



Delivering on the Promise of Competency-Based Education

Table of Contents

Foreword

By Louis Soares

Meeting the changing needs of the labor market has been a central focus of American higher education from its earliest origins. Throughout this long history, determining how to deliver and assess competence has been a moving target for higher education. Experiments in educational practice, advances in the science of learning and emerging technologies have deepened our understanding of what individuals know and are able to do—and how those competencies align with the needs of a changing economy and society.

Today, driving economic growth and equitable social mobility depend more than ever on meeting the needs of diverse adult learners—the so-called post-traditional students who are often working, financially independent and managing a wide range of family, professional and life responsibilities. It is estimated that there are more than 7 million adult learners (older than 25), representing the diversity of the nation, each of whom begins their educational journey with a different foundation of knowledge, life circumstances and held identities.

Colleges and universities that develop innovative educational offerings to meet the needs of adult learners can increase value and student outcomes and garner a competitive advantage in the process.

Competency-based education is such an offering. The authors of this report describe the ongoing implementation of Capella University's competency-based education program, called FlexPath, which uses direct assessment as a driver of student progress toward mastery of knowledge, skills and abilities critically needed in today's labor market and economy.

With 10 years of data and over 20,000 graduates, FlexPath has demonstrated an ability to create affordable pathways to degree completion that may be able to require many students to borrow less, while also enabling them to finish faster based on their assessed competence with an academic program. Through this work, they have begun to move beyond credit-hours and seat time as a proxy for skill and competence. Further, in this report, disaggregated data by race is pointing to positive results for Black adult students.

Tracking these promising results is imperative: the research and findings compiled in this brief have important implications for policymakers, researchers and higher education practitioners as they work to advance the field's understanding of competency-based education. As technology continues to influence the types of knowledge and skills needed in our economy, higher education will need to continue to evolve the ways in which we understand and measure competency.

To maintain a competitive workforce and build a more inclusive and equitable system of postsecondary education, institutions of higher education must begin to better understand and acknowledge the fullness of each learner's lived experiences. Capella's direct assessment competency-based program, FlexPath, is on the frontlines of this work. I look forward to following this work as it progresses.

Louis Soares is Chief Learning and Innovation Officer at the American Council on Education.

Letter from Dr. Richard Senese, President of Capella University

College students are continually becoming more diverse, with higher education now working to serve learners of all ages from a broader range of racial, socioeconomic, and cultural backgrounds than ever before. But ensuring every student has the opportunity to pursue their academic and career aspirations is a complex endeavor, awash with both new challenges and possibilities.

Capella University has long served a community of adult learners, who must often juggle their academic lives with work obligations, caretaking responsibilities as well as military and community service. These so-called “nontraditional students” are fast becoming the new majority, and we are finding the methods we have designed to better help our students graduate and find rewarding and sustainable careers, also hold immense potential for learners across higher education.

Increasingly crucial to our approach is FlexPath, our direct assessment, competency-based education (CBE) program. In our mission to support adult learners and workers with unique and affordable education pathways, we have created a sustainable, high-quality method that allows students to complete their education at a pace and learning style best suited for them.

I am inspired by our current FlexPath learners—as well as the more than 20,000 students who have already graduated from FlexPath since 2013—who can complete their education through our flexible curriculum with no wasted time, money, or effort. At Capella, we continue to take the steps necessary for making the bold changes required for today’s learners, most notably, by cultivating an environment for personalized learning ultimately aimed at better pathways to employment.

With this brief detailing the impact of FlexPath so far, we continue to advance CBE research and policy while recommitting ourselves to breaking down barriers to educational advancement. I have seen firsthand how the use of CBE in our curriculum has opened new doors for our diverse body of students. We hope the outcomes highlighted in this brief demonstrate the lasting potential of the model to the broader higher education sector.

About Capella University

Capella University is accredited by the Higher Learning Commission. Founded in 1993, the university is dedicated to providing flexible, professionally aligned online degree programs designed to help working adults advance in their careers. As of December 31, 2021, more than 40,000 students were enrolled in Capella's bachelor's, master's, doctoral, and certificate programs. Known for its commitment to learner success, academic quality, and innovations in online education, Capella pioneered competency-based direct assessment programs, allowing students to learn at their own pace.

