

InFOCUS

Best Practices in Competency-Based Education: Lessons from Three Colleges

From 2011 to 2014, the U.S. Department of Labor made nearly \$2 billion in grants to community colleges around the country through the Trade Adjustment Assistance Community College and Career Training (TAACCCT) grants program. The broad goals of the TAACCCT program are to (1) increase attainment of degrees, certificates, and other industry-recognized credentials that provide skills for employment in high-wage, high-growth fields; (2) introduce or replicate innovative and effective curricula that improve learning that is relevant to employment; and (3) improve employment outcomes for participants, especially those eligible for Trade Adjustment Assistance and other economically dislocated and low-skilled adult workers.

Under a Round 2 TAACCCT grant, Sinclair Community College is leading a consortium with Austin Community College and Broward College to implement flexibly paced, competency-based education (CBE) programs in information technology. There is no single, authoritative definition of “competency-based education.” However, a key feature is that students are to master clearly defined and measurable learning outcomes (the required “competencies”), but the time a student takes to demonstrate each competency may vary. This contrasts with traditional models, in which different students may experience different learning outcomes, but they all spend a fixed amount of time in each course. Western Governors University (WGU) is providing consulting and technical assistance to help the consortium colleges adapt their programs to time-variant, competency-based models. Mathematica serves as external evaluator of the consortium’s TAACCCT grant. The practices highlighted in this brief were identified through document review, site visits, and interviews with stakeholders at the participating institutions.

STRUCTURE COURSE DESIGN TO ENSURE QUALITY AND CONSISTENCY

In creating new CBE programs, the consortium colleges had to create or modify many courses in a short period of time. The courses had to adhere to academic and industry standards, and they needed to fit together into coherent programs of study that students could work through independently. Most of the colleges’ faculty had no experience with flexibly paced CBE models (although many had worked with online education). They needed support to develop high quality courses quickly and efficiently in a new and different format.

The colleges approached this challenge by building teams with the necessary skills and creating standardized tools and structured processes for course development. All three colleges have brought on at least one instructional designer with a background in online course development; this person collaborates with faculty

teams to develop the new CBE courses. At Austin, the instructional designer developed a guidebook that outlines a standardized 14-step course development process. She helps faculty identify competencies, align learning resources and assessments with competencies, and create course maps to guide students through materials, assignments, and assessments. As one faculty member put it, faculty make the decisions about course content, and instructional designers “make the magic happen.”

Sinclair has a similarly structured process and uses several tools to guide course development. Course development teams begin with a three-step mapping process in which they (1) identify competencies at the program or curriculum level; (2) map curriculum competencies to courses, ensuring that all program competencies are covered by the corresponding courses; and (3) map course competencies to content and assessment items, all of which are tracked in the learning management system. A Sinclair instructional designer developed mapping tools to support each of these steps. In



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developing each course, instructional designers also use a project planning and scheduling tool to define and track milestones, time frame, due dates, and responsibilities. Another important tool for promoting quality and consistency in Sinclair's CBE courses is a master course template, which ensures that all the courses have the same look and feel, making it easier for students to become familiar with the course interface and move quickly and independently from one course to another.

DISAGGREGATE THE FACULTY ROLE TO SUPPORT SPECIALIZATION AND RELIEVE PRESSURE

CBE models place different requirements on faculty than do traditional college programs. For example, in developing courses or assessments, faculty cannot act as independently as they can in traditional courses, because individual faculty members do not determine course and program competencies. Similarly, because students are working through material independently, instructors act more as mentors, responding to student queries instead of lecturing. These differences require a new approach.

WGU has pioneered a staffing model that “unbundles” the faculty role. Instead of the traditional role, in which faculty develop courses and assessments, teach courses, grade assignments and assessments, and provide academic support and advising to students, WGU assigns each of these tasks to different groups of professionals. Course and assessment developers work independently, ensuring the quality of course content, relevance to competencies, and objectivity of assessments. Instructional faculty serve as mentors, supporting students as they work through courses and providing supplemental materials as needed. Graders score assignments and assessments, and coaches provide students with additional academic and personal guidance and support.

Although this disaggregated model has posed challenges for the consortium colleges, they have adapted the WGU approach in different ways. Faculty are still generally responsible for course development and delivery, but they work with professional instructional designers and use course shells and delivery platforms that structure courses consistently within their CBE programs. Broward divides the roles of course content development and assessment development, with different faculty

assigned to each for any given course. All three consortium colleges have developed a separate coaching role to guide and support students as they progress through the program.

None of the colleges has separated the grading role from other instructional duties, but stakeholders agree that doing so would be helpful. This is because flexible pacing often results in students turning in many assignments and attempting multiple assessments in a short time near the end of an academic term. Under their current systems, college stakeholders worry about grading bottlenecks and the resulting faculty burnout; disaggregation could address these concerns and be an avenue for continued program improvement.

PROVIDE SUPPORTS TO HELP STUDENTS ACCELERATE

One goal of CBE is to enable students to move through courses more quickly than they would in traditional online or face-to-face courses. Nevertheless, although acceleration is possible, it is not guaranteed. Because students are working independently, they can progress at the same pace they would in a traditional course, or they might even fall behind the pace required to complete the course in a timely manner. The consortium colleges have developed several strategies to encourage students to stay on track and, ultimately, to accelerate. These include using pace charts (coupled with targeted interventions and support) and financial incentives.

