





CBE IN CTE: The Perfect Fit

By Eric A. Heiser

The School of Applied Technology at Salt Lake Community College (SLCC) is in the middle of a three-year transition of 20 of its workforce-, clock-hour-based programs into a competency-based education (CBE) format. SLCC is a Round IV recipient of a Department of Labor Trade Adjustment Assistance Community College and Career Training (TAACCCT) grant, which provides the funding for this transition.

The Move to CBE

While CBE has been around for decades, it is a relatively new player in higher education. The U.S. military—and even some areas in K–12 and special education—have used and continue to use CBE. Higher education, however, is only now beginning to realize the many benefits that CBE can offer students.

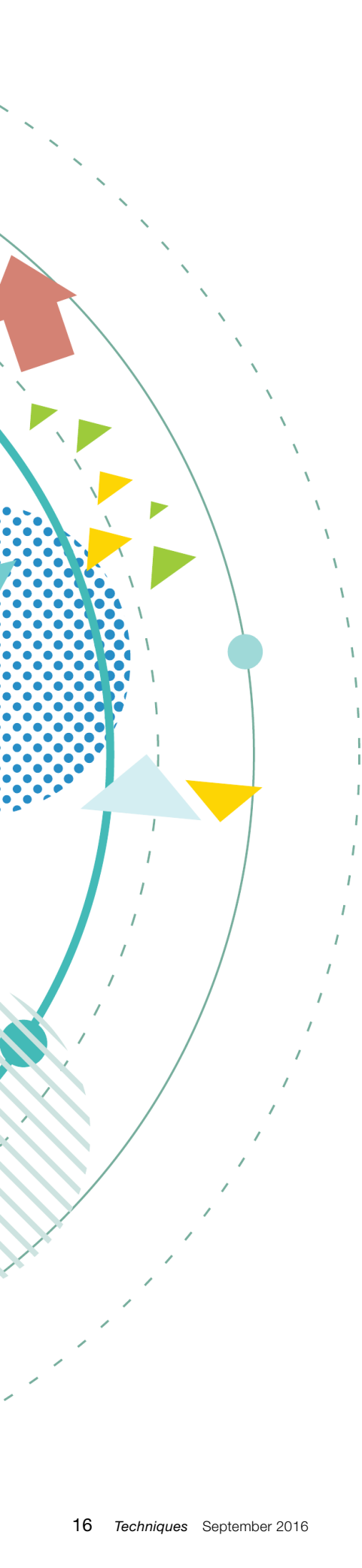
So what is competency-based education? Simply put, CBE removes time as the constant in learning and makes it a variable. More specifically, the Competency-Based Education Network (C-BEN) defines it as combining an “intentional and transparent approach to curricular design with an academic model in which the time it takes to demonstrate competencies varies, and the expectations about learning are held constant” (Competency-Based Education Network, 2016). For instance, if a student can prove mastery of competency in a course in the middle of a semester, he or she moves on. With CBE, there’s no more waiting on the academic calendar to advance. Likewise, if a student needs extra time in a course—for any

number of reasons—the student is not rushed to finish within the bounds of the semester calendar.

The term “mastery” means different things to different schools. At SLCC, mastery has a baseline of 80 percent; however, for many schools, mastery means achieving at least an 85 percent on the practical and written exams. Some medical programs, such as Clinical Lab Assistant and Certified Nurse Assistant, require 100 percent mastery before a student can move on. It is important to remember that there is no average grade in CBE. Students cannot simply perform well on the first half of the class and then coast through the rest of the course. Mastery is proved at the end of the course in the form of a summative assessment that covers all the material that was taught throughout the course.

Most of the assessments in SLCC’s programs are practical, meaning that students are asked to demonstrate the skills they have learned in the course rather than simply answer questions on an exam. It should also be noted that while this is the process used at SLCC, this is not the only way for schools to run a CBE program. If we have learned anything during this transition, it is that while a general definition of CBE can be agreed upon, each school will have its own individual “flavor” of CBE. This should not be regarded as a bad thing, provided that the school is following the agreed-upon format for courses transitioning to CBE.