About the Authors

Richard Senese, Ph.D., L.P., is president of Capella University. His work has expanded the university's FlexPath offerings, which provide one of the country's foremost direct assessment, competency-based learning formats, providing students the ability to have greater control of setting their pace. Senese has been a leader in academic innovation, including establishing the Capella Fellows program that helps participants build the talent and leadership skills required to mitigate social and economic inequities in the communities they serve. Active nationally in higher education leadership, Senese serves on the Presidents Forum board and is treasurer of LGBTQ Presidents in Higher Education. He is a board member and past board chair of the Center for Victims of Torture and has served as a member of the foundation's development committee. In 2019, the *Minneapolis/St. Paul Business Journal* recognized Senese for his commitment to the LGBTQ community. A former professor at St. Olaf College, Metropolitan State University, and the College of St. Scholastica, Senese has held leadership roles at the University of Minnesota Extension and was associate dean of Capella University's Harold Abel School of Psychology.

Jillian Klein is senior vice president of government and external affairs for Strategic Education, Inc., where she works with internal and external partners on higher education policy, postsecondary innovation, and federal financial aid compliance on behalf of Capella University and Strayer University. She was part of the team that created Capella University's competency-based direct assessment program offerings (FlexPath), including the first bachelor's and master's level direct assessment programs approved to offer federal financial aid by the Department of Education. Klein received a Bachelor of Arts in business administration from Augustana College in Sioux Falls, South Dakota, and a Master of Arts in systematic theology from Luther Seminary. She is an alumna of the Policy Fellows program at the Humphrey School of Public Affairs at the University of Minnesota, and in 2019, she participated as a nonfederal negotiator in the Department of Education's negotiated rulemaking on both the Accreditation & Innovation Committee and Distance Learning Subcommittee. Klein lives in Minnesota with her husband and two young girls.

About FlexPath

In 2013, Capella University became the first institution in the country to be approved by its accreditor and the U.S. Department of Education to award federal financial aid for direct assessment programs at the bachelor's and master's levels. Capella's direct assessment model, called FlexPath, is built on the university's strong assessment infrastructure and long history of offering professionally aligned, competency-based programs. The programs have served over 20,000 graduates.

FlexPath uses a mastery model, which requires learners to demonstrate proficiency in all competencies before they can complete their degree. Students work closely with faculty, graduate assistants, and coaches throughout their courses, and their programs allow for the demonstration of critical competencies using assessments that are based on activities required in a given profession. Programs operate on a 12-week subscription period basis, which gives students an all-you-can-learn format for pursuing their degrees.

Since the inception of FlexPath, the university has been committed to sharing key learnings and insights gained through implementation.

Introduction

In 2019, Capella University [released a report](#) highlighting the first five years of promising outcomes from FlexPath, the university's signature direct assessment competency-based education (CBE) program. Many of those learners might have never made their way to—and through—higher education if they did not have the flexibility that direct assessment provides. The report concluded that direct assessment CBE allows students to move at the pace that makes the most sense for them, often speeding up time to a degree and reducing cost. We urged government leaders and the higher education field to invest in the kinds of flexible educational pathways that could better meet the needs of an ever-changing student demographic.

In the time since the release of that report, global events have fundamentally changed the higher education landscape and the learners whom colleges and universities serve. The need for innovation is now all the more important. The United States has grappled with the public health threat of a global pandemic, a subsequent economic crisis, and an extended period of disruption in global labor markets. The economic fallout of the pandemic, ongoing worker shortages, and the prospect of a recession have created unprecedented learning needs for adult working learners, who must consider gaining new skills and credentials if they are to thrive in a rapidly transforming world of work.

According to the [Pew Research Center](#), 53% of those who quit their jobs in 2021, during what has been popularly called the “Great Resignation,” did not leave the workforce but rather changed their occupation or field. This could create immense opportunity for institutions to provide the upskilling and learning experiences workers desire and need to advance their careers.

