

ellucian® BRAINSTORM™

CBE: Meeting students where they are

TECHNIQUES FOR DEVELOPING A MODERN COMPETENCY-BASED EDUCATION MODEL AT YOUR INSTITUTION

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Introduction

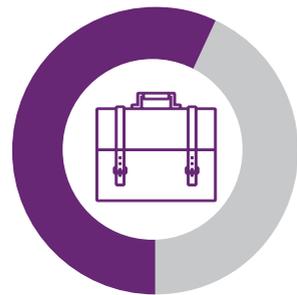
According to the U.S. Census Bureau, there are 36 million underserved adults with some college credits who are looking to accelerate their careers. By 2020, more than 500,000 students will be enrolled in a competency-based education (CBE) program.

That's a significant wave of students looking for self-paced, on-demand education, which institutions can provide via CBE. And for many of these individuals, the so-called "traditional" route to a degree (i.e. "seat time" in a lecture hall) just won't cut it. They have jobs, families, and community obligations. And many students consider

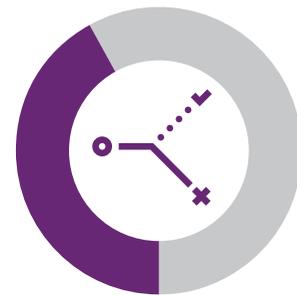
competency-based education a flexible option to complete their degrees faster, with less debt. Think of competency-based education as "made for me" education for each and every student. With CBE, students can focus only on learning what they don't yet know.

But how does a college or university build a CBE program to address this growing demand, and do so quickly and effectively while leveraging the institution's strengths? The tips and techniques outlined in this eBook can help any institution get a CBE program off the ground, or boost an already-existing program to the next level.

What do today's students want?



57%
of adults 25-44 want
postsecondary ed who
don't have it



42%
want self-paced
instruction



40%
want to progress faster
to get their degree

Source: Eduventures, <http://www.eduventures.com/2015/02/mapping-the-competency-based-education-universe/>; Eduventures (2013); American Enterprise Institute, Lumina Foundation (2015), Ellucian Academic Services



Becoming competent in competency-based education

First, what is CBE? There is no standard definition, but broadly speaking, it's a teaching and learning approach that emphasizes explicit learning outcomes that can be assessed in a flexible environment and time frame. It might involve a combination of online, on-campus, or in-practice content exploration and assessment validation. Regardless, students progress by demonstrating mastery of content, as opposed to spending idle time on content they already know. It's a method ideally suited for adult learners who come to formal education with a variety of experiences and knowledge.

Although a handful of institutions have had some kind of CBE program for some time—usually in various forms long before the advent of the Internet—this is largely uncharted waters for higher ed. With the evolution of powerful technological tools (cloud-based software, nearly ubiquitous Internet access, and learning analytics), institutions can implement a competency-based education program that could potentially reach millions of students who would not otherwise have access to a quality education.

The trend toward CBE is rising. Today, more than 150 institutions have some kind of CBE program, while as many as 400 others have programs in development. And by 2020, there are expected to be 750 or more institutions offering such programs.

Fain, P. (2015, September 10). Keeping up with competency. *Inside Higher Ed*. Retrieved from <https://www.insidehighered.com>.

Students are demanding these programs and it's wise for any institution to consider implementing competency-based education to serve the needs of these students. It's also imperative to get faculty involved when developing a CBE program, since they can help guide the plan to create measurable assessments to test student competency.

1. Assess. Take a look at your current academic structure. As a part of the accreditation process, institutions must review programs—such as course descriptions, objectives, and outcomes. This review process is an ideal time to examine your institution's offerings through the lens of CBE. Many programs at your institution may be retooled for CBE—there's no need to reinvent the wheel. With careful planning and strategizing, it's possible to take what your institution already offers and reconfigure those programs for CBE students.

2. Architect. Creating a CBE program requires outcomes-first design, starting with the competencies to master. Think of this as the framework of a house: it's the skeleton of the whole structure, and without it, everything collapses under its own weight. CBE programs must be well constructed, designed around the core competencies that students need to know for each discipline. Identify what must students know to demonstrate knowledge—how can the students perform mastery?



