Salt Lake Community College

Salt Lake Community College: Competency-Based Education in the School of Applied Technology

A CBE case study

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This case study is part of a series on competency-based degree programs that have been emerging in recent years. The case studies are prepared by the Council for Adult and Experiential Learning (CAEL) with funding from Lumina Foundation.

AN OVERVIEW

The School of Applied Technology (SAT), established as a school within Salt Lake Community College (SLCC) in 2009, offers short-term, workforce-based training and certificates. Prior to becoming an integral part of Salt Lake Community College, the largest institution of higher education in Utah, the SAT was one part of the Utah Colleges of Applied Technology and even at that time offered competency-based education (CBE) options. However, the current CBE model, envisioned in 2012, is far different from the earlier version, which relied on both clock hours and some competency assessments. Today, the SAT intends to entirely convert *all* programs to a competency-based format.

The goal of the new CBE initiative, which launched with 10 active programs in 2015 and more in the pipeline, is to enable adults to complete the curriculum as efficiently and cost effectively as possible. Critical to this goal is the SAT's open enrollment policy, which enables students to start their chosen program on most Mondays of the year. Thus, flexibility and individual progress, rather than a set schedule of group lectures and labs, are key. Another distinctive feature of the new model, targeted for implementation in July 2016, is a subscription-based "all you can learn" format. Students pay tuition for a specific period of time (either one month or three months, depending on the number of competencies required in an area), regardless of the number of competencies they complete. In addition, the SAT incorporates Open Education Resources (OER). Because these learning resources are freely available online, students save money they would otherwise pay for textbooks. Indeed, when all programs are operational, the SAT will offer fully CBE/OER degrees.

UNIQUE FEATURES OF THE PROGRAM

- **A totally CBE-based curriculum for all training and certificate programs at the School of Applied Technology**
- **Incorporation of OER in all programs**
- **Facilitated coaching and mentoring, but no traditional lectures or labs**
- **Required live, real-time contact with faculty to review progress**
- **Open enrollment; students may begin the program most Mondays**
- **A subscription model: "all-you-can-learn" for a fixed tuition during a specific period of time**
- **Short-term training of a year or less for full-time students**
- **Stackable credentials that may apply to community college credit**

The goal is to significantly increase the number of adult learners who obtain high-wage, high-demand jobs by redesigning career training programs to a competency-based format.

BACKGROUND AND CONTEXT

For many years, the SAT was one of the stand-alone public colleges of applied technology in Utah. In 2009, when the SAT became part of Salt Lake Community College, its mission remained the same: to provide "high-quality career and technical education to individuals seeking job skills for quick entry into the workforce" (Salt Lake Community College, 2016). As a department within SLCC, the SAT continues to serve as the applied technology college for the county with the largest population in the state (Utah System of Higher Education, September 2015).

Plans to make the SAT a fully competency-based unit of SLCC reflect the foresight and support of former Provost Chris Picard and Dean Kevin Brockbank. Their goal was to improve outreach and service to adults by offering a curriculum that full-time students could complete in one year or less and that would lead to better employment and better wages. Meeting this goal would require innovative strategies to address curricula, pedagogy, assessments, technology, funding, and staffing. In short, a successful outcome would require significant changes to perspectives as well as to program delivery and mileposts.

Faced with the enormous challenge of overhauling all 20 of its workforce training and certificate programs to be fully competency-based by 2018, the SAT has leveraged support from many quarters. At the same time that it recognizes its unusual position as a non-degree-granting unit of a community college, the SAT also recognizes that it is similar to other institutions in its goal of expanding CBE opportunities. Consequently, the SAT joined with other institutions in the national discussion to explore and share CBE activities. For example, SLCC, represented by the SAT, is a member of the Competency-Based Education Network (C-BEN), an initiative funded by Lumina Foundation to support colleges and universities "working together to address shared challenges to designing, developing and scaling competency-based degree programs" (Competency-Based Education Network, 2016). While each member institution has a unique mission and other unique features, the institutions benefit from frank and open discussions of CBE policies, practices, and problems.

Clearly, successful, efficient CBE implementation requires knowing what other institutions have done or plan to do. In addition, however, a successful CBE initiative requires significant financial resources for both planning and implementation. The SAT has received funding from the U.S. Department of Labor as part of the Trade Adjustment Assistance Community College and Career Training (TAACCCT), Round 4 competition. Their grant application notes that "[t]he goal of this project is to significantly increase the number of adult learners who obtain high-wage, high-demand jobs in six Utah industries by redesigning four SAT career clusters to a competency-based format" (Salt Lake Community College, n.d.). Because the total redesign will be extensive, government funding has been invaluable in kick-starting this CBE initiative.

