



RESEARCH REPORT

Supporting Community College Learners Online

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Executive Summary

In this report, we focus on understanding how community colleges are delivering innovative supports to their fully online learners. We find that three types of supports have the potential to facilitate success: academic and personal supports, engagement supports, and career-oriented supports. We interviewed research experts, college staff, and administrators to better understand how community colleges are delivering these supports to their fully online learners.

Background and Context

About one in three public community college students took an online college course in fall 2017,¹ up from 27.3 percent in fall 2012. Over that same period, the share of students enrolled in exclusively online courses grew from 10 to 13 percent.² Community college students' enrollment in online courses has increased for several reasons. Student demand for flexible education options to accommodate work and family, as well as changes in technology, the labor market, and the education landscape, are driving these shifts.

But students' increasing access to online coursework raises some new concerns. Evidence about how the online format affects long-term academic outcomes (such as credential attainment) among community college students is nascent. Some studies show challenges with course completion for fully online students (students completing courses or programs where all instruction takes place virtually). Students who already face disadvantages when enrolling in community college programs, such as students with low high-school grade point averages and those who require remedial coursework, are at a higher risk of dropping out when completing online coursework. For students taking classes in person, support services (activities and programs designed to encourage academic and career success) have been shown to help them succeed. This raises the question of how to best support online students.

Which Types of Supports Can Facilitate Success for Online Students?

Community colleges are working to support online students in several ways:

- **Academic and personal supports** can help online learners navigate their academic experience and address various other needs.

- To combat isolation among students, **engagement supports** can increase the connection between students and what they are learning (learner-to-content engagement), their instructors, and their peers. These supports are aimed at increasing engagement through online methods.
- **Career-oriented supports** in online courses and programs aim to help students succeed in the workplace, sometimes through work-based learning and practicum components. These supports are offered in for-credit, non-credit and employer-sponsored online courses and programs.

An important consideration spanning all three categories is the critical role that technology plays in the delivery of each type of support. The table below provides examples of each type of support. Further detail can be found in table 1 of the report on page 8.

TABLE ES.1
Examples of Academic and Personal Supports, Engagement Supports, and Career-Oriented Supports

Academic and personal supports	Engagement supports	Career-oriented supports
<i>Academic supports</i> <ul style="list-style-type: none"> ▪ Advising in program of study ▪ Advising for navigating academic experience online ▪ Course navigation and sequencing ▪ Subject-matter tutoring 	<ul style="list-style-type: none"> ▪ High-quality feedback provided to students ▪ Peer-to-peer forums and feedback ▪ Surveys for continuous improvement ▪ Professional development for online instructors ▪ Technology supports that enhance engagement 	<i>Career-readiness, -placement, and -immersion supports</i> <ul style="list-style-type: none"> ▪ Job search and placement ▪ Resume development ▪ Career assessments ▪ Mock interviews ▪ On-the-job training ▪ Technology and digital literacy training
<i>Personal supports</i> <ul style="list-style-type: none"> ▪ Automated alerts ▪ Teaching students how to apply for financial aid and find scholarships ▪ Connecting students to institutional and local resources 		<i>Supports for students in employer-sponsored programs</i> <ul style="list-style-type: none"> ▪ Support for course participation provided at employer site ▪ Manuals and guides to assist learners and employers

Promising Practices

This report features rich examples describing how colleges are providing support services for their fully online students through academic and personal, career, and engagement supports, and we explore the role of technology in providing these supports. From our conversations with practitioners and review of the literature, we have developed promising practices and recommendations, aiming to elevate for

community college staff and instructors, higher-education administrators, and policymakers strategies that can facilitate a positive online learning experience and can improve outcomes for students.

Academic and Personal Supports

- **Develop a robust orientation for online learners.** An important component of advising is getting students familiar with course and program requirements and the overall expectations of online learning. A deliberate, robust approach at the start of a program can help students better prepare for online learning.
- **Have an assigned advisor be the first point of contact for online students.** An assigned advisor can help online students connect with the institution, increase student awareness of the resources available to them, and provide referrals for specific supports from other institutional offices.

Engagement Supports

- **Establish standards for engagement with online learners.** Setting clear accountability metrics for college instructors before the semester begins that describe how they should engage with students helps ensure instructors understand the commitment required.
- **Collect survey feedback for continuous improvement of the online course experience.** Student surveys that assess the effectiveness of engagement and interaction throughout the semester can inform the continuous improvement of supports that increase engagement, in turn increasing students' chances of success.

