with not having done the assigned work relevant to the discussion. In an online competency-based learning environment, instructors access a dashboard that immediately reflects the concepts that a student might be failing to grasp. Through frequent online assessments and low-stakes exercises, online competency-based education platforms can capture, in very precise ways, a student's mastery of concepts and learning objectives. They can alert the instructor if a student is trailing in his/her studies or struggling with an exercise. Equipped with an unambiguous profile of a student's progress, instructors can then intervene when necessary, pinpointing and elucidating that specific troublesome concept for the student.

It is as though each student has a specialized tutor. In the American Enterprise Institute's October 2013 *Education Outlook,* the authors liken "watching," via data, to "any tutor watching closely as a student works on a problem. . . . One-on-one tutoring is about the best way

we know to provide intense instruction, real-time customized assessment, and intensive, personalized practice. But it is typically far too expensive to provide at scale."[8] In an online competency-based model, however, access to rich data on the backend alters fundamental aspects of the teaching and learning process. The frequent assessments generate important data about each student. One tutor can serve many more students at a time because the tutor can efficiently gauge the students' level of understanding and intervene only when necessary. These data-driven interactions between teachers and students actually become both richer teaching moments and more cost-effective interventions. Some learning platforms even integrate emerging adaptive learning technologies. Ultimately, instructors can guide the learning process in an efficient yet highly tailored fashion.

A New Value Network: Industry-Validated Experiences

Some online competency-based education providers—such as UNow, Brandman, and CfA—are working directly with employers and are recruiting students through new distribution channels. Partnering with large companies, they are putting a learning mechanism in place for employees who are looking to move up the management chain within their companies. Because tuition prices are so reasonable, employees are able to take advantage of their companies' Tuition Assistance (TA) programs (sometimes $5,000) in order to earn a competency-based degree or improve their skill sets. Through such partnerships, employers will be able to observe firsthand whether the quality of work or the outputs of their employees are markedly different with these new programs in place. Rather than complain about the quality of bachelor's degree candidates, employers have the opportunity to build up the skills of current workers.

Today, employers looking to recruit workers generally put their faith in higher education institutions' brands as general indicators of the quality of a degree without any recourse to useful demonstrations of the outputs of that degree or learning accomplished. Competency-based pathways have the potential to obviate this imprecise recruiting process. The modular structure of competencies makes it easier to create new learning experiences that are tied more directly to emergent fields of study.

At UNow, for instance, when a company wants to teach its employees a new line of inquiry, instructional design teams confer with industry leaders to determine the concepts that need to be mastered. They then plan, moving backward, the specific competencies that would feed into this new major or field of specialization, without regard to departmental structures. Such collaborative efforts ensure a balance of skills and knowledge as well as an application of competencies into productive outcomes. At the same time, employers are able to test and validate these newer types of learning experiences while serving as active participants in the coordination and creation of those competencies.

These learning providers not only are pushing innovation on price but also are offering briefer and more convenient, direct, and personalized pathways to skills that employers can understand and validate. Herein lies the true disruptive potential of these programs. Because the employer is the ultimate consumer of the graduates in training, employers—not accreditors—are the ones who need to be persuaded. By creating a separate and compelling value network connecting students and employers, these competency-based programs have the power to produce a separate and possibly even more powerful set of industry-validated learning experiences that could supersede the traditional degree.

Skeptics of competency-based learning worry that employers will end up dictating the requirements for student learning. In numerous editorials, academics (in particular) are exhibiting extreme territoriality over student

learning. It is no surprise that professors are fighting against this shifting reality. The embedded inefficiencies of the college/university render many professors unable to adapt to economic realities without viewing those changes as threats to their livelihood; however, turf warfare does little to benefit students who look to postsecondary programs as pathways to a career. Indeed, as Anthony P. Carnevale, director of Georgetown University's Center on Education and the Workforce, has argued, the economic role of higher education has gradually altered so that postsecondary education has now become the "nation's workforce development system." He adds: "In spite of its growing economic importance, our postsecondary education and training system and labor market information systems remain disconnected. . . . [P]roviding information systems linking postsecondary education and training programs with career pathways is

tions emerging from the margins have the potential to force all institutions of higher education to think more critically about how they offer learning and justify their costs and to consider whether and how to adapt their curricula to the changing labor market and needs of the workforce.

Education and Equality
The question remains whether the proliferation of online competency-based education programs will somehow lead to a bifurcation of the U.S. higher education system—to a system in which an elite education remains a costly residential experience separate from the more affordable, skills-oriented competency-based programs. But such characterizations misrepresent what will be an equalizing force in what is now a strikingly inequitable system.

Social stratification is embedded in the current system of U.S. higher

attend the top 468 colleges come from the bottom income quartile.[11] Because of rising tuitions and fees, those who are able to access a high-quality education are those who can afford to pay for it or those who have access to the right information.

The U.S. higher education system polarizes, perhaps unintentionally, by race and by class as it channels white students into programs that have greater financial resources as well as increased odds of completion. Because credentials have come to serve as a proxy for skill as well as a ticket to enter into the middle class, students are trapped in a class-based system that demands this credential but simultaneously restricts access to a quality education.

To confront the growing inequality within this system, we need to raise the bar for everyone seeking a postsecondary credential. We need a system that prioritizes the demonstration of

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desperately needed."[9] Despite philosophical concerns regarding the purpose of a college education, faculty members must acknowledge that students are and will be looking for the direct economic relevance of their studies.

The new wave of online competency-based pathways will be especially attractive to students seeking that direct link to the workforce. Online competency-based education can provide learning opportunities that drive down costs, accelerate degree completion, and produce a variety of convenient, customizable, and timely programs for the emergent needs of the labor market. What now appear as one-off innova-

education: only a small and privileged set of people participates in the selective, residential college experience. According to Georgetown University's Center on Education and the Workforce: "Since 1995, 82 percent of new white enrollments have gone to the 468 most selective colleges, while 72 percent of new Hispanic enrollment and 68 percent of new African-American enrollment have gone to the two-year and four-year open-access schools." The completion rates at the latter institutions are substantially lower: 49 percent for open-access two- and four-year colleges versus 82 percent for the most selective four-year colleges.[10] Only 8 percent of those who

student-learning growth and outcomes. For the more than 13.5 million students attending schools outside of the top 250 colleges ranked by *U.S. News & World Report,*[12] we need access to education to be the equivalent of access to *quality* education. Mastery of subject matter via online technologies can displace the importance of place, time, and brand and can ultimately put an end to the growing inequality built into the U.S. system of education.

Students with obvious and identifiable proficiencies and skills that are related directly to industry needs will be undeniable contenders in the workforce. Online competency-based education

can even out the playing field by taking students to the farthest point possible in their learning experiences, regardless of their starting point, race, geographical location, or family income. With high standards of proficiency and quality and with outcomes aligned to employability, it can build a dramatically new value network that changes the rules of the game for the common good. Online competency-based education can truly be the *disruptive innovation* for higher education.   ■

Notes

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