DEVELOPING PROGRAMS AND IDENTIFYING COMPETENCIES

In developing its new CBE curriculum, the SAT has focused on the job-training programs already in its catalog. By December, 2015, the school completed curriculum revisions in the following:

1. Computer Support Specialist
2. Network Administrator
3. Network Infrastructure Technician
4. Clinical Lab Assistant
5. Clinical Medical Assistant
6. Medical Office Administration
7. Administrative Office Specialist
8. Health Information Specialist
9. Medical Coding and Billing
10. Heavy Duty Diesel Maintenance Technician

Programs to follow with a goal of September, 2017, for full implementation are:

1. Electronics Engineering Technician
2. Electronics Technician
3. Professional Truck Driving
4. Graphic Designer
5. Media Design Technician
6. Web Programmer
7. Website Designer
8. Air Conditioning/Heating/Refrigeration
9. Manual Machinist
10. Welding

Those who opt for the CBE program may enroll on Mondays throughout the year. They are required to have meaningful contact with faculty at least once each week and to demonstrate competencies with written and practical assessments on-site. Consequently, they cannot complete the entire SAT competency-based programs at a distance. At the same time, however, participants are not required to attend regularly scheduled classes. Instead, students choose the schedule that works for them and plan attendance around the Monday-Thursday, 8 a.m.-8 p.m. normal classroom hours for the SAT.

At the present time, before the CBE format is fully implemented, SAT students can choose a traditional classroom experience if that is more comfortable for them. The CBE program, however, offers more flexibility, which may be especially important for SAT students, whose average age is 34-35. Many in this group have significant responsibilities in addition to work. For them, a program in which they set their own weekly schedule, study with OER materials rather than costly textbooks, and make progress by demonstrating competencies instead of counting hours in a classroom is an appealing alternative.

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Asking students to demonstrate competencies – what they know and can do – requires clear definitions of those competencies. Students need to know what the content of their training and of their assessments will be. In addition, defining competencies is not only important for students; employers, too, must know what graduates of SAT programs know and can do. Moreover, employers need to understand students' abilities "in terms of employer-related skills, instead of 'overarching' or disconnected concepts seen in the typical course" (Utah System of Higher Education, June 2015). Competencies must be clear to students and prospective students, faculty and administration, employers and potential employers, and the general public. This requirement demands fundamental changes to a curriculum previously based on credit hours and infused with academic language.

The SAT is meeting this challenge and includes a wide variety of perspectives in identifying competencies as it moves to a fully CBE curriculum. To this end, CBE engages in a multi-step process:

Step 1: Identify Competencies

- The SAT identifies nationally accepted industry standards to define competencies in its various programs. Using a backwards design process, the SAT first looks at generally accepted outcomes; then at the competencies that comprise these outcomes. At this point, the SAT determines how to define and measure these competencies. (This reliance on industry-defined standards and competencies stands in contrast to many other CBE programs, which may develop their competency frameworks to align with Lumina Foundation's Degree Qualifications Profile or AAC&U's Essential Learning Outcomes and VALUE rubrics.)

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Step 2: Validate Competencies

- Faculty work with industry partners to ensure that the competency definitions are discrete, appropriate, and understandable.
- An instructional designer who is an expert in CBE works with faculty to review the language of the competency statements, ensuring clarity and consistency.

Step 3: Develop Assessments of Competencies

- Faculty subject matter experts, working with an instructional or assessment designer (depending on availability), design assessments to reflect mastery of the prescribed competencies. These assessments, both formative and summative, may be either written or practical, depending on the appropriateness of each for the competencies being assessed.
- An independent assessment designer reviews proposed assessments for relevant and robust design.

Step 4: Complete Final Review

- Faculty subject matter experts review competency statements and assessments to ensure that they are measurable *and* attainable.
- Faculty review competency statements and assessments to ensure that the delivery model is consistent across all programs. To this end, the SAT has produced a handbook of principles and practices, as well as course requirements, for use by CBE faculty.

As noted earlier, one of the new CBE programs is Health Information Specialist. Some of the competencies required for this area of specialization are based on the curriculum of an Anatomy course, KMCB-0130. The chart on the next page shows how this course has been "translated" to competencies, learning objectives, and summative assessment for the competency-based program. Working together, the subject matter expert, instructional designer, and assessment designer have taken a 40-hour course and re-defined it to comprise 2 competencies and 13 learning objectives. This reframing not only makes the competencies and learning objectives measurable but also makes them far less daunting than the prospect of 40 hours of classroom time.

Course: KMCB-0130 Anatomy

Hours: 40

COMPETENCY 1	SUMMATIVE ASSESSMENT
The student will correctly identify human anatomy by labeling diagrams.	Correctly label body parts using visual diagrams.