At the same time, Americans view cost as the [biggest barrier](#) to attending college. Colleges and universities are now devoting more resources to eliminating barriers to equitable access, completion, and career outcomes for adult learners. They are looking for new ways to ensure these students can quickly gain the education and training they need to succeed in the workforce while minimizing financial risk.

This brief further explores the possibility of the direct assessment CBE model serving as a lever for better serving adult learners in higher education—and at scale. It documents new results from Capella’s work, demonstrating that the direct assessment CBE model has a measurable impact on outcomes, especially for adult learners. It also explores possible explanations for why the underlying design of direct assessment CBE helps to drive student success, and it seeks to provide recommendations for how practitioners and policymakers may be able to accelerate the adoption of CBE.

This brief is not intended to be an exhaustive or a final and authoritative summary or set of conclusions. Instead, it is intended as an exploration of the issues—building upon existing scholarly and institutional research and findings on Capella’s outcomes achieved through the application of the direct assessment CBE model.

Competency-Based Education and Direct Assessment

Defining CBE

CBE enables students to acquire and demonstrate knowledge, skills, and professional dispositions by engaging through learning exercises, activities, and experiences that align with clearly defined and predetermined programmatic outcomes. It's a flexible model of learning that permits learners to earn credentials by demonstrating mastery through multiple forms of assessment, often at a personalized pace. The best competency-based programs are also designed to develop and measure high-demand skills, and they enable graduates to more clearly demonstrate their capabilities to employers.

Former U.S. Department of Education Undersecretary and current American Council on Education President Ted Mitchell has called CBE “the single-most-important innovation in higher education.”

Defining Direct Assessment

Capella University offers a direct assessment CBE model. Called FlexPath, this model enables the learner to demonstrate mastery of a topic and then move immediately on to the next course, rather than rely on credit hours or seat time as the basis for awarding credit. Direct assessment programs like Capella's provide even greater flexibility for students, enabling them to move through the material at their own pace. For students who master material more readily, direct assessment enables them to advance quickly through their education.

The focus on verified learning and achievement is particularly promising for busy adult learners who are often working full time and raising families while pursuing a degree, the majority of students Capella serves. Direct assessment CBE has the potential to transform the way we deliver and quantify learning—and to open a wider range of affordable educational pathways for today's diverse students.

Since launching in 2013, Capella has had over 20,000 FlexPath graduates. The university is currently one of only a handful of institutions approved by the U.S. Department of Education to utilize the direct assessment model.

Connecting to Outcomes for Adult Learners

Students enrolling in higher education today are more diverse in age, race, and income than any previous generation. Juggling multiple responsibilities—full- and part-time work, child or elder care, military or community service—is increasingly the norm. These learners bring with them multiple overlapping held identities that often defy traditional labels.

As the demographics of higher education continue to evolve, the adoption of CBE has grown as more institutions recognize how it can help them better serve the varied needs of today's learners. A 2020 survey from the American Institutes for Research and the Competency-Based Education Network found that more than 82% of higher education professionals surveyed expected CBE to grow nationally over the next five years.

In the 2019 paper *Moving Competency-Based Education Forward*, Capella University detailed findings from the first five years of its CBE program, underscoring the impact the approach can have on adult learners by saving time and money. The university found that students participating in its direct assessment CBE program completed their bachelor's degree programs 59% faster than similar learners in equivalent credit-hour programs. The median federal financial aid borrowed by a FlexPath student was \$11,739, 45% less than students in equivalent programs. In the last quarter of 2018, the two-year persistence for FlexPath learners was 23% higher than learners in equivalent credit-hour programs.

Three years later, and now serving many more learners, the impact remains consistent. It is increasingly clear that programs like FlexPath can help adult learners who are looking for ways to graduate more quickly and for less money while creating new opportunities for advancing their careers. New findings detailed in this brief will demonstrate just how great—and wide—an impact the direct assessment CBE model can have on adult learners.

