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Sharpening Our Focus on Learning: The Rise of Competency-Based Approaches to Degree Completion

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Abstract

This occasional paper by Rebecca Klein-Collins examines competency-based education in the higher education system. The author defines a competency-based education as one that focuses on what students know and can do rather than how they learned it or how long it took to learn it. This paper defines unifying concepts shared by different competency-based education programs, describes current competency-based models using the direct assessment approach, and examines the national policy context that could determine the extent to which these programs are able to go to scale. The author argues that competency-based education provides an opportunity to rethink what a college degree means for student learning while addressing concerns regarding higher education's quality and cost.

Sharpening Our Focus on Learning: The Rise of Competency-Based Approaches to Degree Completion

Rebecca Klein-Collins

Introduction

Competency-based postsecondary degree programs—programs that focus sharply on what students know and can do—are on the rise. These programs do not assume that successful completion of a series of courses results in the achievement of learning outcomes; rather, they confirm student learning through individual assessment. Many of the newest models of competency-based education (CBE) offer online formats, multiple modes of learning activities, and structures that permit students to learn and demonstrate required competencies at their own pace. Some of these programs are credit-hour based while others are designed to function wholly apart from a credit-hour system.

The competency-based degree programs emerging in recent years are products of our time.

The competency-based degree programs emerging in recent years are products of our time in that they harness the technological advances of the last ten years to create student-centered pathways to credentials: online and adaptive learning experiences, open educational resources, learning management systems, peer-to-peer social networks, and online or virtual advising and coaching. Yet these new programs share many underlying concepts with earlier competency-based degree programs. An intensive focus on what students know and can do rather than on what is taught, for instance, is a hallmark of CBE programs going back at least four decades.

The original impetus to create CBE programs was the changing demographic make-up of U.S. college students. With the Higher Education Act of 1965, along with other federal programs at that time, higher education became more accessible to adults (Brock, 2010). One approach to serving adult students incorporated a focus on competencies—acknowledging a student's previous learning and emphasizing performance rather than time in attendance (Maehl, 2000, p. 115). In the 1970s, the U.S. Department of Education Fund for the Improvement of Postsecondary Education (FIPSE) provided significant grant support for adult learning programs to develop competency-based programs at institutions such as Alverno College, DePaul University School for New Learning, Empire State College, Regents College (now Excelsior College), Thomas Edison State College, and a number of others.

This focus on *learning* rather than on *time spent in a classroom* also led to advances in prior learning assessment (PLA) for college credit, including portfolio assessment, promulgated by the Council for Adult and Experiential Learning (CAEL), as well as standardized tests such as the College Level Examination Program (CLEP), first administered by the College Board in 1967, and the Regents External Examination Program, launched by the New York Board of Regents in the 1970s. (Excelsior College Exams for nursing are still used today, and Excelsior's exams in other areas are now called UExcel.)

While these assessment-based approaches to education were important at the time and continued for the next four decades, they largely existed on the fringes of the higher education system—at "adult-focused" institutions or in special

departments of continuing studies. These programs were highly visible and admired at places like the CAEL annual conference, for instance, but were virtually unheard of in mainstream higher education.

Today, however, CBE is increasingly in evidence outside of the adult learning bubble, with media coverage, congressional hearings, and an expansion—almost an explosion—of new program offerings across the country. Many of the newest programs are referred to as "direct assessment" programs since they rely on demonstrations of learning—not accumulated credit hours—to assess student progress toward degree completion. While students taking courses or studying on their own might accumulate credit hours along the way, it is not the sequence of courses or the number of credit hours that results in a degree or certificate. Rather, to graduate and earn a credential, students must demonstrate through competency-based assessments what they know and can do.

CBE's recent regeneration is in response to growing concerns over the last decade or more about both the quality and the cost of higher education. CBE's sharp focus on student competencies is designed to validate the quality of the degree, and its technology-based approach to learning have the potential to lower cost. Following this sketch of the history of competency-based education, this paper defines the unifying concepts shared by different CBE programs, describes current CBE models using the direct assessment approach, and examines the national policy context that could determine the extent to which these programs are able to go to scale.

Each institution designs its competency-based degree programs differently.

Unifying Concepts of Competency-Based Degree Programs

Each institution designs its competency-based degree programs differently. Some institutions, such as Alverno College and Brandman University, assess student competencies in the context of more traditional course- and credit-based systems. Others, such as Western Governors University (WGU) or Southern New Hampshire University (SNHU) College for America offer direct assessment programs in which student progress is defined primarily through competency-based assessments. While these models differ in important ways, the concepts or assumptions they have in common collectively define CBE's approach and purpose.

1. Competencies: An educated person is someone who does not just "know" but can also "do."

In the 21st century, book smarts are not enough. An educated person is one who not only has knowledge but can also put that knowledge to work. Many CBE programs use the term "competency" to reflect this combination of knowing and doing. While some programs use other terminology—such as "ability-based education" at Alverno College or "competences" at DePaul University School for New Learning—the underlying concept is the same. Students must go beyond mere knowledge acquisition and demonstrate that they can apply what they have learned in different situations.

As Clifford Adelman (2013) notes, "Competencies are not wish-lists: they are learned, enhanced, expanded; they mark empirical performance, and a competency statement either directly—or at a slant—posits a documented execution." Adelman himself prefers not to use terms like "abilities," since "one doesn't know a student has the 'ability' or 'capacity' to do something until the student actually does it, and the 'it' of the action is the core of competence."

2. Quality: Defining the competencies required for graduation helps ensure the quality of graduates.

At a time of much publicly voiced concern about the meaning and qualities of a college education, CBE programs are distinguished by (although not unique in) clearly defining and communicating what their graduates are required to know and be able to do. The process of defining competencies is one of the most important steps in the development of a CBE program, as the competencies required for a degree determine the focus of learning and assessment.