Learning Objectives

1. Recognize the anatomy of the integumentary, skeletal, and muscular systems.
2. Recognize the anatomy of the nervous and sensory systems.
3. Recognize the anatomy of the endocrine, blood, and cardiovascular systems.
4. Identify the anatomy related to the lymphatic, immune, and respiratory systems.
5. Identify the anatomy of the digestive and urinary systems.
6. Identify the anatomy related to the male and female reproductive systems.

COMPETENCY 2	SUMMATIVE ASSESSMENT
The student will explain how body systems function and interact.	Objective test.

Learning Objectives

1. The student will utilize correct anatomical and directional terminology to explain how the body functions.
2. Describe the basic functions of the integumentary, skeletal, and muscular systems.
3. Describe the basic functions of the nervous and sensory systems within the body.
4. Explain the basic functions of the endocrine, blood, and cardiovascular systems.
5. Explain the basic functions of the lymphatic, immune, and respiratory systems.
6. Describe the basic functions of the digestive and urinary systems.
7. Explain the basic functions of the male and female reproductive systems.

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The Student Experience

A one-page marketing flyer clearly tells students about the program and – just as importantly – about their responsibilities when participating in the program. For example, students know at the outset that they will be required to commit to a minimum of 15 hours of studying per week, must have regular conversations with an instructor, and will need to complete "defined course assignments/assessments."

Because a significant goal of the SAT CBE programs at is to provide all text material online via OER, the flyer makes clear that "coursework...may be completed anywhere you have internet access." The SAT believes that guiding students to appropriate OER materials will help students save money while still utilizing high quality materials without the added burden of cost and will save an aggregate of millions of dollars for students. The school believes that such economies in time and cost are powerful pedagogical – and recruitment – tools.

Although much of the curriculum and materials are available online, students are not left on their own to navigate the system.

Although much of the curriculum and materials are available online, students are not left on their own to navigate the system. Indeed, the SAT is consistently clear that CBE is not an online program. Rather, it is a hybrid model. Even though classes do not meet at specified times, students must commit to visiting the on-site classroom, where they access equipment and instructional resources, work with a faculty member, complete lab work, and take assessments. They can visit the classroom at their convenience, typically any time from 8:00 a.m.–8:00 p.m. Monday–Thursday. These weekly meetings provide the SAT-mandated, "significant," real-time meetings with instructors to ensure minimum progress within a prescribed timeframe. Each student also has an advisor who is available for guidance throughout the student's period of enrollment (Heiser, 2015).

CBE WITHIN THE INSTITUTION

Encouraged by Deneece G. Huftalin, president of Salt Lake Community College, faculty outside the SAT have also expressed interest in incorporating CBE into their programs. Six degree programs have, to date, indicated that they wish to use the CBE model developed by the SAT.

Eric Heiser, interim dean of the SAT, believes that many Salt Lake Community College faculty members see CBE as a paradigm that meets the institution's overarching goal of responding to constituents' needs. Open enrollment, for example, provides just-in-time learning opportunities for prospective students. And with national attention focused on the SAT as a leader in CBE, many faculty members have begun to envision new models for their own disciplines and new approaches to help meet the institution's mission as a public, open-access, comprehensive community college committed to serving the broader community.

The response of some other staff at the college has, however, been mixed, especially since the roles of student service personnel will change significantly with the CBE format. For example, the burden on financial aid and advising personnel will increase, as there are different systems and processes in place for those enrolled in CBE as opposed to those in traditional academic activities. Further, because some support staff are unsure that CBE will "stick," they are unwilling to make drastic changes only to have to revert back to the old way of doing things. Consequently, there is some resistance toward a program that is in its infancy, when expectations are still unclear.

Similarly, and not surprisingly, there has been some resistance from those charged with keeping student records. A transcript with competencies is far different from one with credit hours and grades. Consequently, SAT staff members are working with others in the college to find ways to incorporate a competency-based transcript that will reflect correspondences to credit hours, thus allowing students to apply their work at the SAT to an associate degree

program if they choose to do so in the future. As their counterparts throughout the country can also attest, CBE staff have found that the most commonly used student information systems are far from ideal in the new environment.

CREDIT HOUR AND ACCREDITATION

The SAT's CBE programs at move beyond the credit hour, assessing competencies rather than time spent in a classroom. Although this change often poses a problem for regional accreditors, it has been uneventful at the SAT. After the merger that created the SAT, the Northwest Commission on Colleges and Universities conducted a formal accreditation review and approved the school to offer CBE. In fact, the institution was a pioneer in CBE (though in a much different form from its current model). Because the new model is not seen to be making "substantive changes" in a department that offers training and certificates (rather than degrees), there have been no difficulties with regional accreditation. If, however, CBE is to apply to degree programs at Salt Lake Community College, the institution will have to seek accreditor approval for substantive changes.

Although there are no problems with regional accreditation, moving away from a credit-hour system has presented major problems in another area: federal financial aid for students. In short, students in the CBE programs are not eligible under current Title IV regulations.

