Redefining learning modalities: How competency-based education can meet student need

REDEFINING LEARNING MODALITIES: HOW COMPETENCY-BASED EDUCATION CAN MEET STUDENT NEED

Sarah Rost | University of Massachusetts Amherst

Policy Brief No. 103

May 2025

Background: This brief is one in a series aimed at providing higher education policymakers and advocates with an evidence base to address how to best serve students in light of the challenges facing higher education. This brief was authored by a University of Massachusetts Amherst student as a course assignment for EDUC 674B: Higher Education Policy and was reviewed by Professor Ryan Wells.

CENTRAL TOPIC

Higher education now serves a diverse population of adults. What was once a prestigious accolade, a college degree is now a necessity in many professions. This means than many adult learners returning to school have families and work full-time while also trying to further their education. For many of these students, competency-based education (CBE) is an attractive model. CBE aims to better meet the needs of these nontraditional students by focusing on life experience and skills, career readiness, and accessible learning modalities.[1,4,11,12,14] CBE emphasizes mastery as a learning outcome.[2,11,16] In Ohio, CBE policy aims to increase high school graduation rates and better prepare students to be college ready.[3,4,12,13] In California, community colleges are using the framework of CBE to create a new program of accessible associates degrees.[5,6] Overall, the goal of current CBE policies is to make higher education more accessible for the increasingly diverse set of students enrolling at higher education institutions.

KEY INSIGHTS

Breaking Down the Issue

- Postsecondary education is now required in many job fields but is difficult to access.
- Adult college students balancing life and school need more accessible modes of learning. [9]
- CBE is an attractive option to make learning more relevant and accessible because it focuses on skills and applied knowledge and allows students to learn on their own time. [2,4]
- CBE can increase retention and improve student outcomes, and programs following this model are already being implemented in multiple states. [10,11,12,16]

Recommendations

- Continue to create peer networks of institutions working on CBE programming. This has been an effective tool in both Ohio and California, where institutions have been able to share best practices and collaborate to support the growth and expansion of these programs.[5,8,13]
- Release more standardized data detailing CBE program outcomes.[13]
- Create an operationalized definition of CBE at the state level to address any ambiguity around the term. This could help policymakers work towards a standard definition of CBE for the field at large.[2,11,13]

Redefining learning modalities

ISSUE

The demand for higher education has grown substantially in the last decade. The college student demographic has changed drastically: only 28% of enrolled students are under the age of 21 and financially supported by their parents.[1] The remaining 72% of enrolled students are usually older, working full-time, supporting a family, enrolled in a two-year program, attending a for-profit institution, or only learning part-time.[1,9] Non-traditional students need a learning system that supports career-readiness and is more accessible given the competing demands of school and adult life.[9] These students need learning that is tailored to not only fit their learning needs, but their longer-term career goals.[8,14]

CASE STUDIES

Ohio CBE Pilot Program

Ohio CBE policy focuses on preparing adults to pursue post-secondary education. The two policies featured here aim to increase high school graduation rates in the state.

- The CBE pilot program for Ohio residents 18+ who do not have a high school diploma offers an accelerated path to a high school diploma along with assessment of a student's "workforce readiness". Similar pilot programs are effective in increasing high school graduation rates.[15]
- A main goal of this pilot is to increase the number of workforce ready adults in Ohio by increasing the education level of the state.[3]
- To expand the number of high school students able to access higher education, Ohio is also increasing access to college credits for high school students through their College Credit Plus program. This program allows high schoolers to earn college credit from their courses while still in high school.[4]

California Direct Assessment CBE

The California Community Colleges Chancellor's Office (CCCCO) is running a collaborative to start a new system of competency-based associate degrees.[5] These programs aim to prepare more students to be workforce ready.

- Called direct assessment CBE (or DA CBE), these new programs promote flexible timing, performance-based assessment, real-world and workforce relevance, and offer multiple opportunities to pass a given course.[5]
- Currently, the DA CBE Collaborative is a peer learning community consisting of eight colleges developing pilot DA CBE associate degree programs, which the CCCCO will use as a framework to create more permanent DA CBE programs system wide.[5]
- California virtual campuses (CVC) is also working with the CCCCO to help develop these DA CBE pilots. They are identifying relevant technology (i.e., learning management systems) that can help these colleges develop the online and distance learning aspects of their DA CBE programs.[6]

Redefining learning modalities

POLICY LOGIC

CBE is a useful alternative to traditional higher education because of the online nature of many courses, faster and more self-paced progress, and credit for previous work experience. With around 70% of learners over the age of 25 and possibly balancing work, family, and college, online, self-paced learning fits into their lives better.[1] California CBE programs are accomplishing the goal of increased access is through distance learning formats.[6,8] For many nontraditional students, self-paced distance learning could be hugely successful.

Though self-paced distance learning is appealing to many, for some students, this system might rely too heavily on their own organizational skills.[7] Neurodivergent students often struggle with self-paced courses; some may procrastinate, struggle with the lack of in-person accountability, or find their home environment too distracting to study in.[7] This might limit the efficacy and successful completion rates of CBE programs for this population, which is a key limitation of current CBE policies. As CBE programs grow, it is important to understand these potential barriers.