This process is generally an important and evolving role for faculty, but they need not start from scratch. In developing a competency framework for a degree program, CBE program designers can and do draw on the Association of American Colleges & Universities (AAC&U) Essential Learning Outcomes, for instance, or Lumina Foundation for Education Degree Qualifications Profile (DQP), a set of defined student learning outcomes at the associate, bachelor's, and master's degree levels, organized according to five broad areas of learning (see box below).

The DQP performance benchmarks are a good place to start because they focus on a student's application of knowledge and skills to a variety of situations. As Peter Ewell (2013) notes, the DQP avoids the use of verbs like "know," "appreciate," or "value," and instead uses action verbs "because this language points directly toward aspects of pedagogy that can actually be observed and toward the production of student artifacts that can actually be measured" (p. 12). According to Lumina President Jamie Merisotis (2011), "The DQP is not rigid or monolithic. It's not a one-size-fits-all document or process. In fact, no institution or organization can really use the DQP unless that organization crafts it specifically to meet its own unique circumstances. From the very beginning, it was *designed* to be institution-specific and flexible."

Brandman University provides a good example of an institution using and adapting an existing framework, like the DQP. For the past few years, Brandman has been working on developing and operationalizing a competency framework for its course- and credit-based bachelor's degree programs. The program devel-

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The DQP defines five areas of learning:

- ***Broad, integrative knowledge in areas such as English, mathematics, science, history, social sciences, languages, and the arts, as well as the creative integration of knowledge about science, culture and society with the students' specialized interests***
- ***Specialized knowledge in a specific discipline or field of study including that field's terminology, tools, technologies, principal features, core theories, and practices***
- ***Intellectual skills including fluencies in oral and written communications and quantitative applications***
- ***Applied learning through which students are able to demonstrate what they learn***
- ***Civic learning through which students understand diverse positions and develop responses to social, environmental, and economic challenges at the local, national, and global levels***

(Lumina Foundation for Education, 2011)

opers, Brandman faculty, started with the AAC&U and Lumina frameworks and made adjustments based on Brandman's mission and values. For example, they adopted the DQP competencies of Applied Learning and Integrated Learning, but chose Civic Engagement rather than the DQP's Civic Learning, and added Innovation and Creativity and Global Cultures in place of the DQP's Specialized Knowledge and Intellectual Skills. Brandman faculty developed rubrics for the competencies, drawing on and adapting the VALUE rubrics, as well as signature assignments embedded in core upper-division courses (Dodge, 2012). Then, when the competency framework is in place, faculty regularly review students' assessment outcomes in a curriculum design feedback loop for quality control, underscoring the value of this framework for ensuring quality.

3. Assessment: Competency-based assessment validates learning.

Assessment is the core of the entire CBE enterprise. This is because in CBE—unlike most traditional programs based on the credit hour—the institution must state with authority that its graduates have *demonstrated* the learning outcomes required for a degree. When originally developed, the credit-hour count—the number of hours faculty or students spend in course-related work or activity—was not intended as a measure of student learning but rather as an indicator of inputs. Yet institutions have often used the credit-hour count as a proxy for student learning (Klein-Collins, Sherman, & Soares, 2012; Laitinen, 2013; Shedd, 2003). In competency-based degree programs, in contrast, the amount of time faculty or students spend in learning activities is considered an insufficient measure of student learning. In CBE, competencies do not represent inputs but outcomes that student assessments can measure.

Consistent with concept #1, whenever possible, competency-based assessment must do more than just measure what a student knows. It must also determine whether the student can apply what he or she knows to real life programs and situations. Thus, a multiple-choice, standardized test is likely inadequate to assess most competencies. Instead, what are required are assignments that present tasks or situations that students will encounter in life and in the workplace. Ewell (2013) takes this a step further by suggesting that assessments should measure whether students are able to tackle "nonstandard, unscripted problems and questions" because colleges must "prepare learners to deal with the complex and uncertain, not just with the rote and routine" (p. 25).

4. Learning: Programs should focus on learning rather than on time spent in learning activities.

As noted above, CBE programs build from the idea that it is more important to focus on outcomes—what a student knows and can do—than on inputs like how the student learns it, where the student learns it, or how long the student takes to learn it. This break from inputs means that CBE programs are free to explore new ways to help students learn and new dimensions of what constitutes a "course." Some CBE programs are designed to allow students to learn in a variety of formats, sometimes drawing on open educational resources (including written materials, videos, recorded lectures, etc.) or hands-on, project-based learning. Many programs are also designed for students to progress at their own pace, rather than at a pace dictated by semesters or credit hours. This means that motivated and efficient students can complete their degrees in less time.

This shift away from a time-based, term-defined approach to education is important. As noted by Paul LeBlanc (2013), president of Southern New Hampshire University (SNHU), "The irony of the three-credit hour is that it fixes time while it leaves variable the actual learning." Within a credit-based system, the amount that is learned can vary a lot from student to student, depending on what courses they took, what instructors they had, or how much the students

Traditional Education vs. CBE

Time spent is fixed; amount learned is variable

vs.

Time spent is variable; amount learned is fixed.

themselves put into it. In contrast, says LeBlanc, "Competency-based education flips the relationship and says *let time be variable, but make learning well-defined, fixed, and non-negotiable.*" It is the learning that is important to students and the employers who would consider hiring them—not how long it took for the students to learn or that the learning took place in a semester-long course.

The SNHU 3-Year Honors Program in business administration provides one example of how a focus on competencies can prompt a rethinking of traditional time constraints in higher education (see box below). The curriculum, which was designed completely around the competencies required for the degree, is structured to help students master the competencies and, as a result, the program includes courses or course modules of varying length. Some modules are five weeks long, while others take seven or nine weeks to complete, depending on the topic to be covered. The goal is not to design enough learning activities to fill a 12-week term but rather to have students master the competencies. The program designers discovered that when the curriculum is designed around learning rather than credit-hour seat-time requirements, students can master all of the competencies required for graduation in three years rather than four.