Career-Oriented Supports

- **Involve employers in the development and implementation of online career-oriented services.** Employer partners must be invested in a program's success and inform colleges about the supports students need to be successful at work. Employers can demonstrate a strong commitment by mentoring online students, providing them with in-person work-based learning opportunities, or hiring program graduates, all of which help validate the relevance of online coursework and credentials earned online.
- **Leverage technology to facilitate work-based learning experiences online.** Tactile simulations and other work-based learning experiences have been made possible by advances in virtual

reality that can facilitate new online training opportunities for professions that have historically required on-site education, such as advanced manufacturing. Colleges should explore opportunities to expand work-based learning in the online context.

Technology

- **Don't let technology be the "tail wagging the dog."** Decisions should not be driven by the latest fads or new technologies. Rather, start with the learner's needs and related goals and strategies in mind, and let the selection of technology flow from there.
- **Consider how technology can supplement resources and ease advisor and college staff burden.** Colleges seeking to increase efficiency while delivering effective support services can use technology to automate some aspects of that delivery. This approach frees up time for supports that require personalized, one-on-one interaction.

Looking Forward

More research is required to understand the efficacy of fully online courses and programs and how to effectively support students completing coursework online. To successfully build better evidence, colleges should collect and transparently report on data about their own students' college and program-level outcomes, both in person and online, to measure improvements over time. Federal and state policymakers should champion transparent and consistent reporting across colleges. Researchers, policymakers, and funders should sponsor, conduct, and invest in further research that leverages this data and the perspectives of students involved in online coursework to help shape decisions at the college, state, and federal levels about how to channel scarce resources toward equitable, effective supports that are scalable and sustainable. Building more evidence about online student learning outcomes and the effectiveness of supports for online learners is an important first step toward linking education and training efforts with the skills employers need.

Introduction

This report explores the different types of supports provided to community college students online, the role of technology in providing supports, and the available evidence on different supports' effectiveness. We describe how colleges across the country are using innovative approaches for delivering supports to students in online courses and programs.

We aim to

- elevate for college staff and instructors, higher education administrators, and policymakers promising practices to support and improve outcomes for online learners; and
- encourage researchers, policymakers, and funders to sponsor, conduct, and invest in further research to build the evidence of how student support services and technology can be implemented in ways that positively impact student success.

We focus on the supports needed by students enrolled in public two-year community colleges who are completing courses or programs fully online (box 1).

BOX 1

Online Learning, Online Coursework, and Online Programs

In this report, we consider the term “online learning” interchangeable with “distance education.”

We define **online learning** as a learning environment in which the teacher and student are separated by time or geographic space, with that separation being bridged by technology that involves interaction between the student and the instructor.³ Online learning is part of a continuum of instructional approaches ranging from traditional in-person instruction to blended or hybrid approaches (involving both in-person and online instruction) to fully online coursework.

Fully online coursework refers to courses where all instruction takes place virtually. Students enrolled in fully online coursework may be completing online courses during the semester in addition to enrolling in courses on campus. We use **online programs** to describe fully online degree programs where instruction takes place exclusively online.

Some colleges may choose to offer courses or programs fully online but allow students to access in-person lectures or supports.

³ In this report, we are not focusing on correspondence education, in which an institution provides materials electronically or by mail to students that are separated from the instructor, where interaction between the instructor and the student is limited, and/or not regular and substantive, and courses are typically self-paced. Federal requirements defining both distance education and correspondence education can be found at “Accreditation in the United States,” US Department of Education, last modified January 28, 2020, https://www2.ed.gov/admins/finaid/accred/accreditation_pg12.html.

Community college student success in online coursework and degree programs can be defined in many ways. In this study, we primarily focus on student academic outcomes, which include course grades and pass rates, program completion and retention rates, and the attainment of two-year degrees and shorter-term credentials. However, student satisfaction with college programs as well as their demonstration of the career readiness and preparation needed for a successful transition into the workplace are also important goals, and we acknowledge the importance of assessing and improving these outcomes as we discuss success throughout the report.

Why Is It Important to Understand Supports?