3. Assemble. Continuing with the home-building analogy, this is where you would hang the sheetrock, install electrical work and lighting. This step brings it all together. And chances are, you might have some of these materials already. In this phase, institutions must compile or create the learner-centered materials and assessment tools for CBE students and faculty. Which materials—audio/visual, printed, etc.—will best help students further demonstrate what they know? Which of these are necessary to assess competencies? What current materials can be reused or retooled, and what needs to be built from scratch?



CBE: What it does

- ✓ **Is self-paced**
- ✓ **Available on-demand**
- ✓ **Gives credit for prior learning**
- ✓ **Promotes significant collaboration**

The 5 pillars of CBE: What it needs

1

Explicit learning outcomes with respect to the required knowledge, skills, and abilities of a discipline

2

A flexible time frame to master these skills

3

A variety of instructional activities to facilitate learning

4

Criterion-referenced assessment of the required outcomes

5

Adaptable content and assessments to ensure optimum learner guidance



Designing with the end in mind

Think of education as a map: students need clear directions to get to their chosen destination, and the purpose of a well-designed CBE program is to help students get to where they want to go. But how do we do that? For a CBE program to function, it should be designed *outcomes first*. That is, we start with the end in mind—the destination—by incorporating the critical competencies necessary. What are students able to demonstrate after they complete their curricular pathway?

1. Identify desired results. First, establish learning goals for the competency. And what's the best way to go about that? "I always tie the desired result to a well-recognized and accepted industry standard when possible," says Mitch Seal, dean of the School of Online Learning at the University of the Incarnate Word, which is participating in the Ellucian Brainstorm™ beta program. What should students know, critically evaluate, and be able to do? This is where you should draw the distinction between what students must know to demonstrate competency or mastery, versus what would be nice for them to know. In order to narrow the focus for the content—and increase effectiveness—it's best to focus on those elements that they must know to demonstrate competency.

2. Determine acceptable evidence. Think about how you will decide if students are starting to master the knowledge and skills you want them to gain. What will you accept as evidence that students are making progress toward the learning goals of the course?

3. Plan learning experiences and instruction. This is where you design instructional strategies and activities. During this phase of planning, you pull together your instructional exercises and craft them so that students deeply understand the material. You don't want them to merely regurgitate memorized information. "Instruction is not pouring information into the minds of students," notes Seal. "Rather, it involves assisting students to help each other fill their heads—and more importantly their hearts—with the competence that I have inspired them to pursue. When I can do that, students tend to exceed all expectations in terms of what was learned and the rate at which it was learned."

That last point is crucial, and here's why: CBE programs are "outcomes based." That means everything hinges upon the student demonstrating what he or she knows. Further, this must be measurable. Creating authentic assessments that facilitate a student's ability to demonstrate the acquisition of new knowledge through a self-paced model is imperative in a competency based model. It's impossible to quantify whether a student "understands" the subject matter, so it's critical for a CBE program to measure and quantify what that student knows in order to progress to the next milestone or level and, eventually, a certificate or degree. Measuring knowledge and competency at each stage is vital.

Traditional vs. CBE programs: a comparison



	CLASSROOM/ONLINE	COMPETENCY BASED
Pace	Fixed for all	Student determined
Faculty:student ratio	1: to many	1:1
Learning path	Standard for all	Customized per student
Learning measurement	Time and grade	Demonstrated mastery
Curriculum design	Static	Continuous
Time	Constant	Variable
Orientation	Teacher-centered	Student-centered

9 steps to funding your CBE program

The trend is clear: competency-based education is taking off, with more institutions developing programs every year. Competition for grants is increasing, so it's vital for any new, nascent, or well-established CBE program to secure adequate funding. How does a CBE program obtain funding through federal sources or foundations? What's the best approach—and what are the pitfalls to avoid?

 **Familiarize yourself with the grant process and serve on a grant planning team.** This may seem obvious, but it's imperative to learn about the grants process and how it works. By serving on a grant planning team at your institution, you'll quickly learn the basics, including which grants are being pursued and where there may be opportunities for CBE funding. Further, you'll pick up on what has worked in the past and what hasn't, potentially saving yourself some time and effort down the road.