The direct assessment approach to CBE goes even further to disrupt the semester-length course model in higher education. In programs at Northern Arizona University (NAU) Personalized Learning, Southern New Hampshire University (SNHU) College for America, and Western Governors University (WGU), students are essentially on a subscription plan in which they can take as many assessments as they choose during their subscription period. Fast learners—or students with considerable prior learning—can move quickly through the assessments. Students can set the pace, taking more time on material that is challenging or unfamiliar or less time on material they have already mastered. Similarly, programs at Alverno College and DePaul University School for New Learning (SNL) offer prior learning assessment to formally recognize the learning a student brings from his or her work and life experience, from the military, or from MOOCs. In these programs, students rarely need to sit through a course in subjects they already know. Evidence of learning is counted, not the exercise of sitting through a 12-week class.

5. Student-Centered: Programs should "meet students where they are."

Students come to postsecondary degree programs with a wide range of abilities, experiences, and previous learning. Well-designed CBE programs customize the learning activities of each student according to his or her needs. Students needing additional help with basic math and writing skills, for example, are steered to modules that help them build those skills before they move on to the activities of the degree program.

> ***"Competency-based education flips the relationship and says let time be variable, but make learning well-defined, fixed, and non-negotiable."***
>
> ***~LeBlanc***

SNHU 3-Year Honors Program

Southern New Hampshire University (SNHU) offers a three-year bachelor's degree in business administration that was designed from the bottom up around a set of competencies. In this program, classes are interdisciplinary "modules" rather than the traditional three-credit courses, and course content is integrated into learning experiences. Each semester, students participate in a week-long "integrating experience," which is a group project in which students use what they have learned to solve real business challenges. Through this program design, students master the same knowledge and skills in three years as they could in a four-year traditional program, saving both time and money. For more information, see http://www.snhu.edu/2220.asp

In addition, most CBE programs count what students have learned and can do as a result of experiences through other sources of learning. Currently, 40 percent of all U.S. undergraduates are age 25 or older (National Center for Education Statistics, 2012). Many of these students come to postsecondary degree programs with significant learning from their work and life experiences, and some of that learning is comparable to the learning that takes place in college. Some CBE programs recognize this learning through prior learning assessment (PLA) options (see sidebar). Other CBE programs, rather than recognizing prior learning through a separate PLA offering, allow students to use previously acquired learning to progress through competency assessments more quickly.

Another way CBE programs customize their programs to the students is by offering learning activities in a range of modes, including written materials, video lectures, hands-on activities, demonstrations, and games. Such offerings reflect the extensive research showing that people have different styles of learning, and that the learning mode that works well for one student may not work well for another.

In addition, in many of the direct assessment CBE models, faculty take on the role of a coach or mentor responsible for keeping tabs on how the student is progressing through the learning material and the assessments. When a student struggles, the coach may help the student access alternative learning materials or resources that are better suited to the student's learning style or that provide supplemental information helping the student to mastery.

Well-designed CBE programs customize the learning activities of each student according to his or her needs.

Prior Learning Assessment Within Competency-Based Programs

Prior learning is a term educators use to describe learning that a person acquires outside of a traditional academic environment. This learning may have been acquired through work experience, employer training programs, independent study, noncredit courses, volunteer or community service, travel, or noncollege courses or seminars.

Prior learning assessment (PLA) is the process by which an individual's experiential learning is assessed and evaluated for purposes of granting college credit, certification, or advanced standing toward further education or training. PLA methods include standardized exams, faculty-developed challenge exams, evaluation of noncredit instruction (e.g., military or corporate training), and portfolio assessment. Alverno College and DePaul University School for New Learning CBE programs offer many options for recognizing a student's prior and experiential learning, with many students encouraged to take advantage of portfolio assessment. Students prepare a portfolio of their learning, which is then assessed by faculty with appropriate subject matter expertise to determine a credit award or mastered competency.

Portfolio assessment and other methods of PLA cost considerably less than the tuition and fees associated with taking a course at a higher education institution. These assessment methods are founded on the principle that what a student knows and can do is more important than how the student learned it and how long it took to learn. Recent research on the link between PLA and better student outcomes includes a 2010 study by CAEL, Fueling the Race to Postsecondary Success, that examined the records of more than 62,000 students at 48 postsecondary institutions and found that adult students with PLA credit were two-and-a-half times more likely to graduate during the study period than adult students without PLA credit. (See http://www.cael.org/pdfs/PLA_Fueling-the-Race.***)***

The assessments themselves can be tools for personalizing students' learning experiences. In the NAU Personalized Learning Program, for example, students master the required competencies through online lessons, each of which covers a set of topics. When they start a lesson, students take a pretest that is a competency-based assessment. Students scoring 86 percent or better on that pretest can skip the lesson entirely and earn points toward those competencies. Students scoring below 86 percent proceed through that lesson's topics, skipping those they already know. Once completing all topics in the lesson, students take a posttest, again a competency-based assessment. (Kentucky Community & Technical College System Learn on Demand is structured similarly.)

Enacting CBE Concepts Through Direct Assessment

While institutions have many approaches to choose from to be competency-based, it is the direct assessment model of CBE that has been getting a lot of attention in the last year. The best-known direct assessment program is W**estern Governors University (WGU)**, which has been operating since the late 1990s. WGU offers online, competency-based degree programs in which students progress toward a postsecondary degree by passing a series of competency-based assessments. Current credential offerings include teaching licensure and graduate programs, as well as bachelor's and master's degrees in business, information technology, and nursing. WGU does not offer traditional courses. Instead, students learn through online resources curated by WGU faculty, working independently to learn what they need to successfully complete the assessments, with coaching and guidance from WGU faculty coaches.