As the share of students participating in online coursework increases, evidence is emerging that community college students may face challenges completing fully online courses and programs, and colleges and policymakers need to understand the kinds of supports necessary to facilitate their success. Recent studies have found that community college student outcomes (as measured by course completion rates and satisfaction) are worse in fully online courses when compared with those of students attending in-person or hybrid programs (Protopsaltis and Baum 2019). Other studies of large, statewide community college systems have found that male students, students with lower grade point averages, and black students are also less able to persist and earn strong grades (Xu and Jaggars 2013). These differences are even more pronounced for students enrolled in online developmental coursework than for those in college-level courses (Jaggars, Edgecombe, and Stacey 2013).³

But evidence also shows the positive impacts of online learning formats on longer-term outcomes for students, specifically two-year associate degree attainment (Johnson and Mejia 2014; Shea and Bidjerano 2016). Case studies of exemplary programs suggest that institutions that offer these programs can see positive impacts, such as increased efficiency and affordability (Bailey et al. 2018), but more research and data are needed to assess this rapidly changing landscape (Wu 2015).

More recent studies of fully online programs indicate they have positive impacts on student access but negative impacts on completion rates (Garrett 2018). A recent analysis by Eduventures found that on average, degree attainment eight years after enrollment is lower at institutions with very high percentages of fully online students, and completion is significantly less likely for older adults and other at-risk students (Garrett 2018).⁴

Completion is not just a challenge for students taking classes online. Recent data from the National Center for Education Statistics (McFarland et al. 2019) show that only about a quarter of all community college students graduate within 150 percent of the time expected for completion (e.g., within three

years for a student who is supposed to finish in two years). Low graduation rates are caused by several factors, such as poor academic preparation and challenges with developmental education (US Department of Education 2017); a lack of alignment between educational programs and the labor market (Van Noy and Cleary 2017); and the fact that so many students enrolled in college are also managing complex lives, including balancing work, education and school,⁵ or facing other challenges that may be connected to a low income.

Research has examined the important role that supports can play in ensuring community college persistence and completion (Karp 2016). Academic, personal, and career-oriented supports are at the center of community college systems change efforts.⁶ This report builds off prior research and was funded by a grant from JPMorgan Chase (see box 2).

BOX 2

The Urban Institute's Partnership with JPMorgan Chase

The Urban Institute is collaborating with JPMorgan Chase over five years to inform and assess JPMorgan Chase's philanthropic investments in key initiatives. One of these is New Skills at Work, a \$350 million multiyear workforce development initiative that aims to help people build new in-demand skills, prepare for the future of work, and succeed in an ever-changing world of work. The goals of the collaboration include using data and evidence to inform JPMorgan Chase's philanthropic investments; assessing whether its programs are achieving desired outcomes; and informing the larger fields of policy, philanthropy, and practice. As one of several resources Urban is developing for the field, this report and its accompanying fact sheets describe types of support that can improve outcomes for students in fully online coursework so that community colleges can identify promising strategies to implement as part of their programs.

College success initiatives with some of the strongest outcomes⁷ have focused on student support. But much of that research is limited to investigating supports that are effective for students attending college courses on campus. The growth in community college enrollment online and emerging evidence of poorer outcomes for fully online students suggests the need to better understand how to support these students. More research is needed to understand student outcomes in online coursework, who benefits from it and why, and what is needed to support success for students participating in fully online courses and programs.

About This Report

Our research questions for this exploratory and descriptive study are as follows:

- What are the different types of supports offered to community college students online and considerations for their implementation? What are the implications for academic and future labor-market outcomes?
- How are community colleges currently using technology to provide support for students enrolled in fully online courses or programs? How can technology be leveraged to increase access to supports?

To address these questions, our research team conducted 23 semistructured interviews with research and subject matter experts, college staff, and administrators to better understand the types of support services delivered to online learners, respondents' perceptions of the impact of student supports on student outcomes, considerations for sustainability and scale, and where we need to learn more to advance knowledge in the field. More information about the types of organizations and programs we interviewed representatives from, as well as a full list of the people we interviewed and the data we collected, is available in the appendix.

We start by describing what the evidence suggests about community college students and their outcomes and about the online student population and its growth in recent years. Then we outline the types of supports explored in this report. We conclude with a discussion of effective practices identified by the colleges we interviewed, emerging findings and recommendations, and areas for further research.