 **Align your CBE goals with the institution's plan.** If your CBE program appears "tacked on" to the institution's mission, it faces an uphill battle for funding. A CBE program should be properly integrated into the institution's plan and goals—that's how it obtains buy-in from internal and external stakeholders, including potential funding sources.

 **Link your CBE strategy to proper outcomes.** Funders are looking to be matched with projects and programs that support their goals. Whether it is college readiness, student success, or innovative education strategies, for example, a funding source's outcome and objectives should match your CBE program's outcome



Federal funding sources

-  **National Science Foundation**
-  **U.S. Department of Education**
-  **U.S. Department of Agriculture**
-  **U. S. Department of Labor, Employment & Training Administration**

Foundation funding sources

-  **Foundation Center**
-  **Philanthropy News Digest**
-  **Guidestar**

and objectives. How will your CBE program partner with the funder to achieve a common goal?

 **Data, data, data.** Show how you will measure success—or, if your program is already established—how you have measured success in the past. Funding sources will require data and information to track how your program is performing—i.e. how effective their investment is in your program. Show how you plan to measure progress, and what the metrics are.

 **Follow directions.** Your grant proposal simply must adhere to the funder’s requirements. You can’t obtain funding from a source that isn’t a good fit for your program, and if you fail to follow the grant submission guidelines, your proposal will likely be rejected. Know who the potential funding source is, what they seek, and how they want their submissions prepared.

 **Do the research, times two.** First, know what research supports CBE as a viable strategy for delivering instruction and increasing student success. You will likely have to include evidence that your CBE vision will, in fact, lead to student success and completion. Second, know which funders are currently including or are considering including CBE as an allowed activity under their programs. For example, the U.S. Department of Labor’s Employment and Training Administration recently released two program competitions (TechHire and Strengthening Working Families) that include CBE as a strategy for helping students succeed and for reducing time to completion.

Current CBE funding trends include STEM and workforce training, as well as targeted populations such as low-income and first-generation students.

 **Recognize trends.** There are certain trends in CBE grant funding that may provide opportunities. Current focus areas include STEM and workforce training, as well as targeted populations such as low-income and first-generation students.

 **Cultivate a good list of funding sources.** Some of the best federal funding sources include: the National Science Foundation, the U.S. Department of Education, the U.S. Department of Agriculture, and the U.S. Department of Labor, Employment and Training Administration. Foundation funding sources include: Foundation Center, Philanthropy News Digest, and Guidestar.