WGU students are charged a flat rate of $2,890 for a six-month term, during which they may complete as many competency-based assessments as they can. Students coming to the program with prior learning—whether from the workplace, military, or massive open online courses (MOOCs)—can use what they already know and can do to complete the assessments more quickly. Several states, including Indiana, Texas, and Washington, have recently formed partnerships with WGU to offer this approach through their public postsecondary systems.

Although WGU has perhaps the highest visibility as an example of a direct assessment program, other programs have used a form of direct assessment since the 1970s. **DePaul University School for New Learning (SNL)** offers degrees based on 50 competence statements. Each student's curriculum is a unique combination of prior transfer coursework, SNL courses designed to meet specific competencies, documented college-level learning from experience (often using portfolio assessment), and independent study. Students progress toward a degree at SNL by demonstrating each of the competencies, most often through written narratives as part of their coursework or prior learning portfolios. The associate degree in nursing program at **Excelsior College School of Nursing**, meanwhile, is designed for individuals transitioning from an LPN/LVN or other professions in a clinically oriented health care discipline (e.g., certain classifications of military service corpsmen and paramedics). Students complete the general education component of the curriculum through campus-based or online courses or through credit-by-examination. Students engage in the nursing component of the curriculum by successfully completing a series of assessments. The assessments include computer-delivered nursing theory examinations as well as tests of clinical performance in a simulation lab and with real patients. (See additional descriptions of these and other CBE programs in Klein-Collins, 2012).

The past few years have seen the development of several new CBE programs offering still more variations on the direct assessment model:

While institutions have many approaches to choose from to be competency-based, it is the direct assessment model of CBE that has been getting a lot of attention in the last year.

- The Kentucky Community and Technical College System (KCTCS) offers a range of online competency-based programs through its **Learn on Demand** initiative, including two-year degrees in business, IT, and nursing; certificate programs; targeted skill training; and college readiness programs. Learn on Demand, which began enrolling students in 2008, offers online learning modules mapped to competencies. These modules are designed to be completed within three to five weeks, but students have the option to complete them more quickly. The assessment process is similar to that at NAU in that it adapts the learning activities based on what the student already knows and can do.

- The Northern Arizona University (NAU) **Personalized Learning** program offers bachelor's degrees in liberal arts, computer information technology, and small business administration. Students learn through online courses, or lessons, that map to the program's competency framework. The program's process of assessment is designed to adjust the learning modules to an individual student's learning needs, and students with prior learning can advance quickly out of modules and topics they have already mastered. This program, launched in the spring of 2013, charges students $2,500 for a six-month term.

- In early 2013, SNHU launched **College for America**, a new associate degree program designed around 120 competencies. Students learn through online resources curated by the faculty, and they demonstrate their mastery of the competencies through the completion of tasks or projects assessed by faculty. If students are not successful in their first attempt with an assessment, they continue to work on that competency until they achieve it. Students progress through the program at their own pace and pay $2,500 per year.

- In the **Westminster College** project-based bachelor's degree in business administration and MBA programs, students learn independently through resources they access online. They progress toward a degree by completing a series of projects that require them to demonstrate mastery of different competencies. Students progress at their own pace through the programs. The bachelor's-level program is designed for students coming in with an associate degree or equivalent. In both the bachelor's- and the master's-level programs, most learning and assessment is completed online. In the MBA program, students spend two days on campus each semester in workshops.

Several other institutions have already developed, or are in the process of developing, direct assessment degree programs, including Brandman University, Capella University (which has long defined its curriculum in terms of competencies), and the University of Wisconsin Extension.

The past few years have seen the development of several new CBE programs.

The Implications of a Focus on Assessment

As noted throughout this paper, CBE models differ from each other in many ways, but one important commonality is that each relies heavily on assessment as the determinant of student academic success and, in the case of direct assessment programs, as the justification for awarding postsecondary degrees or credentials. With so much depending on assessment, it is critical that the assessments be of the highest quality and that the assessment method be appropriate for what it measures.

As noted above (Concept #3), assessments are competency-based when they are focused not just on what students know but also on what students can do with what they know. Yet clearly there are multiple levels of competency around which assessments should be based. At lower levels of competence, multiple-choice

and other tests of objective learning may be appropriate. At higher levels of competence, however, getting at more complex and analytical thinking requires different kinds of assessment such as student narratives, demonstrations, simulations, or performance-based assignments.

Students at SNHU College for America demonstrate mastery of competencies by completing projects that are "authentic tasks that enable students to learn by doing." Students choose a long series of simple projects (e.g., writing a paragraph with supporting evidence for a claim) or a smaller number of more complex projects (e.g., developing a business memo that evaluates the choice between two vendors) (Share, 2013).

Other programs, such as DePaul University School for New Learning, utilize written essays or portfolios in which students reflect on what they have learned, the evidence of that learning, and how that learning can be applied to real life experiences. Similarly, the Iron Range Engineering program (see box) requires students to describe competencies they have demonstrated in industry-based projects in a portfolio that includes evidence of their work and their reflections on it.

The above examples are just a taste of the kinds of assessments currently being used in CBE programs. A lot of room still remains to grow the sophistication of competency-based assessment. For example, one could envision greater use of technology-based simulations similar to those produced in the gaming industry. In addition, given the reliance of these programs on high quality assessment, the scalability of CBE may depend on institutions and accreditors agreeing on, and adhering to, standards for good practice in competency-based assessment, including standards regarding the evaluation of an assessment's validity and reliability.

The quality of assessment is not the only consideration of CBE programs. When and how assessment takes place also varies from program to program. For example, in programs in which students take more traditional courses (whether online or face to face), such as those at Alverno College and Brandman Univer-

A lot of room still remains to grow the sophistication of competency-based assessment.