Community College Student Characteristics and Online Enrollment Growth

Community colleges play an important role in developing the future workforce: they provide students with the opportunity to train for immediate jobs or prepare them for additional education at a four-year college where they can earn a baccalaureate degree that has currency in the labor market. However, many community college students have barriers to credential and degree attainment, such as taking care of relatives or dependents, working full time while attending class part time, transferring between colleges before credential or degree completion, and requiring remedial coursework to address gaps in prior coursework. Students facing these difficulties now constitute the majority of the community college student population, and institutions must adapt to meet the needs of a changing student body.

Growth in Online Enrollment

As colleges attempt to address students' unique needs, they face financial pressure to compete for students because enrollment has been declining at two-year public colleges amid a tight labor market (National Student Clearinghouse Research Center 2019). Although growth in total student enrollment is down, colleges have seen increased online enrollment. One reason could also be that online programming can provide a lower-cost option for students than in-person courses (Bailey et al. 2018). For colleges trying to leverage technology to cut costs and provide flexible learning environments, online learning can be an attractive option, allowing institutions to pass lower costs on to students by reducing the need for printed materials such as textbooks and potentially limiting costs to the institution by not requiring brick-and-mortar classrooms.

The growth in enrollment in online courses and programs (up from 27.3 percent of students in 2012 to 32.9 percent in 2017)⁸ may also be partially explained by the changing demographics of the college population. According to data from the 2016 National Postsecondary Student Aid Study, two-year public college students enrolled in programs entirely online are older than their peers, more likely to be single parents, and more likely to be working full time while enrolled in school.⁹ These programs can provide students who require flexible schedules with access to more education options.

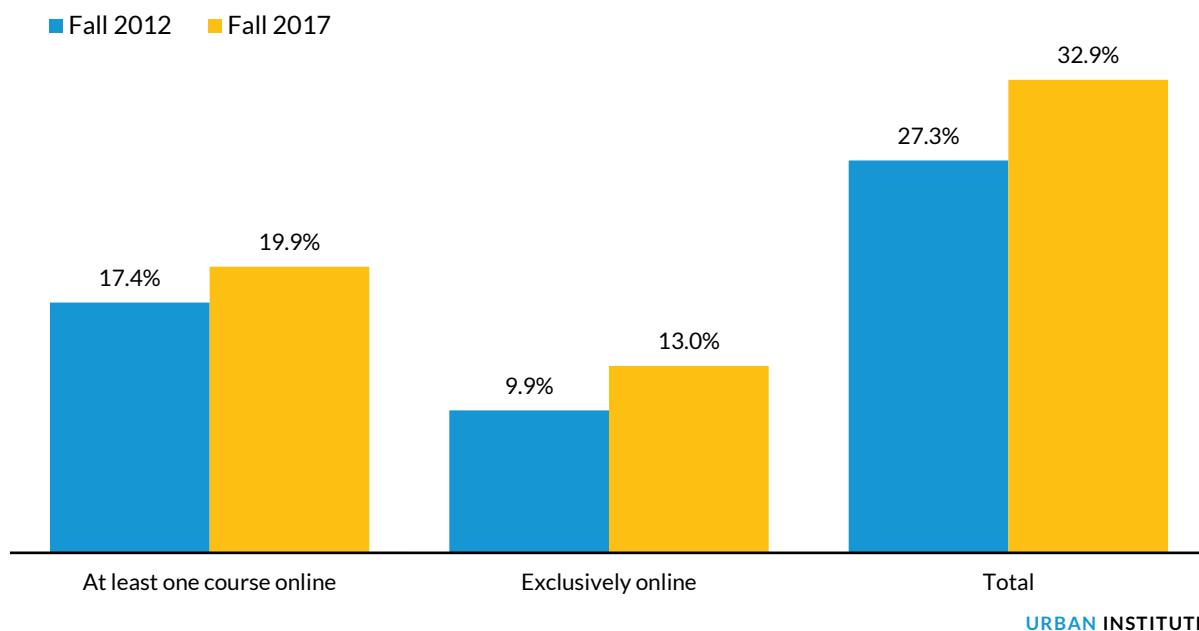
Some evidence suggests that pursuing fully online courses aligns with community college students' preferences. A recent study found that community college students are twice as likely as students at four-year colleges to prefer courses that are completely online; the study also found that women, students who work, and students in a domestic partnership or with dependents are more likely to prefer community college courses that are mostly or completely online (Gierdowski 2019). Some colleges are also choosing to only offer certain courses online.