How FlexPath Frequently Improves Student Outcomes

To better understand the impact of direct assessment CBE on student outcomes, Capella's data analysis team conducted a rigorous analysis of the outcomes of students participating in the FlexPath program and then disaggregated those outcomes based on race and gender. Through a process known as propensity score matching, researchers used statistical methods to create an artificial control group of credit-hour students and compared it to FlexPath students with similar characteristics. The results from this analysis suggest that a direct assessment approach to CBE can help accelerate completion and improve learning outcomes for all adult learners.¹

Importantly, these results were obtained while expanding the size of the program. FlexPath currently serves more learners than when the original paper was published, and success metrics have remained steady. The continued strength of FlexPath's results through this growth suggests that the benefits of the model remain as the model scales.

¹ Capella used a propensity score matching methodology in comparing FlexPath and GuidedPath students, adhering to prevailing standards for reliability. See page 22 for details on how this information was calculated. Although this information reflects the typical experience of a FlexPath student, competency-based, direct-assessment programs are inherently flexible, allowing for a wide range of student experiences. Capella is careful to educate prospective students that their own experience in the program will depend on a variety of factors, including how many transfer credits they bring and how quickly they move through their coursework. Outcome metrics included in this brief have been measured for students who started and completed their program between 2015 and 2021.

Time to completion



Bachelor's
50%
faster

The median time for learners in FlexPath **bachelor's** programs to complete was **50% faster** than for similar learners in equivalent Capella credit-hour bachelor's programs.

Master's
36%
faster

The median time for learners in FlexPath **master's** programs to complete was **36% faster** than for similar learners in equivalent Capella credit-hour master's programs.

Financial aid borrowed



Bachelor's
58%
less

The median federal financial aid borrowed by a **bachelor's** FlexPath learner was **58% less** than for similar borrowers in the equivalent Capella credit-hour programs.

Master's
39%
less

The median federal financial aid borrowed by a **master's** FlexPath learner was **39% less** than for similar borrowers in the equivalent Capella credit-hour programs.

Tuition expense



Bachelor's
65%
less

The median tuition billed to a **bachelor's** FlexPath learner was \$11,550. This is **65% less** than a similar learner in an equivalent Capella credit-hour program.

Master's
45%
less

The median tuition billed to a **master's** FlexPath learner was \$14,400. This is **45% less** than a similar learner in an equivalent Capella credit-hour program.

Equity Analysis

In a separate analysis using similar statistical methods, we found that Black and white learners are benefiting from FlexPath.

	 Graduation rate	 Time to completion
BLACK LEARNERS	<p>21.5% higher graduation rate</p> <p>For Black FlexPath learners who started their program from Q1 2016 through Q1 2018, the four-year graduation rate was 2,150 basis points higher (21.5%) than similar learners in equivalent Capella credit-hour programs.</p>	<p>13 months faster</p> <p>The median time to complete for Black learners enrolled in FlexPath bachelor's programs was 13 months (42%) faster than for similar learners in equivalent Capella credit-hour bachelor's programs (31 vs. 18 months).</p>
WHITE LEARNERS	<p>30.5% higher graduation rate</p> <p>For white learners who started their FlexPath program from Q1 2016 to Q1 2018, the four-year graduation rate was 3,050 basis points (30.5%) higher than similar learners in equivalent Capella credit-hour programs.</p>	<p>15 months faster</p> <p>The median time to complete for white learners enrolled in FlexPath bachelor's programs was 15 months (48%) faster than for similar learners in equivalent Capella credit-hour bachelor's programs (31 vs. 16 months).</p>

	<p>Compared to other Capella programs, the FlexPath delivery method has a higher four-year graduation rate for both white and Black learners.</p>
---	---

How—and Why—it Works

Initiatives focused on support, flexibility, and speed all contribute to the model's success. Subscription-style pricing can make it seamless for students to start and stop as their personal and professional responsibilities fluctuate. Learners can take two concurrent courses in most programs, starting the next course immediately upon completion rather than waiting for the next academic quarter to begin. There is no limit to how many courses a student completes during each billing session. This flexibility allows learners to move at their own pace—moving through a course faster or slower, based on the content, their understanding of it, and the time they can devote to learning. This is especially beneficial to working adult learners, whose busy schedules may necessitate spending more time in a course or, alternatively, who may desire to complete a course as rapidly as possible to gain the skills and credentials they need to quickly advance their careers.