Iron Range Engineering Program

Iron Range Engineering is a bachelor's in engineering program that is a collaboration between Itasca Community College in Grand Rapids, MN, Minnesota State University, Mankato (MSU) and the Iron Range industry in northeastern Minnesota. The third and fourth years of a bachelor's program, this program is designed around a three-part competency framework: technical skills, professional skills, and project management skills. Students work in industry during those two years and, together with faculty, develop projects that will help them demonstrate the competencies required for the degree. For each competency, the student must develop a portfolio in which they demonstrate their technical competencies. The portfolio is a form of self-assessment in which students articulate the learning outcomes and how they acquired them in their industry experiences. Students must also take part in oral exams with faculty to discuss the portfolios and how they have met the competencies. (See http://www.ire.mnscu.edu/)

sity, competency-based assessments are embedded into the curriculum. Being deliberate in the scheduling of where, in a particular set of courses, a competency is covered and assessed is a process that Ewell (2013) calls "curriculum mapping." When designing its three-year, competency-based bachelor's degree program, for example, SNHU undertook a series of curriculum mapping exercises that helped the program designers determine how and when students engaged with different subjects as well as when student learning would be assessed. (This degree program is described further on the following page. A detailed description of the curriculum mapping process can be found in Bradley, Seidman, & Painchaud, 2012). In other models, the sequence of the assessments may be less important. In the NAU Personalized Learning program, for example, students can take the lessons/assessments in any order they choose, allowing them to tackle first—and get out of the way quickly—the areas in which they are already proficient.

The Way Forward

The expansion in the past few years of new programs offering competency-based degrees provides an opportunity for the higher education community to rethink a range of issues including how students learn, how faculty best add value to the learning process, and what a college degree means in terms of student learning. These programs present several challenges as well. Since 2012, Lumina Foundation for Education, the Bill and Melinda Gates Foundation, the Kresge Foundation, and the Joyce Foundation have sponsored and hosted convenings of institutions to discuss how to address the various challenges in taking CBE models to a larger scale. At a convening (attended by the author) in September 2012, institutions either offering or developing CBE programs identified several of these challenges:

- establishing federal financial aid eligibility
- building faculty support
- identifying principles of good practice
- managing expectations about degree completion
- developing a common language or narrative for communication purposes
- working with regional accrediting bodies
- gaining a better understanding of the kinds of assessments being used
- identifying standard data collection needs so that off-the-shelf back office systems might be developed

A similar list was generated at a February 2013 national summit, "Assessing Outcomes and Competencies," hosted by the Council for Adult and Experiential Learning (CAEL, 2013) and the Excelsior College Center for Educational Measurement. Two topics that have emerged as priorities out of these recent convenings and conversations have been federal financial aid eligibility and the role of accreditors.

Addressing Financial Aid and the Credit Hour

The foundation-sponsored group of institutions pioneering CBE programs has given top priority to the topic of establishing federal financial aid eligibility. A major stumbling block for programs designed around assessments is the credit hour—for decades the unit around which financial aid awards have been established.

The solution for many—including KCTCS Learn on Demand, NAU Personalized Learning, SNHU College for America, WGU, and others—has been to develop a process for converting their competency frameworks to credit hours. This not only helps with financial aid eligibility but also allows students greater ease in transferring in and out of the programs.

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Another solution is an initiative to redefine the credit hour recently announced by the Carnegie Foundation for the Advancement of Teaching, which originally developed the concept of the credit hour, or Carnegie Unit, early in the last century *(Fain, 2012). In an interview with the New England Journal of Higher Education (DiSalvo, 2013)*, Carnegie Foundation President Anthony Bryk explained that this new initiative is a response to calls within higher education for "new measures of student progress tied more closely to what individual students know, measures that can more effectively than the current Carnegie Unit strengthen teaching and learning." Bryk also observed that one way to shift from a time-based system of measuring student progress would be to "measure their mastery of material regardless of the where and when they achieve that mastery."

Redefining the credit hour is not easy to do.

Redefining the credit hour is not easy to do. The U.S. Department of Education made an attempt in 2010, providing this definition for a credit hour:

> […] an amount of work represented in intended learning outcomes and verified by evidence of student achievement that is an institutionally established equivalency that is not less than one hour of classroom or direct faculty instruction and a minimum of two hours of out of class work for each week for approximately fifteen weeks for one semester […] or the equivalent amount of work over a different amount of time. (National Archives & Records Administration, 2010)

This new definition proved to be confusing, requiring the department to clarify in a "Dear Colleague" letter that the new definition was, in fact, "completely consistent with innovative practices such as online education, competency-based credit, and academic activities that do not rely on 'seat time'" (Ochoa, 2011). Despite this clarification, confusion persisted about how a competency-based, assessment-based program might be eligible for federal financial aid.

Ways forward do exist, however. Two of them are articulated by Amy Laitinen (2013) in *Cracking the Credit Hour*. First, institutions can work with the Department of Education's new definition of the credit hour, which acknowledges that the credit hour need not be based solely on seat time. Second, the department could invite institutions to be part of "experimental sites" in which competency-based, assessment-based financial aid policies could be tested to see how they work and how to mitigate fraud and abuse under such policies.

A third way forward is through a provision that was the initial focus of the foundation-sponsored group of CBE institutions. In this provision, the Department of Education would allow CBE programs to use direct assessment as a measure of student learning in lieu of the credit hour for financial aid purposes. In October 2012, a subgroup of CBE institutions attended an "innovation summit" sponsored by the U.S. Department of Education. At that meeting, SNHU College for America submitted the first-ever application to operate under the direct assessment provision, and in April 2013 the department approved that application. Several other programs have submitted applications since then or are currently preparing them.