In fall 2015, nearly all community colleges (97.3 percent) offered at least one online course or program. Evidence also shows there has been growth in online course taking and exclusively online enrollment in recent years (Babson Survey Research Group 2017). Figure 1 below provides a breakout of online learning enrollment among community college student learners in fall 2012 and fall 2017, which demonstrates increasing enrollment over time.

As described in figure 1, from fall 2012 to fall 2017, the share of community college students taking an online course grew from 27 percent to 33 percent. The same upward trend in enrollment is observed for students taking some, but not all, online coursework (at least one online course) and for students

taking exclusively online coursework. Thirteen percent of public community college students were enrolled in exclusively online courses in fall 2017 compared with 10 percent in fall 2012.

FIGURE 1
Community College Online Course Enrollment Data in Fall 2012 and Fall 2017



Sources: U.S. Department of Education, National Center for Education Statistics, IPEDS Spring 2013 and Spring 2018, Fall Enrollment component. See *Digest of Education Statistics 2013*, table 311.15, accessed January 24, 2020; and *Digest of Education Statistics 2018*, table 311.15, accessed January 24, 2020.

Notes: IPEDS = the Integrated Postsecondary Education Data System. Enrollment figures reflect enrollment in for-credit courses. IPEDS does not currently track data on the nearly 6 million students who are in noncredit programs (continuing education, workforce, developmental education, or community programs).

To address low graduation rates, colleges have undertaken several strategies aimed at better serving learners who desire increased access to education opportunities and flexible course scheduling options. The growth in community college enrollment and poor outcomes suggests the need to better understand how to effectively support these students.

Types of Online Supports Explored in This Report

As enrollment in online programs has grown, research and practitioner organizations that work with colleges have developed frameworks to categorize colleges' online programs and courses, and these frameworks are being used to evaluate and promote quality (Stewart et al. 2013).¹⁰ Stewart and colleagues (2013) completed a review of these frameworks and found that “student support systems were consistently listed among the important components of quality” (291). Other research has shown the importance of quality interactions and feedback students receive from instructors, fostering social connectedness (Barbatis 2010). Persistence in online programs is also related to students' flexibility to adapt in new learning settings (Hart 2012).

Based on our review of existing frameworks and research findings about protective factors that help students succeed in online courses and through conversations with experts in the field, we identified three types of supports important for community college student success:

1. Academic supports and personal supports
2. Engagement supports
3. Career-oriented supports

We use these categories to organize our discussion of the examples included in this report. We explore the kinds of supports online students need as well as the implementation context (i.e., how colleges are implementing each type of support in the online environment).

Academic supports help online learners with academic advising, degree and course navigation, and subject matter tutoring. They can include assistance with students' academic experience online, such as help with time management, study plans and organization, and goals. Online learners desire individualized academic advising just like their peers taking courses in person at a college campus.

Personal supports help students with financial issues (such as by teaching students how to apply for financial aid and find scholarships) and with mental health services,.

Student engagement is defined as “the student's psychological investment in and effort directed toward learning, understanding, or mastering the knowledge, skills, or crafts that academic work is intended to promote” (Newmann, Wehlage, and Lamborn 1992, 12). Creating many opportunities for student engagement in the online environment is essential because online learners may have fewer

opportunities than traditional students to engage with the institution. Interactions with peers (learner-to-learner interaction), instructors (learner-to-instructor interaction), and content (learner-to-content interaction) help online learners stay active and more engaged in their courses (Moore 1993).

Career-oriented supports are aimed at helping students succeed in the workplace and involve work-based learning and practicum components. Career-readiness training, simulated work experiences, and placement supports help students new to an industry identify available careers and learn the skills needed for success on the job (e.g., resume development, career assessments, mock interviews, and digital skills training), provide simulated and real-world learning opportunities, and help identify opportunities for work-based learning and full-time employment. Career-oriented services are also offered in online employer-sponsored programs and include employer mentorship. Table 1 summarizes how we have categorized the various supports provided for online learners.