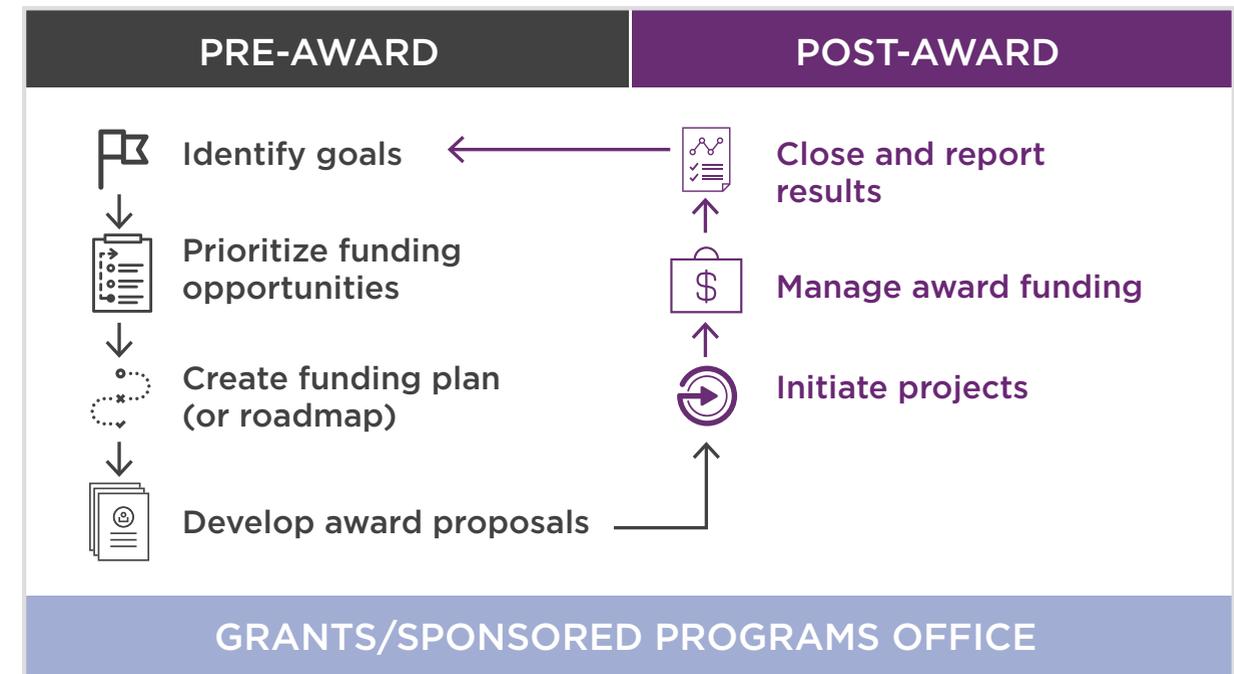
 **Start now.** It's never too early to begin planning your CBE grant project. If you wait until a grant competition is announced, it's too late to plan appropriately and align your CBE initiative to the funder's goals.

As more institutions look to implement CBE programs in the next few years, competition for grants will become fierce. In fact, institutions today are already scrambling for a limited supply of funds. It's crucial for any CBE program looking to get off the ground to apply for grants early and to distinguish itself from the crowd.

Four crucial steps for obtaining grant funding

1. Learn how grants work
2. Understand how CBE benefits students and helps them succeed
3. Align your CBE goals and priorities with the institution's plan
4. Align your CBE goals and priorities with the grant programs and projects

How grants work: the grants lifecycle



Popular CBE funding goals

- College readiness
- Student success, persistence, completion
- Innovative strategies
- Research based strategies
- Reducing cost and time to completion

Most frequent reasons proposals are rejected:

- The funder doesn't have enough funds to accept every request
- The request falls outside of the funder's giving interests
- The applicant didn't follow application guidelines

Federal definitions: ensuring Title IV funding

CBE can mean many things to many people, but as far as the federal government is concerned, it knows CBE when it sees it. For institutions looking to start a CBE program, or perhaps take an established competency-based education model to the next level, it's helpful to know how the government defines CBE, because federal categorizations can directly impact the types of funding a program may be eligible for.

The feds have outlined a few characteristics that they use to define a CBE program: (1) programs organize content by competency or outcomes; and (2) a student's academic progress can be measured by assessing the identified outcomes on the basis of mastery. In other words, to be considered a Title IV eligible CBE program in the eyes of the federal government, the program must define what the student needs to know, and then measure the degree to which the student has mastered that knowledge.

With that in mind, the federal government has also identified two types of competency-based education programs: direct assessment and credit/clock hour programs.

With direct assessment programs, the student's progress is measured by assessment of the competency. The Department of Education (DOE) approves direct assessment programs and the institution's accrediting agency must approve the credit equivalency. All outcomes measured in a direct assessment competency-based program must be directly measured. To put it another way, the student's progress is not measured by time spent on courses, but rather through verifiable, measured assessment to determine what that student has mastered.

A credit/clock hour CBE program is designed to assess the competencies and then the competencies are mapped back to specific courses. A credit crosswalk map is created to demonstrate which competencies are covered in which courses of a program. This allows higher education students to get credit for the specific courses. Basically, students take the needed courses to fulfill competency requirements.

Credit/clock hour programs require DOE and accreditation approval if the content is a new program. However, if an institution is deconstructing a current course or program and reconstructing it as a competency-based program, notification to the DOE and accreditors is not required. A credit/clock hour program can have a combination of traditional course-hour courses in addition to competency-based courses that map back to credit-hour courses. The credit crosswalk courses must account for satisfactory academic activity for each aid-eligible credit hour. The institution's policies for credit crosswalk also must be in compliance with the institution's accreditors.