The foundation-sponsored CBE group is now working together, and with accreditors, to define the details for how programs will operate under the direct assessment provision. One challenge for this group, and for their accreditors, is that the Department of Education's definition of *a direct assessment program* is unclear in its practical application. The Higher Education Act defines *a direct assessment program* as "an instructional program that, in lieu of credit hours or clock hours as a measure of student learning, utilizes direct assessment of student learning, or

recognizes the direct assessment of student learning by others" (Section 668.10). In practice, however, as noted above, many direct assessment programs establish some relationship to the credit hour—whether by accepting a transfer student's credit hours from another institution or by converting competencies to credit hours for students transferring to other institutions. In some cases, this kind of credit hour/competency conversion has allowed an institution to qualify for financial aid under the Department of Education's normal rules (which is the case for NAU and WGU), while other programs have qualified for financial aid under the department's "direct assessment" provision (to date, SNHU's College for America and the Capella FlexPath program). Exactly which program structures require this special "direct assessment" designation from the department is not yet clearly understood within the CBE community.

Understanding the Role of Accreditors

A second high-priority topic for the foundation-sponsored CBE group is working with accreditors. This topic is closely related to the financial aid topic since the Department of Education requires that programs first receive approval from their regional accreditors before applying for the direct assessment provision. The CBE group has reached out to accreditors to involve them in discussions about how to support CBE programs. A meeting in April 2013, for example, included representatives from the CBE institutions, the Council for Higher Education Accreditation, regional accreditors, the U.S. Department of Education, the White House, and several state higher education officers. The purposes of the meeting included building greater trust among the stakeholders and creating an opportunity for "solutions-oriented dialogue in support of responsible experimentation with competency-based design" (Enabling Responsible Innovation, 2013, p. 1). At the meeting, the accreditors expressed the view that the Department of Education's criteria for direct assessment approval needed to be clearer if accreditors are expected to have a role in the approval process. In response, the department promised to have better communication with accreditors on the topic. Notably, the department also invited the CBE institutions to submit their ideas for experimental sites.

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Several regional accreditors have demonstrated a willingness to participate in discussions about competency-based degrees and assessment, and even, in some instances, to move the process forward. For example, the Higher Learning Commission (HLC), the New England Association of Schools and Colleges (NEASC), and the Western Association of Schools and Colleges (WASC) have all approved select CBE programs so that they can apply to the U.S. Department of Education to operate under the direct assessment provision. In addition, HLC is overseeing a pilot of CBE programs at four institutions: Capella University, Northern Arizona University, the University of Wisconsin Colleges (a system of two-year campuses), and the University of Wisconsin at Milwaukee (Fain, 2013, April 17). Meanwhile, WASC (2013) has provided its member colleges and universities a template designed to "frame a proposal for awarding an academic degree that is based on measurable learning outcomes (competencies) rather than on the successful accumulation of credits (often referenced as "seat time")."

The role of accreditors may ultimately expand beyond the overall approval of competency-based degree programs, however. In a 2013 article, SNHU President Paul LeBlanc considered this issue and noted that CBE is opening up many possibilities for new delivery models in which both teaching and assessment can be disaggregated from the credentialing institution. In such scenarios, in which a student accesses learning activities provided outside of the institution and in which assessment is the basis for measuring progress to degree, LeBlanc wondered, "Will [accreditors] accredit only institutions, or does accreditation

have to be disaggregated too? Might there be multiple forms of accreditation: for institutions, for programs, for courses, for MOOCs, for badges, and so on? At what level of granularity?" These are questions that accreditors will likely be working on as they consider their role in CBE going forward.

Conclusion

The number of competency-based postsecondary degree programs is increasing, largely prompted by concerns about higher education's quality and cost. The approaches that institutions are taking with CBE programs fall mostly into one of three categories:

- embedding competency-based assessments into a traditional curriculum;
- redesigning the curriculum entirely around competencies; and
- redesigning the credentialing process around competency-based assessments, also known as direct assessment.

The emerging models of direct assessment programs benefit greatly from and are made possible by technology advances that support online learning, adaptive and self-paced learning options, open educational resources, advising and coaching at a distance, and web-based student services and learning management tools.

Although the CBE concept has existed at some institutions for more than 40 years and the direct assessment approach has been operating for more than a decade, CBE degree programs are still considered new within higher education. Questions remain about how to ensure quality in these programs, how to price them, how best to ensure that students in them have access to effective learning experiences, and how they interact with existing structures such as financial aid and accreditation. With the growing interest and support of foundations, and perhaps also federal and state governments, we are sure to see more studies of these programs and efforts to answer questions about student learning, quality, cost, and the roles of faculty and accreditors.

While efforts may increase to expand the acceptance of CBE approaches within mainstream higher education, we also will likely see some resistance to those efforts. Concerns have been raised within "traditional" academe, for instance, about how CBE programs (especially those using the direct assessment approach) differ so radically from the four-year, classroom-based, liberal arts degree programs that so many of us have heretofore understood as a "college education" (see, for example, Slayton, 2013). Meanwhile, CBE programs are meeting a clear need that may be uniquely of our time—with technology making so many learning opportunities accessible at low cost and with students, more mobile than ever, taking courses from multiple institutions, learning through multiple avenues, and deserving to have that learning count toward a postsecondary degree or other credential.

The central concept behind CBE programs—that it is more important to focus on what students know and can do than on how they learned it or how long they took to learn it—also resonates with the public. In a national poll conducted by Lumina and Gallup (2013), 87 percent of respondents said that students should be able to receive college credit for knowledge and skills acquired outside the classroom; 75 percent said they would be more likely to enroll in postsecondary education if they could receive credit for what they already know; and 70 percent said that if a student demonstrates mastery of material in less time, the student should get credit for a course without completing the full session.

The number of competency-based postsecondary degree programs is increasing, largely prompted by concerns about higher education's quality and cost.