TABLE 1
Types of Online Supports and Examples

Academic and personal supports	Engagement supports	Career-oriented supports
<p><i>Academic supports</i></p> <ul style="list-style-type: none"> ▪ Advising in program of study ▪ Advising for navigating academic experience online, including <ol style="list-style-type: none"> 1. time management and study planning and prioritization, and 2. goal setting ▪ Advising for course navigation and sequencing ▪ Tutoring on subject matter <p><i>Personal supports</i></p> <ul style="list-style-type: none"> ▪ Automated alerts (e.g., reminders for financial aid payments) ▪ Teaching students how to apply for financial aid and find scholarships ▪ Connecting students to institutional and local resources, including childcare, mental health services, and local workforce development boards 	<ul style="list-style-type: none"> ▪ Providing high-quality feedback to students ▪ Using discussion forums to facilitate peer-to-peer engagement ▪ Using peer feedback models (e.g., pair-share, pair rewrite activities). ▪ Using surveys, including course evaluations, to provide a feedback loop for continuous improvement. ▪ Providing professional development for online instructors, including training opportunities to increase student engagement ▪ Providing technical supports, including <ol style="list-style-type: none"> 1. course management systems; 2. mail and text messaging; 3. automated course assignment reminders; 4. videos, screen-sharing, and other interactive content enable virtual meetings and synchronous learning opportunities. 	<p><i>Career-readiness, -placement, and -immersion supports</i></p> <ul style="list-style-type: none"> ▪ Job search and placement ▪ Resume development ▪ Career assessments ▪ Mock interviews ▪ On-the-job training opportunities ▪ Technology and digital literacy training <p><i>Supports for students in employer-sponsored programs</i></p> <ul style="list-style-type: none"> ▪ Support for course participation at employer site ▪ Manuals and guides to assist learners and employers

Note: Support types are not mutually exclusive; supports could be of more than one type.

Technology has an important role to play in the delivery of supports, and it has been used by postsecondary institutions for decades to deliver course content and student supports. The What Works Clearinghouse released a practice guide that includes evidence-based recommendations for how technology can support student learning and completion. For example, the guide details how technology can be used to increase interaction among learners, between learner and instructor, or to provide prompt and targeted feedback to learners, but the guide is not specific to the online or community college contexts.¹¹ Many studies have examined community college student outcomes in technology-mediated courses (Bowen et al. 2012; Briggs et al. 2019). Others have assessed the role of technology in providing supports or assessed student perceptions and satisfaction with online supports, but those discussions of supports are not specific to the community college context. This report builds on existing evidence to explore the use of technology in community college programs delivered online. In our interviews with colleges, we sought to understand not only how they were providing the three types of support we identified but also how they were leveraging available technology to do so.

Examples of Support for Community College Online Learners

The supports we focus on in this report are designed to increase course completion, student satisfaction, and student retention, helping students better meet their educational goals and learn the skills they need to succeed in the labor market. This section describes and defines each type of support in more detail and provides examples of how community colleges are supporting their online learners by providing academic and personal supports, engagement supports, and career-oriented supports. In exploring these examples, we also draw from the literature to understand what is known about the implementation and effectiveness of these approaches.

Academic and Personal Supports

Community colleges provide academic and personal supports to help online learners navigate through their academic experience and assist with various other personal needs. As detailed in table 1, academic supports include advising students in their program of study, helping students navigate the online experience and their course options, and providing tutoring. Personal supports can include financial aid assistance and mental health counseling. Although not the focus of this report, pre-enrollment supports (those delivered before the start of the semester), such as assessments of digital literacy or of preparedness for online learning, can help students better prepare for online learning or determine if online learning is right for them.¹²

“[Supports are provided] to build affinity and to help students advance personally and professionally, enrich their well-being and improve their academic experience ... online learning can be isolating and can feel like you’re doing it alone”

—College administrator

Research has shown that academic advising can increase student retention and graduation rates at higher-education institutions that use strategic and supportive communication approaches with in-

person and online students in their counseling and advising sessions (Kulls 2017). In the online context, the Global Community for Academic Advising (NACADA)¹³ Standards for Advising Distance Education advises that using a single point of contact to provide these supports and services to learners is a best practice.¹⁴ Further, the lack of interaction between advisors and online learners has been found to be a key factor in students' decisions to drop out of online degree programs (Gravel 2012).