EVIDENCE

Since the Morrill Land Grant Acts in the late 1800s advocated for the expansion of education, higher education has worked to increase access to applied education for under-educated populations.[2] Now, with the diverse population of students in the higher education system, new learning modalities such as CBE are essential.[14] CBE offers not only skills-based, practical learning with real-world applications, but allows for self-paced and distance learning, which increases attendance and lowers dropout rates.[12] CBE based high school programs had a higher graduation rate of 97.2% in one state (compared to a non-CBE average of 93.1%).[15] In Ohio, degree completion for distance learning CBE programs increased by 43% between 2012 and 2018.[9] CBE has also been found to increase retention rates. At Sinclair Community College in central Ohio, 76% of students completed a pilot CBE course in between 60 and 80 days, and 70% of students returned year-to-year.[10] Another bachelor's granting CBE program reported 5 year completion rates of 86%, while simultaneously saving students an average of $6,650 over the course of their bachelor's degree program.[16] The average age in this program was 39, and 97% of students brought credits from previous higher education institutions with them.[16] These programs are successfully serving the population of students it intends to serve: older, potentially returning students who want an efficient and flexible way to earn their degrees.

While CBE remains an attractive option for higher education, there are a couple key limitations to consider. The largest limitation is the lack of clarity around the definition of CBE.[12] Part of the ambiguity around the definition of CBE comes from the eclectic theoretical background of this model. No one theorist is credited with creating the model.[2,11] It draws from behaviorist, fundamentalist, and humanistic modes of inquiry.[2] Additionally, some scholars are concerned that CBE does not allow for adequate training in social skills, and that the focus on discrete competencies may lead to difficulties with complex synthesis of ideas. Students may have a firm understanding of each unit of knowledge but struggle to combine ideas.[12] These limitations are important to consider as CBE programs continue to expand.

Redefining learning modalities

RECOMMENDATIONS

Creating networks of colleges to establish peer mentorship and collaboration has proven effective in the two case study states presented here. The Ohio Department of Education started the Ohio CBE network to encourage Ohio institutions to consider CBE.[8] The DA CBE collaborative in California supports institutions in creating CBE programs.[5] States should continue to implement such CBE networks. Additionally, stakeholders want policymakers to provide data about demographics, costs, retention and completion rates, and employment outcomes for these programs to create more standardization in the field.[2,11,13] Standardized outcome data (i.e. graduation and retention rates) should also be provided as it becomes available.[13] Along with standardized data, creating state definition of CBE could help address any ambiguity.[13] A state definition could help schools design more standardized programs and equip instructors leading these courses and further develop a sustainable model of CBE programs that successful meets the needs of nontraditional college students.

CITATIONS

[1] Inside Higher Education. (2016). The rise of competency-based education. https://www.insidehighered.com/sites/default/files/2023-08/IHE Rise of Competency-Based Education booklet.pdf

[2] Gervais, J. (2016). The operational definition of competency-based education. *The Journal of Competency-Based Education*, *1*(2), 98–106. https://doi.org/10.1002/cbe2.1011

[3] *Competency-based diploma pilot program*. Ohio Department of Education. (2024). https://education.ohio.gov/Topics/Testing/Ohio-Options-for-Adult-Diploma/Competency-Based-Diploma-Pilot-Program

[4] Educational Service Center of Central Ohio. (2015). (rep.). *Navigating central Ohio's college & career readiness system*. https://nacep.org/docs/membership/oadep/NavigatingOHCollegeCareerReadinessSystem2015.pdf

[5] California Community Colleges Chancellor's Office. (2023). *Direct assessment competency-based education*. Direct Assessment Competency-Based Education. https://www.cccco.edu/About-Us/Chancellors-Office/Divisions/Educational-Services-and-Support/da-cbe

[6] Hanstein, A. (2024). *Competency based education (CBE)*. California Virtual Campus. https://cvc.edu/educators/cbe/

[7] Le Cunff, A.-L., Giampietro, V., & Dommett, E. (2024). Neurodiversity and cognitive load in online learning: A systematic review with narrative synthesis. *Educational Research Review*, *43* (100604). https://doi.org/10.1016/j.edurev.2024.100604

[8] *Competency based education (CBE) | Ohio higher ed*. Ohio Department of Higher Education. (2024). https://www.ohiohighered.org/academic-program-approval

[9] Franklin University. (2020). *Student-centered vs competency-based learning in Columbus*. Columbus Underground. Retrieved April 6, 2025, https://columbusunderground.com/student-centered-vs-competency-based-learning-what-makes-sense-for-central-ohio-adults-f1/

[10] Thibeault, N., & Amato, C. (2016). *Accelerate IT*. Retrieved April 6, 2025, from https://ohiocommunitycolleges.org/wpcontent/uploads/2016/11/CBE-Ready-Set-Go-Thibeault-Amato-Sinclair-Community-College.pdf?x57939.

[11] Brauer, S. (2021). Towards competence-oriented higher education: A systematic literature review of the different perspectives on successful exit profiles. *Education + Training*, *63*(9), 1376–1390. https://doi.org/10.1108/et-07-2020-0216

[12] Malhotra, R., Massoudi, M., & Jindal, R. (2023). Shifting from traditional engineering education towards competency-based approach: The most recommended approach-review. *Education and Information Technologies*, *28*(7), 9081–9111. https://doi.org/10.1007/s10639-022-11568-6

[13] Ohio Department of Higher Education. (2016). (rep.). *Competency-Based education: 9th report on the condition of higher education in Ohio*.

[14] Dodge, L. G. (2024). Competency-based education + Quality assessment = Learning validation. *Assessment Update*, *36*(4), 9–13. https://doi.org/10.1002/au.30405

[15] Blankenberger, B., Kerr, R., & Dooley, T. (2023). Competency based education pilot in Illinois: Preliminary findings. *Educational Policy*, *38*(5),1229–1256. https://doi.org/10.1177/08959048231198819

[16] Rivers, C., & Sebesta, J. (2016). *Competency-based education and predictive analytics: Learning from transfers*. EDUCAUSE Review. https://er.educause.edu/articles/2016/7/competency-based-education-and-predictive-analytics-learning-from-transfers#:~:text=They%20also%20have%20an%20average,negative%20pattern%20facing%20our%20institution.