Early on in our process of converting to CBE, SLCC was invited to join the newly formed C-BEN, which is supported by the Lumina Foundation. The network provided



schools that are on the cutting edge of developing new CBE programs a space to talk about what was working and what was not. Based on our goal of transitioning 20 clock-hour programs into CBE, SLCC was one of only two community colleges invited to join the first cohort of colleges in C-BEN.

All About Assessment

Valid and reliable assessment is the cornerstone of any CBE program. Without a valid and reliable assessment, there is no way for an institution to prove the student actually learned what was contained in the course outcomes and objectives. At SLCC, our CBE courses are created using a “backward-design” model, or in other words, starting with the assessment and then subsequently creating the knowledge, skills and abilities from that assessment.

We build courses in a team format. Faculty members serve as the subject matter experts and contribute the content for the courses. Instructional designers provide the design expertise for the course. Our instructional designers are trained in CBE, with many of them having prior experience in CBE before being hired by SLCC. The faculty and instructional designers work in tandem throughout the development process, providing mutual feedback along the way before handing the course off to the assessment designer for final review.

Assessment designers are tasked with ensuring the assessments used in the course match the stated competencies and objectives, and the assessments must definitively prove that students passing the assessment have indeed mastered the course. A course cannot go live until all three parties—faculty, instructional designer and assessment designer—have signed off. Once the sign-off has occurred, no further changes can be made unless the course is redesigned. This process helps us ensure that students receive the

same course design regardless of the particular CBE program.

For those in education, CBE is simply a different way of proving that students are actually learning what our course objectives state they are learning. At SLCC, this process began in earnest about two-and-a-half years ago, prior to the awarding of the TAACCCT grant. The programs selected for transition seemed a good fit as these programs focused on getting unemployed and underemployed students into the workforce in a year or less. The programs include Computer Networking, Welding, Diesel Mechanic Technician, HVAC Repair Technician and Medical Coding/Billing, among others.

As of today, SLCC has successfully transitioned 10 of its 20 workforce-training programs into a CBE format. The final 10 programs will be transitioned in the next 16–24 months.

The SLCC CBE Model

First, a word of caution: We may well have chosen the hardest possible way to run a CBE program. Please do not assume that the SLCC way is the only way to do CBE. In fact, we know of many schools doing things differently and experiencing success. This is simply the way we chose to jump into CBE.

SLCC operates its CBE programs in an open-entry format. We have new students starting nearly every Monday throughout the year. This works well for those students who come to us having just lost a job or not wanting to wait for the academic calendar to flip before receiving training. Courses are operated in a hybrid format; while much of the course material is available online, most of the practical aspects require access to specialized equipment in the lab. Students can utilize lab space during lab hours—normally from 8 a.m.–8 p.m., Monday through Thursday.

Most of our programs have some lab time available on Friday, and some faculty

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will open labs on Saturdays, as well. This format gives students the ability to choose a time that works best for them. It also allows instructors to meet students where they are rather than dictating that they come to class at a set time and set day.

As you are probably imagining, this drastically changes the way faculty spend their teaching time. We are quick to point out that while the model is indeed changed, the faculty role is just as, if not even more important, than the traditional delivery model. Faculty have more time to work with students in a one-on-one situation rather than conducting lectures to the masses and hoping that questions are asked. Our faculty have embraced the new model, and most have said they feel the new model is a better fit for students.

SLCC's student tracking—or student information system (SIS)—and the learning management system (LMS) are works in progress. Our current institution-wide LMS has not proven to be a good fit for CBE. What this means for us, and could mean for your institution, is that we have many manual processes that cannot be automated. Again, this is another important consideration as you take the steps to move toward CBE.


The two biggest student information systems in higher education have yet to perfect managing students in a non-term, CBE environment. We are currently using an in-house student tracking system to ensure that students are pacing correctly. This is not to say that students are not allowed to fall behind, rather it gives us

the opportunity to intervene at an earlier point if we see a student struggling. The SIS and LMS are two of the biggest pain points for us to date.