Although the importance of advising supports is well documented, several approaches and models can be used to deliver these supports in the online context.¹⁵ Studies that examine different advising approaches for online learners find that a critical element of effective advising from the learner perspective is that the interaction between advisor and learner is prompt but personalized and that they have an individualized relationship (Axelson 2007; Gravel 2012; Raphael 2006). For example, these interactions can be prompt emails or instant messages that are addressed to the learner and their specific needs and challenges rather than messages that cover basic information about registration and graduation requirements (Kalamkarian and Karp 2015). Access to personal supports for online learners is also highlighted as a NACADA distance education learning standard, noting that institutions should “provide appropriate student support services for distance learners as they would for students on campus.”

Understanding effective supports—including academic and personal needs for community college students taking courses online—helps institutions understand in turn how to use technology to address the educational challenges community college students may face, such as a longer time to degree attainment, higher attrition, and lower graduation rates. For example, evidence suggests that using emerging technologies to increase efficiency in advisor-student communication will increase online program completion and retention rates (Kulls 2017).

Two Colleges' Approaches to Delivering Academic and Personal Supports

Montgomery County Community College (MCCC) and Austin Community College (ACC) provide strong examples of the processes and strategies colleges can use to transform the delivery of student supports. See table 2 for an overview of the strategies used at the two colleges.¹⁶

TABLE 2

Academic and Personal Supports: Structure and Strategies at Montgomery County Community College and Austin Community College

		Montgomery County Community College	Austin Community College
Academic supports	Staff	<ul style="list-style-type: none"> Advisor 	<ul style="list-style-type: none"> Advisor Academic coach (designated staff members)
	Technology	<ul style="list-style-type: none"> Advisors communicate with learners via phone, video conference, and email Blackboard used as the virtual learning management system Help desk for technology issues (24/7) 	<ul style="list-style-type: none"> Advisors communicate with learners via WebEx, email Blackboard used as the virtual learning management system Help desk for technology issues
	Structure of interactions	<ul style="list-style-type: none"> Learner is assigned an advisor Meetings are required twice in the first semester (before semester and at middle to end of semester) 45-minute meeting using prepared materials 	<ul style="list-style-type: none"> Learner is assigned an advisor Meetings upon request from learner (not required, but strongly encouraged) 30-minute meeting using InsideTrack coaching model
	Supports	<ul style="list-style-type: none"> Degree and course navigation assistance (advisor and student resource center) Online tutoring (24/7) Online library services (24/7) Starfish EARLY ALERT system Orientation video (required) 	<ul style="list-style-type: none"> Degree and course navigation assistance (advisor) Call-in help desk for immediate questions Online tutoring (24/7) Time management and planning (through academic coach)
Personal supports	Staff	<ul style="list-style-type: none"> Financial aid office staff Student Success Center staff 	<ul style="list-style-type: none"> Mental health counselor (for online learners) Financial aid office staff
	Technology	<ul style="list-style-type: none"> Chatbot to answer financial aid questions Online mental health assessment 	<ul style="list-style-type: none"> Mental health counselor communicates with learners via video
	Supports	<ul style="list-style-type: none"> Referrals to virtually connect with on-campus offices for supports Financial aid services and enrollment services (help with setting up payment plans) Resources for common mental health issues and referral to local treatment options 	<ul style="list-style-type: none"> Referrals to virtually connect with on-campus offices for supports Mental health services provided by specific mental health counselor for online learners Loaner laptops available

Source: Authors' analysis.

MONTGOMERY COUNTY COMMUNITY COLLEGE

MCCC received two Integrated Planning and Advising for Student Success (iPass)¹⁷ grants from the Bill and Melinda Gates Foundation; the first to begin evaluating and developing changes to the delivery of student support services and the second to further develop and implement those changes. The iPass initiative encourages new approaches to advising and degree planning services using new technologies that can catalyze change in both in-person and online student support delivery. A 2016 study that examined six colleges deploying iPass showed that three of those colleges (including MCCC) made steps

toward changing their institutional structures, processes, and attitudes to improve their student support delivery (Karp et al. 2016).

Upon receiving its first iPass grant, MCCC began evaluating how it could improve the delivery of support services—especially how the institution could use technology to scale up advising—and recognized that changes were necessary. The first grant also gave MCCC administrators and staff the time to become comfortable and familiar with the restructuring of the student advising experience, which made it easier to implement these changes with the second iPass grant.

“The goal was to move the institution away from transaction-based sessions to relationship-oriented [sessions], and to help from a student success standpoint [retention and graduation rates] and build communication and connectivity.

