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NEXT–GENERATION CBE

SUPPORTING SUCCESS FOR UNDERPREPARED COLLEGE LEARNERS

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JOBS FOR THE FUTURE

BY JOE DEEGAN

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I would like to thank the developmental education students I have met over the years. These students have taught me invaluable lessons about the assets and challenges of opportunity youth and adult learners in community college.

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ABOUT THE SERIES

JFF is leading an effort to explore how competency-based education (CBE) can be adapted to meet the needs of underprepared adult learners in order to help members of this large and economically vulnerable group earn college credentials and advance in the U.S. workforce. With support from the ECMC Foundation, JFF is producing a five-part series, *Next-Generation CBE*, that identifies strategies for expanding and strengthening CBE for students who have been historically underrepresented in higher education. Previous papers in this series are linked here:

- *Next Generation CBE: Designing Competency-Based Education for Underprepared College Learners*
- *Building on a Strong Foundation: Linking CBE with Innovations in Developmental Education Redesign*
- *Paving the Way: Remaking Entry for Postsecondary Success*

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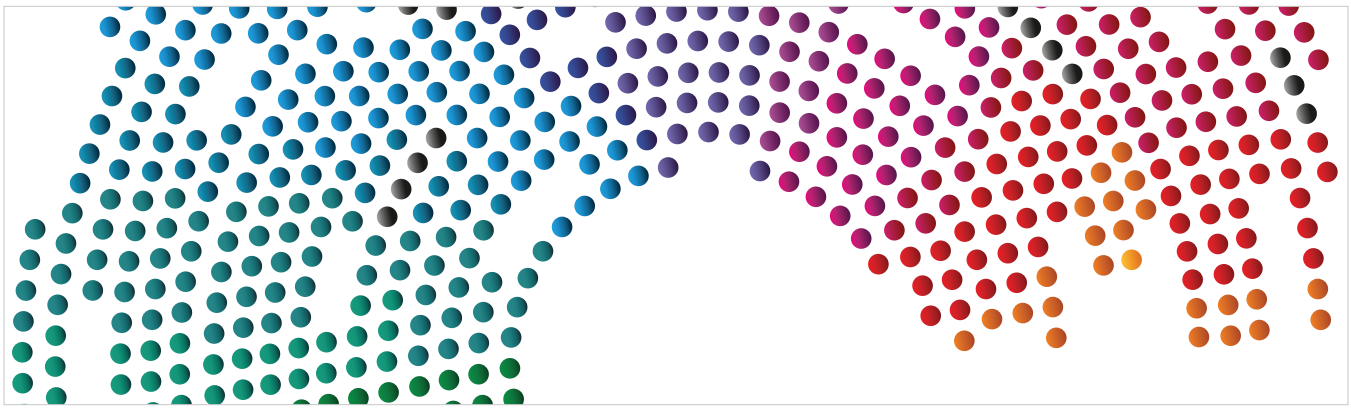

INTRODUCTION

This paper is one in a series exploring the potential of competency-based education (CBE) to increase college completion—and the economic prospects that come with a postsecondary credential—for underprepared adult learners.

More than 2 million underprepared students who enter community college each year must take remedial classes because they lack college-level skills in reading, writing, or math. Many grow discouraged with developmental education and leave without ever taking college coursework. But research increasingly shows that with the right systems in place, many can persist and go on to earn postsecondary credentials that lead to good jobs.[1]

Adapting CBE to meet the needs of underprepared learners requires careful planning, and incorporating well-designed, comprehensive student support services is absolutely critical. Sometimes called "wraparound supports," these services enable students to overcome both academic and non-academic barriers to success.

With support from the ECMC Foundation, JFF reviewed the evidence base for student supports and interviewed leading practitioners in both developmental education and CBE. This paper outlines the challenges facing underprepared learners and recommends specific strategies to support them in a CBE model for developmental education.

What Is Competency-Based Education?

CBE models are flexibly paced programs of learning customized to individual needs. They measure progress toward a degree by what students demonstrate they know and are able to do, as spelled out in specific competencies, rather than by earning a passing grade at the end of a traditional time-bound course.