In an effort to find a way to award federal financial aid to its students, the SAT has been approved to become a Department of Education (DOE) experimental site. At least during the experimental period, the DOE will grant the SAT and other institutional participants "a waiver from certain rules that govern federal financial aid" (Fain, 2015). While waiting for the experiment to get underway, the SAT gives students the option of enrolling in their traditional classroom program and receiving aid or forgoing aid with the newly designed CBE programs.

In dealing with the inability of CBE students to receive federal financial aid for CBE, the SAT has made several interesting discoveries. First, some students are so eager to complete a competency-based, accelerated program that they have returned their original, credit-hour-based financial aid awards and enrolled in the CBE program. Second, the SAT has found that, even in its traditional programs, the percentage of students who receive federal aid is low. Many choose to delay using federal aid for a myriad of reasons, not the least of which are the regulations imposed on students who accept aid. Even before CBE, many working adults could not meet federal financial aid requirements for full time attendance. In addition, many adult SAT students are supported by their employers or an agency, such as Department of Workforce Services or Vocational Rehabilitation. Finally, state funding heavily subsidizes tuition costs for SAT students, making education affordable for the majority. Consequently, the SAT does not expect that the absence of federal financial aid will greatly affect enrollments.

OUTREACH

The SAT is trying out a variety of marketing strategies to increase public awareness of the new CBE programs. There are, for example, ads in buses and trains and on TV. The SAT is also using social media and in-person appearances at community events, such as the farmers' market. The concepts framing the ads are that 1) your past does not have to determine your future and 2) continuing education is indispensable for career growth. The SAT has also, as mentioned earlier, produced an informative one-page flyer outlining the unique features of the program and helping students determine whether they are good candidates for this online, self-paced instruction.

Outreach materials also clearly tell prospective students that they may demonstrate knowledge not only by completion of SAT materials but also by demonstrating competencies through "prior coursework, on-the-job training, military training, or through other life experiences." Indeed, Salt Lake Community College has an institutional prior learning assessment (PLA)

policy based on awarding credit for learning, not simply for experience. The college supports a PLA center (funded by TAACCCT) that helps students progress toward their academic goals by taking challenge examinations. SAT staff will help expand PLA opportunities by working to develop additional consistent opportunities for students to demonstrate learning from life experiences.

The outreach efforts are slowly working. As of November 2015, approximately one year into the initiative, there were about 80 active students in the program. Two or three new students continue to enroll each week, thanks to open enrollment. Over time, CBE program administrators plan to measure success by increases in enrollment, retention and program completion rates, time to completion, cost of attendance, and job placement.

LESSONS LEARNED

An important lesson learned is that developing and implementing a new model within a successful institution is a major undertaking. Not only does it require a significant change in thinking, it also requires significant financial resources as well as diplomacy, creativity, energy, and time. In addition, development has required input from a variety of experts from within and outside the SAT. Along with SAT faculty, other experts such as an instructional technician, instructional and assessment designers, and industry partners, have been crucial to the early successes of the CBE initiative.

More critical than any of the above, however, has been the support that the SAT has received throughout the process from administrators at Salt Lake Community College. Without support and encouragement from top administration, it is altogether possible that the initiative would have never taken hold.

In addition, the SAT did not develop its model in a vacuum. Rather, administrators benefited greatly from the general experience and advice available at C-BEN meetings and other national conferences, as well as from specific help offered by Western Governors University.

Another important lesson is that the goal of student success must guide the process and the priorities. Sometimes the choices are not easy, such as relinquishing federal financial aid for students whose progress does not conform to current guidelines especially in light of the explicit charge to SAT to serve the underserved, underemployed, and unemployed, all of whom most probably have limited financial resources. Yet, after research and discussion of alternatives, SAT administrators initially agreed that the goal of providing students with short-term workforce training that leads to better jobs is achievable even without federal financial aid. In a state that heavily subsidizes tuition, SAT also identified additional sources of financial support, such as employee tuition assistance and other agency funding. And now that SAT will become an experimental site, staff and administrators will be freer to initiate innovative ways to help support financially needy students.

CONCLUSION

Its particular mission, history, and role in the Salt Lake Community College guide the SAT as it develops its CBE program. All of these factors are unique and are reflected in the individual approach to CBE that the department has chosen. Yet there are also similarities between its program and others that are in development throughout the country. All support the premise that the credit hour is no longer the only viable way to measure student learning and progress. As the SAT initiative contends, providing exemplary workforce training to adults in the county with the largest population in Utah requires reassessment of old models, clear definition of a goal, and teamwork. This is an exciting new approach to teaching and learning, one that is embraced by many in the larger college and, indeed, in the country. The innovative programming holds great promise for helping the SAT accomplish its mission: student success.

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