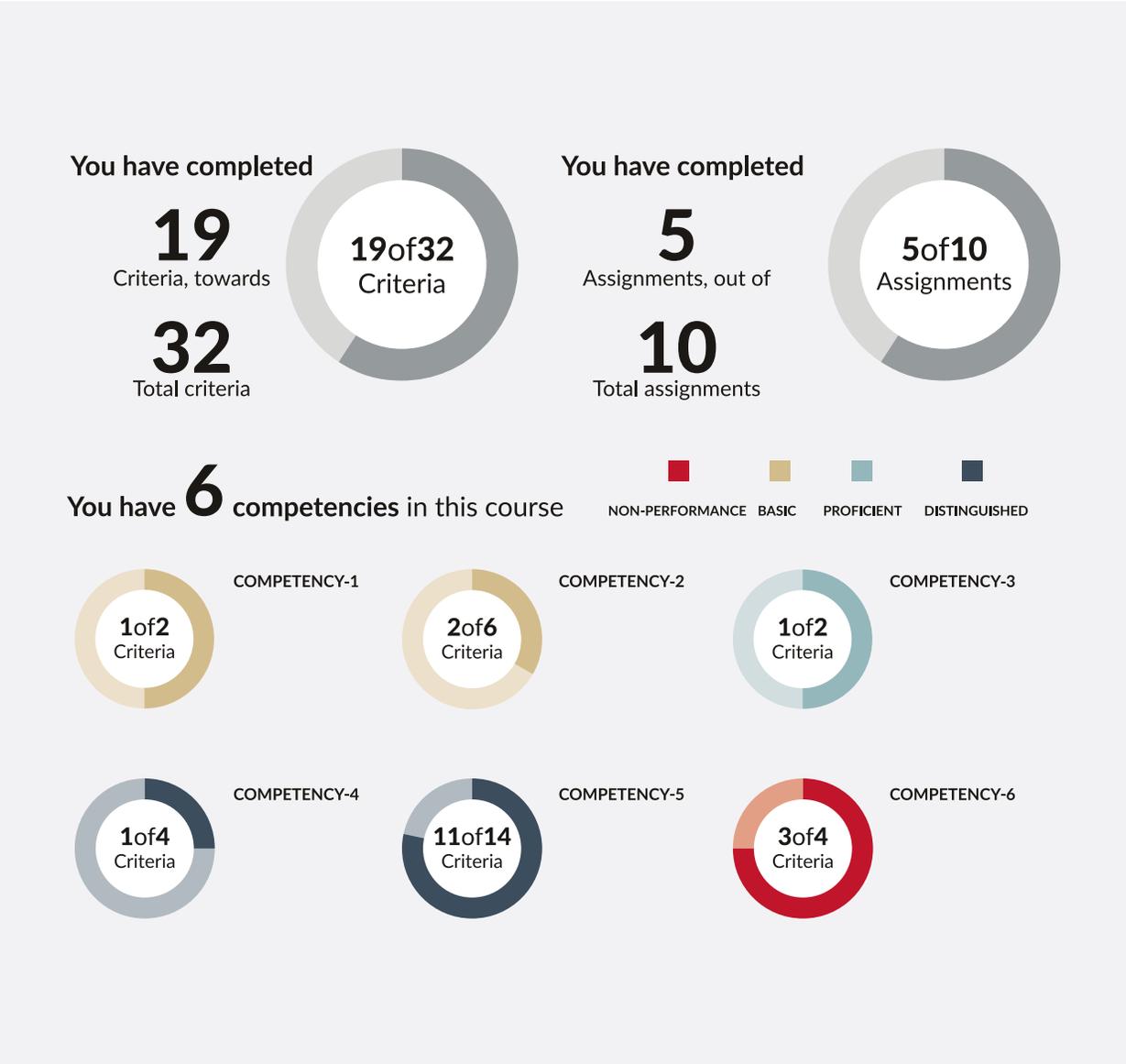
While students are moving at their own pace, wraparound student support ensures they are never alone. FlexPath highlights the criticality of the whole ecosystem of learning for students; it's not just the faculty who help students find success in postsecondary education. Coaching can also offer support with the daunting undertaking of seeking out a degree. Students set their own assignment deadlines, and academic coaches can help keep them on track with their goals. Formative assessments built into the course help students gauge their understanding of the material, providing real-time feedback to help increase a student's level of success on each summative assessment.