The concepts that define CBE programs—that students must be able to apply their knowledge and skills in real world settings, that validating student mastery of competencies through assessment helps ensure degree quality, and that what students know and can do are more important than how they learned it—are not a threat to higher education as we know it. On the contrary, as we learn more about students' experiences in CBE programs and how best to ensure high standards in the design and administration of these programs, these concepts can serve as guideposts in navigating the way to broader acceptance of competency-based programs in higher education.

The concepts that define CBE programs—that students must be able to apply their knowledge and skills in real world settings, that validating student mastery of competencies through assessment helps ensure degree quality, and that what students know and can do are more important than how they learned it—are not a threat to higher education as we know it.

References

Adelman, C. (2013, June 6). Competence, technology, and their discontents. *Inside Higher Ed*. Retrieved from http://www.insidehighered.com/views/2013/06/06/higher-ed-discovers-competency-again-essay

Association of American Colleges and Universities (AAC&U). (n.d.). *VALUE: Valid assessment of learning in undergraduate education.* Washington, DC: Author. Retrieved from www.aacu.org/value/

Bradley, M. J., Seidman, R. H., & Painchaud, S. R. (2012). S*aving higher education: The integrated, competency-based three-year bachelor's degree program*. San Francisco, CA: Jossey-Bass.

Brock, T. (2010, spring). Young adults and higher education: Barriers and breakthroughs to success (Issue: Transition to adulthood). *The Future of Children,* 20(1), 109–132. Retrieved from http://futureofchildren.org/futureofchildren/publications/docs/20_01_06.pdf

College-Level Examination Program (CLEP). (n.d.). *Research and statistics*. Retrieved from http://clep.collegeboard.org/research/statistics

Council for Adult and Experiential Learning (CAEL). (2013). Assessing outcomes and competencies: A national summit for innovators (Competency-Based Education). *CAEL Forum and News.*

DiSalvio, P. (2013, April 29). *New Directions for Higher Education: Q&A with Carnegie Foundation President Anthony Bryk about the credit hour.* Retrieved from http://www.nebhe.org/thejournal/new-directions-for-higher-education-interview-with-carnegie-foundation-president-anthony-bryk-about-the-credit-hour/

Dodge, L. (2012, January). *Brandman University adopts the Degree Qualifications Profile.* Retrieved from https://www.wascsenior.org/files/Brandman%20University%20Adopts%20the%20Degree%20Qualification%20Profile_January%2031%202012_final.pdf

Enabling responsible innovation: Policy options for competency-based education (2013, April 22-23). Unpublished convening summary. Washington, DC.

Ewell, P. (2013, January). *The Lumina Degree Qualifications Profile (DQP): Implications for assessment* (Occasional Paper No. 16). Urbana, IL: University of Illinois and Indiana University, National Institute for Learning Outcomes Assessment.

Fain, P. (2012, December 5). More cracks in the credit hour. *Inside Higher Ed.*

Fain, P. (2013, April 17). Big disruptions, big questions. *Inside Higher Ed*. Retrieved from http://www.insidehighered.com/news/2013/04/17/competency-based-education-heats-new-entrants

Hart Research Associates. (2010). *Raising the bar: Employers' views on college learning in the wake of the economic downturn.* A survey among employers conducted on behalf of the Association of American Colleges and Universities. Retrieved from http://www.aacu.org/leap/documents/2009_EmployerSurvey.pdf

Hart Research Associates. (2013, April). *It takes more than a major: Employer priorities for college learning and student success.* An online survey among employers conducted on behalf of the Association of American Colleges and Universities. Retrieved from http://www.aacu.org/leap/documents/2013_EmployerSurvey.pdf

Higher Education Act (HEA) of 1965, § 668.10 (2006) [FR 45693, Aug. 9, 2006, as amended at 71 FR 64397, Nov. 1, 2006; 72 FR 62026, Nov. 1, 2007.]

Klein-Collins, R. (2012). *Competency-based degree programs in the U.S. postsecondary credentials for measurable student learning and performance.* Chicago, IL: Council for Adult and Experiential Learning. Retrieved from http://www.cael.org/pdfs/2012_CompetencyBasedPrograms

Klein-Collins, R. (2010, March). *Fueling the race to postsecondary success: A 48-institution study of prior learning assessment and adult student outcomes.* Chicago, IL: Council for Adult and Experiential Learning. Retrieved from http://www.cael.org/pdfs/PLA_Fueling-the-Race

Klein-Collins, R., Sherman, A., & Soares, L. (2010, October). *Degree completion beyond institutional borders: Responding to the new reality of mobile and nontraditional learners.* Washington, DC; Chicago, IL: Center for American Progress and Council for Adult and Experiential Learning.

Laitinen, A. (2012, September). *Cracking the credit hour.* New York, NY: New America Foundation and Education Sector.

LeBlanc, P. (2013, March/April). Thinking about accreditation in a rapidly changing world. *EDUCAUSE Review*, 28(2).

Lumina Foundation for Education. (2011). *The Degree Qualifications Profile: Defining degrees: A new direction for American higher education to be tested and developed in partnership with faculty, students, leaders, and stakeholders*. Indianapolis, IN: Author.

Lumina Foundation for Education & Gallup, Inc. (2013, February 5). *America's call for higher education redesign: The 2012 Lumina Foundation study of the American public's opinion on higher education*. Indianapolis, IN; Washington, DC: Authors.

Maehl, W. H. (2000). *Lifelong learning at its best: Innovative practices in adult credit programs*. San Francisco, CA: Jossey-Bass.

Merisotis, J. P. (2011, December 16). *Defining quality in higher education with the DQP* (Speech to the National Advisory Committee on Institutional Quality and Integrity). Retrieved from http://www.luminafoundation.org/about_us/president/speeches/2011-12-16.html.