Who Are Underprepared College Learners?

Underprepared college learners are individuals who enter postsecondary education without college-level skills in at least one foundational area: reading, writing, or math. Roughly 2.4 million community college students each year—about 60 percent of the incoming population—are required to take at least one remedial course in English or math before starting college-level coursework. Only 28 percent of these students earn a credential within eight years.[2] Many juggle school with work and family responsibilities.

How Can CBE Help College Students Without College-Level Skills?

A previous report in this series explored national efforts to increase the success of underprepared students by redesigning developmental education in community colleges. JFF concluded that a co-requisite model of developmental education, in which students begin college-level courses immediately while receiving supplemental remedial instruction, has the most potential to be paired successfully with CBE.[3]

What Are Student Support Services?

Student supports are services that address the interrelated barriers preventing underprepared learners from succeeding in postsecondary programs. They have evolved beyond core college services such as academic advising, the registrar's office, and financial aid. Examples include individualized student success coaching, college success classes, and comprehensive strategies combining multiple, mutually reinforcing elements. These supports can be provided by the college or offered through partnerships with outside organizations.

CHALLENGES FACING UNDERPREPARED LEARNERS

Underprepared learners are a diverse population with a wide range of strengths and challenges (see box "Who Are Underprepared College Learners?"). Colleges differentiate these students and assign them to developmental education classes based on academic testing. But as a group, they also differ from their peers in non-academic ways.

Student Characteristics and Life Circumstances

Specifically, underprepared learners are more likely to have characteristics that compound their risk of dropping out. Many come from low-income backgrounds, are the first person in their families to attend college, or belong to other groups that historically have been underrepresented in higher education.[4]

Research shows that many students placed into developmental education have also had different academic experiences than their non-developmental peers.[5] It is likely that they took fewer academic courses prior to college and may not have previously identified as college-going at all.[6] More of them have learning disabilities, whether officially diagnosed or not, that have interfered with their performance in school.[7] Many did not enter college immediately after completing secondary education—gaining work experience or caring for a family member instead.[8] Nearly all have faced repeated academic difficulties in the past.[9]

Meanwhile, developmental education students are subject to the same daily challenges that face community college students overall. One-third of community college students' household incomes are at or below the poverty level and many have difficulty meeting basic needs, such as food, housing, or health care.[10] One study of emergency grant programs at community colleges found that students also frequently requested assistance with transportation and child care.[11] The complex and unpredictable way that life circumstances affect these learners can make it difficult to attend class regularly or sustain long-term participation.

Complications of Program Design

Traditional developmental education designs often add to the barriers that underprepared students inherently face. For example, a majority of entering students believe that they are academically prepared for college and will attain their credential on time, despite the likelihood that they will test into a sequence of developmental education courses, which, in turn, dramatically decreases their chances of earning a credential within eight years.[12] This clash of

expectations versus reality can be especially frustrating when remedial classes feel like a repeat of high school, leaving students to question their belief in their chances of academic success.[13]

Underprepared students bring an extremely wide range of skills to any developmental education classroom, making it difficult to match course content to individual remedial needs. Even students who achieve the same overall score on placement exams often have significantly different skill levels in different areas. For example, some developmental students may struggle with algebra but have a solid understanding of geometry, or vice versa.[14] Developmental education faculty are asked to meet challenging instructional demands—not only managing a diverse group of learners but also addressing gaps in non-academic skills, such as time management, organization, and collaboration.[15]

Further, at community colleges that implement compressed developmental sequences that stack multiple developmental classes into one semester, students face acceleration challenges.[16] Pacing in these courses is tied to the length of the term. A learner who falls behind will likely have greater difficulty catching up than in traditionally paced classes. Meanwhile, without any way to account for prior learning within the course, students who enter with stronger skills in one area may be forced to repeat content that they already know.

Figure 1: BENEFITS AND CHALLENGES OF CBE FOR UNDERPREPARED LEARNERS

Source: JFF Research.