Many programs offer faculty-qualified graduate assistants who help students improve their understanding of the academic content. Faculty also provide ongoing outreach to encourage students, acting as an accessible resource and sending learners supplemental materials as needed to advance the students' understanding of course content. Institutionally, coordination across the student support teams and student-facing staff helps remove barriers to success.

All coursework is evaluated through competency-based assessments. Learners must demonstrate proficiency in all course competencies, which illustrates the rigor of the FlexPath modality. Each assessment is broken down into competencies defined as the skills, knowledge, and professional disposition required to show mastery of a topic or course. They are all assessed with one of four performance levels: distinguished, proficient, basic, or nonperformance. In addition to faculty members, a variety of institutional resources are available to help students,

including coaches, a writing center, and a quantitative skills center. Additionally, Capella can assess and recognize students' prior learning from before enrollment, ensuring students have no wasted time, money, or effort.

Meanwhile, the university's competency map allows students to track their progress and see how their studies align with skills that many employers value. This is a valuable tool for learners, both during their educational programs and upon completion of their credentials, because students have a visual representation of their competency attainment and mastery level that they can share with employers.



Takeaways and Recommendations for the Field

Our recent findings show that FlexPath can have a considerable impact on the outcomes of all learners. Higher education on the whole has a long way to go, however, to fully embrace this promising innovation and bring it to scale. Below are four recommendations on how practitioners and policymakers can accelerate the adoption of CBE while ensuring its place as an effective tool for better serving all learners.

Rethink Finances

Higher education still too often favors the four-year, full-time residential student who is working toward a four-year bachelor's degree. It's a system that ignores the diverse experiences and needs of adult learners, who are quickly becoming the majority and who require a more flexible approach. These learners need an approach that allows for completing their education at a pace and learning style best suited for them, whether that means moving more quickly through a program to save money and time, or more slowly in order to adapt their learning around their already busy lives.

But traditional financial aid rules, built on outdated metrics like credit hours and seat time, often rule out direct assessment programs based on CBE that are designed to help learners do just that. We should reimagine the finances of higher education to allow for these more flexible, affordable, personalized programs.

Release and Evaluate Data

To fully gauge the impact direct assessment CBE programs can have on closing attainment gaps, we need far more data. Other institutions should analyze their programs as Capella has in this brief and its earlier reports, and they should release those findings to further higher education's shared understanding of the true potential of direct assessment CBE.

Couple with Support

Self-paced doesn't mean students should be left to navigate their education on their own. While flexibility is a large part of why CBE can work so well, the best programs are undergirded by a robust system of student services and resources. Direct assessment CBE programs should be paired with hyper-personalized advising, coaching, and other support services. Importantly, these resources should be easily accessible wherever and whenever busy learners need them most. Capella, for example, has been sure to invest in consistent communication, frequently reaching out to students through text, email, faculty messaging, and phone calls to effectively deliver the right message to students at the right time.

Align with DE&I Initiatives

The events of the last two years have galvanized higher education, and colleges and universities are doubling down on diversity, equity, and inclusion initiatives. Institutions should position CBE programs as explicit and important components of this work. These programs more fully account for the complexity of learners' academic and life experiences. And when implemented thoughtfully, direct assessment CBE programs can help avoid the implicit bias that is plaguing much of higher education, leading to stronger outcomes for all students.

Credit for Prior Learning

Direct assessment programs like FlexPath exist along a growing continuum of solutions that help learners demonstrate competency. Chief among those is credit for prior learning (CPL), which seeks to recognize college-level learning that students have acquired before enrolling at an institution, including from their careers and military training. The Council for Adult and Experiential Learning (CAEL) has described CPL and CBE as “ideal companion tools that help postsecondary programs focus on student learning while being highly flexible and student-centered.”