Currently, programs must be one or the other: direct assessment or credit/clock hour CBE programs. In other words, institutions cannot combine credit/clock hour courses with direct assessment competencies to be eligible for Title IV funding.

Although the precise definition of "competency-based education" may still be in flux, **the federal government's definition of what is (and isn't) a CBE program** remains the best option for understanding the field. And when it comes to obtaining the most funding for the students, the parameters set forth by the feds are the *only* option.

Conclusion

The statistics show us that CBE is growing. Colleges and universities should expect to see more students demanding CBE, and it represents an engaging and innovative path toward an education. CBE promises to help more students attain degrees or certificates, and improve their lives. With the right preparation and planning, any institution can craft a viable, successful CBE program, and provide students the education they need to prosper.

Here is where technology can help. Powerful CBE software can probe a student's comprehension of a topic, not just quizzing him or her once for a single correct answer, but rather by applying an algorithm over multiple assessments to gauge that student's proficiency of the subject matter. This approach allows the institution to have a measured, thorough evidence of what that student knows. With this kind of technology, assessments can be modified, improved, and adjusted, creating valid and reliable assessments to accurately measure the student's knowledge. And that's the hallmark of CBE.

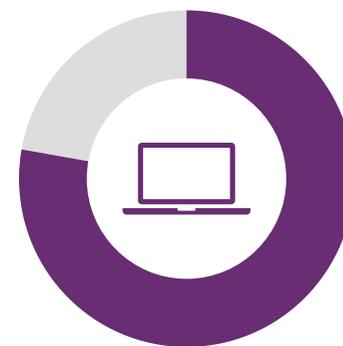
One of the key benefits from this kind of technologically driven approach is that students are permitted to try, to fail, and to try again once they have learned from their mistakes. They don't simply answer a question correctly or incorrectly and move on to the next one. The technology, in conjunction with the instructor, can test the limits of their knowledge, and offer assistance in areas where the student may be weak. In this fashion, the main concern is the success of the student and ensuring that he or she can apply the material. It's not just a process of weeding out those who don't know the material. In the end, it's about promoting student success,

and successfully designed CBE programs underpinned by the right technology can do just that.

A first-of-its kind solution, created just for higher education

Ellucian Brainstorm™ is a first-of-its-kind CBE solution, purpose-built for educators to offer continuous lifelong learning with a personalized, “made for me” student experience and authentic engagement. With its outcomes-first design and assessments, Ellucian Brainstorm enables faculty to focus on competencies they want students to master. Administrators can create a full spectrum of competency-based programs, including certificates, credentials, and degrees, that cannot be achieved by retrofitting an existing learning management system.

Sign up for *CBE Today* for all the latest insights on this fast-moving space.



Technology needs to pave the way

78% of institutions surveyed think that the lack of automated and compatible data systems is a barrier to or an extremely challenging aspect of establishing a CBE program.



Ellucian helps education institutions thrive in an open and dynamic world. We deliver a broad portfolio of technology solutions, developed in collaboration with a global education community, and provide strategic guidance to help education institutions of all kinds navigate change, achieve greater transparency, and drive efficiencies. More than 2,400 institutions in 40 countries around the world look to Ellucian for the ideas and insights that will move education forward, helping people everywhere discover their futures through learning. To learn more, please visit www.ellucian.com.

Ellucian Brainstorm

Ellucian advances the Competency Based Education (CBE) movement, enabling higher education to expand its reach and impact by successfully serving adult learners, while maintaining the rigor of their institution. Ellucian Brainstorm is the modern competency-based teaching and learning solution for continuous learning. For the first time, Ellucian Brainstorm offers educators a purpose-built CBE solution for continuous lifelong learning with personalized “made for me” learning and authentic faculty-student engagement. With Ellucian, educators can finally meet the modern student where they are and give credit for what they already know. Learn more: www.ellucian.com/competency-based-education-cbe.

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