CBE-Specific Challenges

A CBE approach would resolve some of the complications of traditional developmental education design while, at the same time, introducing new challenges (see Figure 1). For example, the flexible pacing that allows students to slow down to accommodate their life circumstances might lead to a procrastination problem, where students set a pace too slow to support success. The technology that enables many CBE programs to customize learning may pose a barrier to students who have been known to struggle in online or hybrid models.[17] The CBE emphasis on individual progress might disrupt the peer learning effects that have been shown to help groups of developmental education students who are all facing the same material at the same time.[18] These challenges will require carefully designed solutions to ensure students can get the most from a competency-based approach.

STUDENT SUPPORTS TO IMPROVE OUTCOMES IN DEVELOPMENTAL EDUCATION

Innovators in the traditional developmental education field have already demonstrated that comprehensive support services can bolster the success of underprepared learners.[19]

Here, we profile four of the most well-researched approaches to student support in developmental education: personalized coaching; college success classes; monetary incentives; and comprehensive support systems, a strategy that features several interrelated elements.[20]

Personalized Coaching

Coaching—sometimes referred to as college mentoring, intrusive advising, or enhanced advising—has been shown to help developmental education students achieve better outcomes than traditional advising. Multiple studies of coaching models for developmental students have found positive effects on college-credit accumulation, a key metric for assessing progress toward completion.[21]

Coaching models vary considerably, ranging from semi-automated "nudging" via text message and email alerts to intensive, personalized case management approaches. Coaches help students navigate the bureaucracy of their institutions and often make referrals to both internal supportive services, such as financial aid or academic tutoring, and external services offered in the community. One coaching expert we interviewed stressed that the most successful coaches are well integrated into their campuses and proactive about following up on referrals to providers.[22]

Technology-informed coaching, where coaches have access to critical data (including early warning indicators of academic risk and real-time progress information), has been shown to improve long-term outcomes for blended groups of college-ready and developmental students across multiple institutional types.[23] Early warning indicators can include student characteristics, grades, and attendance. Where colleges are using a learning management system, the indicators are more granular, such as identifying learners who have not consistently logged in to the platform or completed required tasks.

High-quality coaching programs share some common characteristics. Most invest in ongoing professional development and training for coaches, ensuring that they remain up to date on best practices and

institutional policies. Coaching staff serve students individually but work from a common advisement model, guiding which coaching activities should happen at key points in a student's process. Coaches reinforce messages about perseverance and timely completion to create a positive organizational culture within the program.

College Success Classes

Many colleges require developmental students to take a class geared toward addressing their non-academic skills, such as time management, test taking, communications, and long-term planning.[24] Just like coaching, success classes vary widely in format, content, and staffing. Some offer a single credit, while others offer up to three credits. Most are taught by adjunct instructors, but some models employ student affairs staff members or team-teaching with instructors and advanced students.

Participation in these courses has been demonstrated to improve the rates at which developmental education students attain credentials, persist in college, and transfer to university systems, though performance can vary from college to college.[25] Studies indicate mixed results as to the longevity of the positive outcomes, but well-structured classes can protect against diminishing effects.[26] The highest-quality examples are credit-bearing courses designed in collaboration with disciplinary faculty at the college and emphasizing applied learning approaches.[27] The courses can help learners decide on a meta-major and take ownership of their pathways to a credential. For example, the course could help a student discern her interest in a health-related career and steer her toward enrollment in gateway courses that are compatible with several specific health occupations, such as nursing or medical laboratory support.

Personalized coaching can help underprepared learners stay in college.