National Archives and Records Administration. (2010, October 29). Department of Education: Program integrity issues. *Federal Register*, 75(209). Retrieved from http://www.gpo.gov/fdsys/pkg/FR-2010-10-29/pdf/2010-26531.pdf#page=116

National Center for Education Statistics, U. S. Department of Education. (2012). *Digest of education statistics 2011* (NCES 2012-001), Chapter 3, Table 200. Washington, DC: Author. Retrieved from http://nces.ed.gov/programs/digest/d11/tables/dt11_200.asp?referrer=report

Ochoa, E. M. (2011, March 29). *Guidance to institutions and accrediting agencies regarding a credit hour as defined in the final regulations published on October 29, 2010*. Washington, DC: U.S. Department of Education. Retrieved from http://ifap.ed.gov/dpcletters/GEN1106.html

Share, J. (2013, forthcoming). College for America: A new approach for a new workforce that is accessible, affordable, and relevant (Competency-Based Education). *CAEL Forum and News*.

Shedd, J. M. (2003). The history of the student credit hour. *New Directions for Higher Education*, 2003(122), 5–12.

Slayton, A. (2013, August 8). Democratic limits of "customized." *Inside Higher Ed*. Retrieved from http://www.insidehighered.com/views/2013/08/08/competency-based-education-puts-efficiency-learning-essay

Southern New Hampshire University (SNHU). (n.d.). *3-year honors program in business (BS)*. Retrieved from http://www.snhu.edu/2220.asp

Western Association of Schools and Colleges (WASC). (2013). *Proposal template for competency-based degree programs*. Retrieved from https://www.livetext.com/doc/8405569?print=1

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NILOA Mission

NILOA's primary objective is to discover and disseminate ways that academic programs and institutions can productively use assessment data internally to inform and strengthen undergraduate education, and externally to communicate with policy makers, families and other stakeholders.

NILOA Occasional Paper Series

NILOA Occasional Papers are commissioned to examine contemporary issues that will inform the academic community of the current state-of-the art of assessing learning outcomes in American higher education. The authors are asked to write for a general audience in order to provide comprehensive, accurate information about how institutions and other organizations can become more proficient at assessing and reporting student learning outcomes for the purposes of improving student learning and responsibly fulfilling expectations for transparency and accountability to policy makers and other external audiences.

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About NILOA

- The National Institute for Learning Outcomes Assessment (NILOA) was established in December 2008.
- NILOA is co-located at the University of Illinois and Indiana University.
- The NILOA website contains free assessment resources and can be found at http://www.learningoutcomesassessment.org/.
- The NILOA research team has scanned institutional websites, surveyed chief academic officers, and commissioned a series of occasional papers.
- One of the co-principal NILOA investigators, George Kuh, founded the National Survey for Student Engagement (NSSE).
- The other co-principal investigator for NILOA, Stanley Ikenberry, was president of the University of Illinois from 1979 to 1995 and of the American Council of Education from 1996 to 2001.
- Peter Ewell joined NILOA as a senior scholar in November 2009.

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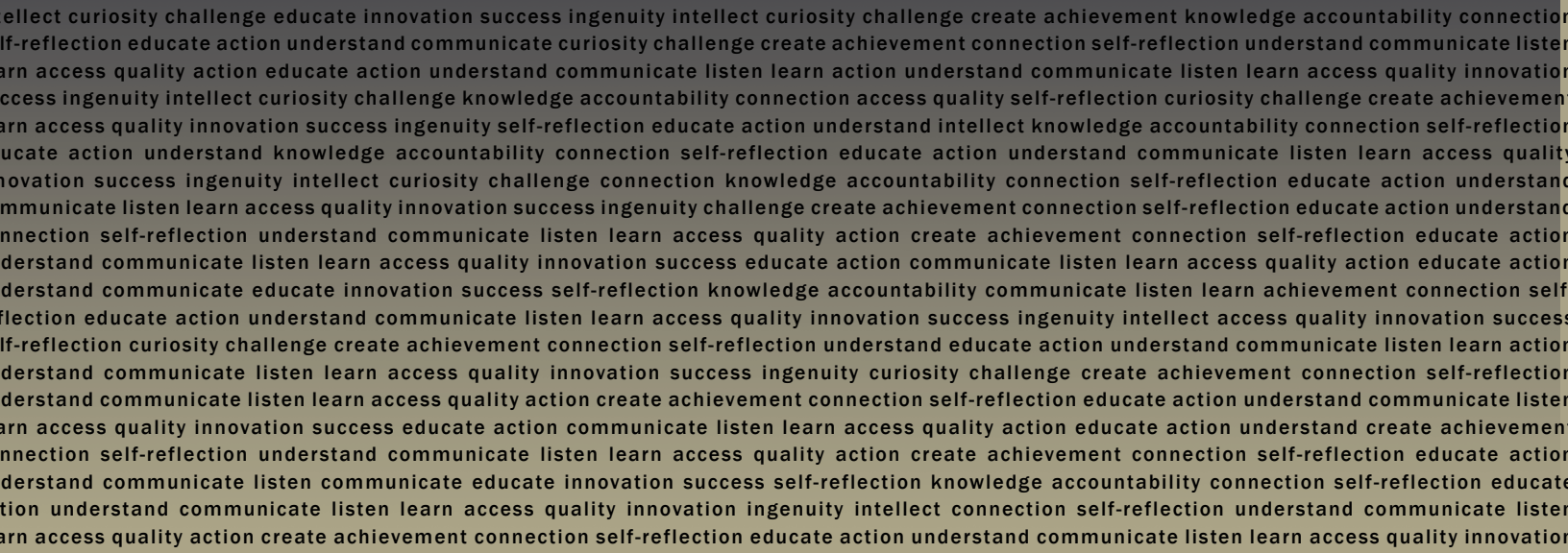

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