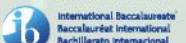


Moving a Program to CBE

The process for moving a traditional program to CBE is very time-intensive. While we are held to a very ambitious timeline due to our TAACCCT grant, we warn schools considering the transition that it cannot and will not happen overnight. When we are asked to advise schools considering the move to CBE, the first thing we share is that those involved in the process must be prepared to strip the current curriculum down to the studs and build it back up in the new format.

CBE is not a window-dressing change to the curriculum. Anything less than




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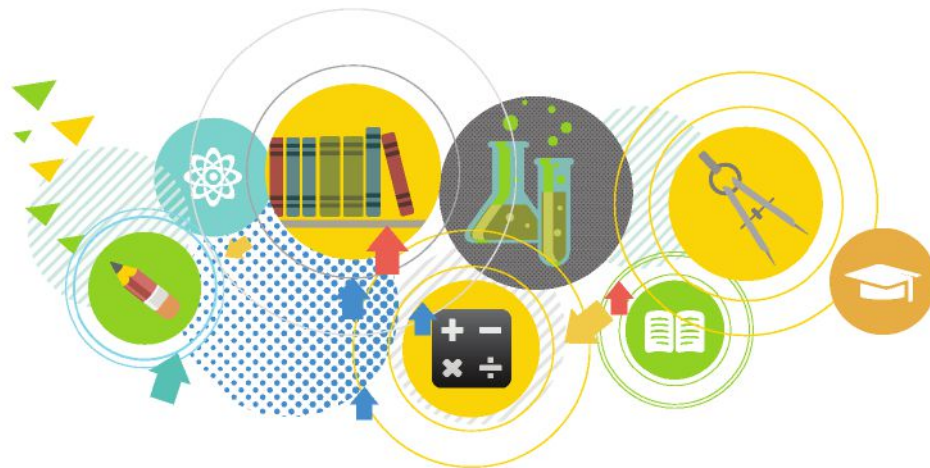
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a complete revision from a traditional course is not considered CBE. As CBE picks up steam and oversight grows, schools should be aware that while this is still a developing space, CBE programs are held to the same, and in most cases even higher, standards by the accrediting bodies. The last thing we or the accreditors want is for schools to begin advertising that they offer CBE programs without having actually gone through the time and labor-intensive process to transition the courses into "true" CBE.

Taking the Leap

Once the decision has been made to make the shift to CBE, the most important thing for any school is to find faculty who are willing to champion and take on the transition. Without faculty buy-in it would be very difficult, if not impossible, to start a CBE program. It is important to note the different roles that both sides (faculty and designers) play in the development process. One of our early lessons learned stemmed from faculty not wanting to give up perceived control, and instructional designers wanting to do more than design. Communication is key between the two parties. Have a plan for when—not if—conflict arises between the teams, and be prepared to implement it and stick to it.

The last part of the process is having an assessment designer check for validity and reliability of the assessments in each course. Multiple choice exams will not fly in CBE. If you truly want to know if a student mastered the competencies in a course, you will need to bank on having new assessments created to ensure it is happening. As mentioned earlier, the vast majority of our CBE assessments are practical in nature, whereby a student is

actually demonstrating the skills attained in the training, not just answering questions on a paper test.

Why We Believe in CBE

Though the process is arduous and generally a bumpy ride, we truly believe that CBE has a place in higher education, namely career and technical education. CBE in CTE seems the perfect fit for schools looking for a new approach to the time-based system; CBE affords more flexibility for students to accelerate learning should they choose or spend more time in an area giving them trouble.

At SLCC, we believe that CBE is an effective way for educators to work in tandem with industry to ensure that those we are training are gaining the necessary skills to become exceptional employees. We believe CBE to be a skillful way to show that students know what they are doing by having them prove mastery with practical, real-world assessments.

While it is not for every student or the only way to provide a quality education, CBE has a place in 21st-century education. For those students for whom CBE is a fit, it is a great way to prove a skill set and progress at a pace that works best for them and their current situation. **Tech**

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REFERENCE

Competency-Based Education Network. (2016). *What is competency-based education?* Retrieved from <http://www.cbenetwork.org/competency-based-education>