Financial Incentives

As the profile of developmental education students suggests, the cost of even the most-affordable postsecondary programs can be a serious financial strain for underprepared learners. Expenses like technology, fees, reliable internet access, and required textbooks add up quickly, as do the opportunity costs of spending valuable time in the classroom, in transit, or studying. Even with financial aid awards, many students have unmet needs that lead them to reduce their course loads or take on more paid work—two choices that have both been shown to negatively impact their likelihood of completion.[28]

Several programs have successfully used financial incentives programs to both alleviate financial pressure and encourage students to engage with their programs of study. Incentives are usually structured in the form of performance-based scholarships, but they can also take the form of cash awards or in-kind support like transit passes. Since 1991, at least 14 states have implemented performance-based scholarships of some type.[29]

The evidence on incentives is promising. Out of six large studies of incentive programs reviewed by the Institute of Education Sciences, part of the U.S. Department of Education, all six demonstrated a positive effect on enrollment rates. In addition, two showed increased credential attainment rates, and three showed a measurable increase in college-credit attainment during the first year.[30] Increased first-year credit attainment is linked to timely completion, regardless of a student's preparation level.[31] Another study by MDRC demonstrated that a performance-based scholarship program combined with tutoring increased students' rate of progress through developmental mathematics by 10 percent compared to a group receiving standard services.[32]

A Comprehensive Strategy

The most effective approach to ensuring developmental education students remain on track is to integrate several support systems into a strong, coherent model.[33] The Community College

Research Center has termed this approach "SSIP: Sustained, Strategic, Intrusive and Integrated, and Personalized."[34] Developmental education students generally face multiple barriers to success. By tailoring support programs to systematically address all the most urgent needs of the population, some colleges have achieved unusually strong results.

The most-cited example is the Accelerated Study in Associate Programs at City University of New York (CUNY). It combines full-time and intersession enrollment requirements, consistent messaging about timely completion, enhanced advisement, college success classes, and financial assistance to create a robust support framework for all students who opt in to the program.[35] Advisement in the ASAP model is particularly notable. ASAP advisors work only with ASAP students and have small caseloads (usually fewer than 100 people). They are trained to perform a wide variety of functions, spanning the spectrum of roles outlined in the advising and counseling continuum above.

The educational outcomes of the ASAP program reflect the comprehensiveness of the program. An MDRC study, validating CUNY's previous internal analysis, showed that participation in the program led to increased likelihood of completing developmental education (17 percent more likely), an increase in earning college credit (22-percent increase in credits earned), and an almost double likelihood of credential attainment within 3 years (40 percent likelihood compared to 22 percent).[36] These outcomes were expensive individually but economical at scale. The total cost of the program added more than $16,000 per student over 3 years, but the overall cost per degree was still about 11 percent less than for non-ASAP students because students finished in less time and did not enroll in unnecessary coursework.

Though the combination of interventions makes it difficult to determine which individual strategies within ASAP are most effective, it is clear that several overarching characteristics of the program are critical to its success. It is data driven, well implemented, comprehensive, and long lasting.[37] Donna Linderman, university dean for student success initiatives at CUNY and director of ASAP, adds one more critical attribute: "ASAP is holistic and relationship based. Advisors help students demystify and destigmatize developmental education." The most-effective comprehensive system of support for underprepared learners emphasizes both high-quality services and authentic relationships between advisors and students.

STUDENT SUPPORTS TO INCREASE SUCCESS IN A CBE MODEL OF DEVELOPMENTAL EDUCATION

The preceding strategies address the barriers that are inherent to traditional developmental education programs and the characteristics and life circumstances of developmental learners as a population. Yet, a competency-based program will be a fundamentally different educational experience for these students.

Combining the proven developmental education support strategies described above with specific interventions designed to help learners succeed in a competency-based environment will increase the chances of success for learners in a CBE model of developmental education. It is also critically important to ensure the strength of the college's student support infrastructure, which forms the foundation for the entire student support system.

Here, we describe three emerging CBE support strategies that should be incorporated into a CBE model of developmental education: enhanced coaching, pace charts, and peer supports. Then we outline the necessary student support infrastructure, which includes the effective alignment of college support offices, processes, staffing, and data systems.