CPL has long been associated with better student outcomes for adult learners, including higher credential completion and cost and time savings. A study conducted by CAEL and Western Interstate Commission for Higher Education found that, when controlling for other variables, awarding CPL increased the likelihood of an adult student completing a credential by 17%. The boost was even larger for students at community colleges (25%) and minority-serving institutions (33%) for Latino students (24%) and recipients of federal Pell Grants (19%).

Despite the potential of CPL to improve outcomes, it is still vastly underused. Even at institutions participating in the study, only 11% of students had earned CPL. Black students, Pell Grant recipients, and students living in lower-income communities were least likely to have earned the credits.

At Capella, we have found that for students who earn CPL credits, those credits increase the affordability of their degrees. The university also allows students to transfer previous college credits to cover up to 75% of their bachelor’s degree, saving learners significant time and money.

Conclusion

In [an interview](#), Charla Long, executive director of the Competency-Based Education Network, said that solving the decades-long inequities in higher education is going to take new and bold ideas.

“We can’t think the same model that led to these inequities will be the solution to these inequities,” she said. “We need to get comfortable with change so we can better serve our students and the learners who need us most. Yet, this change is difficult to achieve.”

Direct assessment CBE could very well serve as a critical lever for this kind of change. The impact of CBE programs is still an emerging field of research, but early evidence suggests it may yet provide us with a concrete tool for advancing opportunities for adult learners in higher education.

Methodology

Capella used the propensity score matching methodology in developing its comparisons of FlexPath and GuidedPath students. A random sample of 1,000 FlexPath students was used to identify a control pool of 1,000 GuidedPath students using propensity score matching. Simple random sampling was used, which means that the selection probability was the same for all students in the sample. The final sample size was determined based on literature-recommended guidelines and was the largest sample pool for which it was possible to build an equivalent pool of high-quality matches.

The quality of the propensity score match between the sampled pool and the control pool was well within the literature-recommended thresholds for usability. The sampled population included only FlexPath students who began and completed their degree at Capella University in a FlexPath program. The propensity score matches were sourced from a pool that included only GuidedPath students who began and completed their degree at Capella in a GuidedPath program that has a FlexPath counterpart (excluding doctoral and certificates). The population includes students who started their program on or after January 1, 2015, and graduated on or before December 31, 2021.

Propensity score matching is a nonexperimental causal inference technique. It attempts to balance the treatment groups on the confounding factors to make them comparable so that we can draw conclusions about the causal impact of a treatment on the outcome using observational data (Luvsandorj, 2021). Steps include collecting data, estimating propensity scores, matching records, evaluating matching, and evaluating the treatment effect on the outcome.

Data Collection: The aim is to collect data on all possible confounders. While there is much we do not and cannot know about Capella learners, we assembled a variety of learner data including demographics, program, transfer credits, cohort data, and payment information using internal data sources. We also included Social Vulnerability Index (SVI) data from the Centers for Disease Control and Prevention website. SVI is assignable to learners by zip code.

Propensity Scores Estimation: This involves estimating the probability of a learner choosing FlexPath based on the collected characteristics. The output is a propensity score for each learner representing this probability. This was completed for four separate populations: bachelor's learners who started 2015–2021, bachelor's graduates who started and completed 2015–2021, master's learners who started 2015–2021, and master's graduates who started and completed 2015-2021.

Records Matching: This process takes a sample of FlexPath learners from each population (5,000 from the full populations and 1,000 from the graduated populations) and matches a GuidedPath learner to each FlexPath learner by propensity score. The propensity score allows us to match based on a sole variable, and we end up with an equal population of FlexPath and GuidedPath learners, balanced for confounding characteristics. Each population is evaluated individually, and only variables that prove helpful in the matching process are kept.

Matching Evaluation: The matched populations must be inspected to see whether they are more comparable in terms of confounding variables. We compare the absolute mean standard difference between the variables for each matched population versus its full population. This requires confirmation that the matched populations are more similar than the full populations. Ideally, the absolute mean standard difference should be within .05 for the matched population.

Evaluation of the Treatment Effect on the Outcome: With the matched populations we can compare GuidedPath and FlexPath outcomes with confidence, knowing we have balanced confounding variables as much as possible.