Austin, Broward, and Sinclair have all implemented pace charts to support student progress through a course. Pace charts specify benchmarks that students must meet to progress successfully through a given course. For example, a pace chart might indicate that a student should complete at least one assignment within the first week after beginning the course and specify the maximum amount of time it should take to complete 25, 50, and 75 percent of the course material. At Broward and Sinclair, coaches work with students to tailor pace charts at the beginning of a course, pushing for acceleration and also fostering student ownership of and accountability for their own progress. Coaches use the pace charts to monitor students' movement through course material. A student who is not meeting the milestones set by the pace chart triggers a targeted intervention, which is usually

direct contact from the coach to troubleshoot and help the student move forward. Using the pace chart to prompt the intervention helps coaches provide outreach more effectively and improves the chances that students will respond. As one coach asserted, “The right service has to be delivered at the right time, otherwise...they don’t hear it.” Since introducing pace charts, Sinclair has seen a 20 percent reduction in the average time to course completion.

All the colleges have implemented some form of pace chart to help keep students on track, but Broward has also introduced financial incentives to encourage acceleration. The college allows students to test out of some courses at a cost of \$7 per credit hour, versus the normal cost, which is more than \$100 per credit hour. To take advantage of this option, the student must first pass the Course Challenge Evaluation, which all students take to assess their baseline competency. Next, without accessing the course content, the student must demonstrate all the required competencies by passing the relevant Course Unit Evaluations, all with a score of 81 percent or better. By offering the same credits at a drastically reduced price, this option provides students with an incentive to accelerate through the program.

SUPPORT STUDENTS’ CAREER DEVELOPMENT BEYOND THE CLASSROOM

In implementing their CBE programs, the consortium colleges are seeking to help students not only earn credentials, but also be successful in a career. However, employers may be unfamiliar with CBE, or even wary of accelerated programs. Therefore, students must be able to demonstrate competency to potential employers. The colleges have used several approaches to familiarize employers with CBE and support students’ career success. These include student portfolios, employer partnerships, and reverse job fairs.

At Austin, career services staff help students create a student portfolio to package and showcase their skills. They work with students to build a portfolio that includes an effective resume, a professional video statement, and examples of course work to demonstrate specific skills (for example, a sample of programming code). This portfolio is then made available via the internet. It is available first to the program’s employer partners,

who are in communication with program staff and are familiar with the skills students attain in the program. Later, portfolios are posted for the public to access on the program’s website. Making portfolios available to employer partners gives them preferred access to qualified students; it also provides students with an incentive to develop high quality portfolios because they know that relevant employers might look at them.

At Sinclair, program staff have worked with the Ohio Department of Job and Family Services (DJFS) to host reverse job fairs. Instead of the traditional job fair model, in which hundreds of students seek out a handful of employers, the reverse job fair brings select employers to qualified job seekers as they are finishing their college program. As part of this model, DJFS prepares prospective job seekers by putting them through a weeklong boot camp where they create a portfolio and resume (similar to the approach at Austin) and attend a session on how to dress for success. They also complete a one-on-one mock job interview and debrief.

These models have proven to be effective for students and employers. At Sinclair, 40 percent of those who participate in the reverse job fairs (who have been out of work for an average of seven months) are back to work within three weeks after the fair. Across the colleges, students are better prepared to be on the job market and are meeting potential employers who are familiar with their programs and ready to hire. For employers, these approaches offer a low-risk and effective way to identify potential employees who have the desired skill set.

WORK WITH EMPLOYERS AND OTHER PARTNERS TO UNDERSTAND CURRENT AND FUTURE COMPETENCIES

Competencies are the heart of any CBE program, and they must align with academic and industry standards. Yet standards change, especially in rapidly evolving areas like information technology. Although most college and program accreditation processes require some regular review of program content, this is not enough to ensure that competencies keep pace with industry needs. Moreover, informed program planning and curriculum development require that college leaders think ahead to future needs.



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Sinclair is leveraging local and regional employers and industry organizations to ensure that program and course competencies are aligned with existing and future industry standards and job requirements. During program development, Sinclair used the itWORKS.OHIO technical content standards as a starting point in identifying competencies for the programs planned under the grant. State education agencies, post-secondary institutions, and industry professionals worked together to develop these standards. As Sinclair's grant-funded program began, program leaders developed the Stakeholder Collaborative, which bridges the supply and demand for an educated workforce by bringing employers and industry representatives together with college and program representatives. The collaborative includes industry partners at the executive and line manager levels. This is critical because executives can address broad industry evolution and regional economic development, and line managers can address alignment of curricula with current job requirements. Sinclair has developed a transparent and repeatable process for gathering input from members of the collaborative, which could be applied to other content areas beyond information technology. Ongoing input from the group helps ensure that Sinclair programs and courses have clear, job-relevant competencies, which can be continually updated as academic and industry standards evolve.

BUILD A FRAMEWORK FOR CONTINUOUS IMPROVEMENT

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CBE requires colleges to do things differently than in traditional programs; if colleges are to be successful in using CBE, they must learn from their own experiences as they implement program, policy, and procedural changes. At Sinclair, CBE program leaders have supported a process in which stakeholders (1) develop and pilot changes based on existing best practices; (2) collect and analyze quantitative and qualitative data from participants and other relevant stakeholders; and (3) continually refine the process, documenting changes and their corresponding outcomes. This process of piloting, assessing, and refining applies to all areas of the CBE effort, including strategy and planning, workforce engagement, curriculum development, course delivery, and student support.

A concrete result of the continuous improvement process has been documentation of the key policies and procedures that support Sinclair's CBE program. Informed by the continuous improvement process described above, this CBE policy document describes the college's approach to many of the issues that must be addressed for CBE programs to be successful (for example, intellectual property, faculty payload, and assessment policies). The document serves as a guide for Sinclair's ongoing program improvement and can provide a blueprint for other programs and colleges considering CBE.

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