Emerging CBE Support Strategies

Enhanced Coaching

Coaches play a primary support role in CBE. Many CBE programs assign one coach for the duration of a student's program. This allows the coach to learn about each individual over time and better interpret data about the student in the broader context of the student's unique qualities and entire program history. Participation in coaching is often mandatory, especially when students are completing online or hybrid course work. In qualitative studies of CBE programs, the students who report the most benefit from coaching are those who understand the coaches' role and have frequent contact with them.[38]

While coaches for many CBE programs work remotely, developmental education experts we interviewed cautioned against online-only programs. They stressed that underprepared learners do best when coaches can explain systems and resources in person. Coaches with Match Beyond, which partners with Southern New Hampshire University's College for America, use both a centralized physical space to meet with students and a suite of electronic communications tools to maintain contact with learners outside the center. The students do their coursework completely online yet receive support both in person and remotely.

Remote contact with students can range from lengthy online advisement sessions to a brief text message "nudge" reminding students about upcoming deadlines. Students should be able to access support seamlessly through multiple channels, such as email, text message, or live chat, in addition to in-person office hours, to accommodate unpredictable schedules or varying access to technology at home.

Pace Charts

Supporting learners in a flexibly paced environment poses a novel challenge. The progress of students in CBE programs often corresponds to discernable profiles, such as "sprinters," who accelerate through the program, and "flexers," who master competencies at a slower and sometimes uneven pace.[39] While sprinters may maximize the economy of a CBE program by achieving mastery more quickly, most

practitioners we interviewed did not recommend encouraging all learners to accelerate, especially during skill remediation. Rather, the program should strike a balance between accepting students' own inclinations and pushing them to achieve more challenging goals.

CBE programs accomplish this through the use of pace charts, which show learners how their rate of accomplishment measures against benchmarks in real time. Individual pace charts should be co-created by students and also serve to predict time to completion using aggregate data. One college that implemented pace charts for the first time in its CBE program saw a 20-percent reduction in the average time to course completion.[40] An effective support system should equip underprepared learners with tools to help them plan their own capacity for acceleration and hold them accountable to measurable goals. This includes initiating timely communication with students who get off track and helping them make a plan for extended disruptions due to life events.

Peer Supports

One of the complexities of a competency-based design is the naturally uneven advancement of students according to which competencies they have mastered. With flexible pacing, it is likely that students within the same cohort will be learning different topics at any given time. Though this might seem to disrupt the ability of students to provide support to one another (and thereby enrich their own learning), CBE practitioners have found that there are still ways to organize peer support in such a context. If the scale of the program supports it, peer support groups can be organized by competency rather than course section, so students from multiple sections who are all tackling a certain competency can prepare together.

At Salt Lake Community College, the College Academic Readiness course has had success using a learning lab environment to create opportunities for peer support. Students pay a low monthly subscription fee and work at their own pace on a personalized skill remediation program that is created for them by a faculty member. They can drop in to the lab as their schedules allow, and a qualified developmental education faculty member is always present, along with support personnel. While students are each working on their own individualized plans and receiving instruction, they have the opportunity to offer peer support at the same time.

Studies have also shown that even asynchronous online interactions between peers can have lasting benefits on learning outcomes when structured properly.[41] Moderators of such interactions should promote short, frequent discussions rather than long ones. Interactions that encourage the rapid exchange of posts within the period of a few minutes, and limit both the length of each post and total number of responses, lead to increased student engagement.

The Student Support Infrastructure

Building a comprehensive support system to facilitate the strategies above will require some rethinking of the way that community colleges traditionally support students. A college's existing support infrastructure forms the foundation for a CBE student support system for underprepared learners, and the empirical evidence in favor of a comprehensive support strategy is clear. All student-serving offices (such as financial aid, the tutoring center, and career services) contribute to student success in the CBE program, and all their efforts must be coordinated along the entire student experience. Consider every

> ***Support staff need regular, up-to-date data on student progress in order to be effective.***

opportunity for increasing the frequency and quality of communication within the support ecosystem, including co-locating services, using faculty and staff orientation and training, implementing shared data systems, and consistently seeking student feedback.

Leaders of these support offices are experts in the gaps that exist between services, but they may not understand how CBE courses can differ from traditional college experiences. Raising awareness will help, as will additional training on the nuances of competency-based models. Supplement their input with a student engagement strategy to identify opportunities for greater coordination or new services. The complexity of a competency-based design will place new demands on service providers, who will need to generate a shared vision for student support.

A Sequenced Support Process

CBE support systems often use the student's program journey as a way of organizing support services. In Sinclair Community College's AccelerateIT program, students receive specialized services according to their progress along a program pathway. Supports are differentiated according to five phases: admit, enroll, retain, transition, and complete.[42] When a student progresses into a new phase of the program, the change triggers a new set of support priorities. For example, a coach's priorities for a student just entering the program might include broad goal-setting and establishing an individualized timeline for the student. Those priorities would shift to academic supports and engagement monitoring in the first few months, and then to career exploration and work-based learning opportunities as the student approaches completion. A CBE design for underprepared learners should align with the student's journey through the program, with specific strategies accompanying specific program phases.

Defined Staff Roles

For some programs, building an adequate support system will involve changing faculty roles and creating completely new positions, such as learning coaches, who provide a level of personalized support surpassing a typical academic advisor. Though modern CBE programs vary widely, supports are typically distributed throughout academic affairs, student affairs, and other administrative offices. For example, College for America aligns the efforts of instructors, content specialists, peers, coaches, and mentors to create an ecosystem of proactive supports serving multiple functions.[43] This differs from a traditional classroom arrangement, where a faculty member manages academic performance and students seek support from student affairs and academic resource providers.

In one three-year case study of emerging community college CBE programs, researchers documented that institutional leaders went through several iterations of a staffing model before successfully balancing the roles of faculty and coaches.[44] In the absence of such clearly defined roles and responsibilities, critical information on student performance might never reach coaching staff, and the referral of students to supportive services (and subsequent follow-up) may happen unevenly or not at all. Organizational leaders

The Faculty Role In Student Support

A widely held myth about CBE designs is that they eliminate faculty jobs by delegating key functions to other staff or automating classroom activities. This is untrue in a majority of cases. First, most CBE designs are in fact faculty driven, with faculty members building curricula and assessments based on their past experience teaching course material.[45] Second, CBE programs protect faculty time. Disaggregating the faculty role can allow faculty to devote the most time to their individual strengths—as content creators, assessment designers, coaches, or lecturers, for example.[46] Yet research shows that completely removing faculty from student support can jeopardize student success.[47] Support personnel should act in concert with faculty to provide added capacity to serve the needs of learners.

should map specific responsibilities to coaches, faculty, and other support staff.

Data Systems

Good data and learning management systems (LMS) serve learners, faculty, and staff. Learners should receive clear, personalized information that demystifies complex program requirements.[48] Support professionals should get timely and relevant student data to coordinate their efforts. For example, at Sinclair Community College, CBE coaches receive weekly reports of their students sorted into high-, medium-, and low-risk groups. Students categorized as high risk may be logging in with lower frequency than they should be, falling behind pace, or experiencing a personal emergency. The Sinclair system uses student characteristics identified at intake, as well as other factors, to inform risk determinations.

It is important that all staff involved in supporting developmental learners are able to participate in implementing new data systems. Staff in each of the support offices can play a critical part in helping design systems and participate in train-the-trainer programs to spread adoption throughout the college. The greater fluency that staff have in identifying pertinent data, the more efficient the sharing of information and practice can be between support offices. ■

CONCLUSION

CBE has the potential to improve developmental education outcomes in community colleges. But in order to do so, it has to be carefully designed and implemented.

CBE is an inherently learner-centered model of instruction, but its unique characteristics require corresponding efforts on the part of support personnel to ensure that every student remains on track. Fortunately, the field of developmental education has pioneered and tested highly effective strategies for supporting underprepared learners and produced both a considerable body of evidence and a generation of experienced support professionals ready to adapt existing structures to the challenges of CBE.

At the same time, new evidence for effective practice in CBE is rapidly emerging, along with quality standards to ensure access and persistence. As further research into learner behavior in a competency-based design emerges, it will be possible to further refine these systems and strategies to support success for all students.

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