—Phil Needles, Vice President of Student Services, Montgomery County Community College

Currently, each student at MCCC has an assigned advisor, and first-semester students are required to have two 45-minute meetings by phone or video conference with their advisor. These meetings are structured to foster a relationship and facilitate targeted discussion between the advisor and the learner. One key change MCCC made to facilitate this relationship is requiring that learners watch a short [orientation video](#) before meeting with their advisor, allowing more time in the meeting for in-depth discussions (such as the advisee’s academic and personal interests, goals, and barriers). The video covers standard onboarding information (such as resources available to the learner and how to be a successful student) and serves as an overview of and welcome to the college. MCCC has also developed [videos](#) specifically for online learners, including “How to Be a Successful Online Student” and “What Is an Online Class?”

Students are also required to complete tasks before the first advisor meeting (such as developing an educational and career plan) that help with the discussion of degree and course navigation. Learners can get help from the student success center, a student-staffed in-person resource center, to complete these plans. Although the student success center is an on-campus support, online learners can connect with the center staff by phone or access self-service resources on MCCC’s student portal outside of the center’s operating hours. Online services such as tutoring, the technology help desk, and library services are also available to online learners at all hours.

Another component of MCCC's advising structure is the implementation of the Starfish EARLY ALERT¹⁸ system, which allows instructors to notify the tutoring team or disability services when a student needs assistance. The use of this type of early-warning software along with an advising structure that involves communication strategies MCCC uses to connect with students (such as the use of email and video conferencing) can help improve retention (King and Alperstein 2015).

In addition to academic supports, MCCC also offers some personal support resources using automation to increase their efficiency and reach. For example, MCCC is piloting a chatbot, an instant chat program that interacts with users online, that students can use to get information on financial aid (such as information on scholarships, financial literacy, and admission). Other personal supports include [health and wellness resources](#), such as a behavioral health assessment that screens for common mental health issues and provides local options for treatment. This support is made available online to address the needs of students who are not able to take the assessment on campus.¹⁹

AUSTIN COMMUNITY COLLEGE

After an assessment of advising services at ACC, the institution partnered with [InsideTrack](#) in an effort to professionalize advising services and foster more thorough engagement with learners. ACC's adoption of a guided pathways model supported the partnership with InsideTrack. Box 3 provides information on InsideTrack and guided pathways.

As a part of implementing the guided pathways model, ACC began using online learner-specific advisors to create a support system that would better serve the growing number of distance education learners at the college. Advisors are assigned one to four areas of study, and their caseload consists of students who are in programs under those areas; this approach allows advisors to become familiar with the course requirements and better help students navigate degrees and courses.

At ACC, each online learner is assigned to an advisor, and although learners are not required to meet with their advisors,²⁰ the advisors send out an email to each advisee at the beginning of each semester with WebEx meeting invitations. During these 30-minute meetings, advisors use the InsideTrack coaching model, which involves discussing commitments, goals, time management, finances, health, and engagement with activities (among other topics). Academic advisors also staff a helpline for online learners' immediate needs or questions (such as how to change majors or how to clear a hold on registration).²¹ Designated staff members, called academic coaches, are also available to online learners if they need more support or advisement on managing their time, setting goals, or staying organized. In some academic programs, faculty members provide informal advisement to their students, so students in those programs do not meet with their assigned advisors as much as students in other programs.

BOX 3

InsideTrack and Guided Pathways

InsideTrack is an organization that uses the guided pathways model and aims to help colleges increase enrollment, retention, and graduation rates by consulting and training college staff. A randomized controlled trial on the effectiveness of InsideTrack coaching at colleges showed that students who were randomly assigned to an InsideTrack coach were more likely to be attending the college one year after the coaching had ended (Bettinger and Baker 2011). In recent years, InsideTrack has moved away from providing direct coaching services to college students. They now provide [training and consulting](#) at colleges so advising staff can coach on their own. InsideTrack also has a platform, [uCoach](#), that colleges can use to support interactions and help with intervention management (e.g., automated nudges, messages, and phone calls).

Guided pathways is a framework for redesigning a community college to improve the student experience from entry through graduation. The framework involves reforms in advising and registration processes to help all students identify their goals early in their academic careers; improvements in how students are supported throughout their courses of study; clear “maps” for each program of study that guide students as they select courses; and programs that are aligned with local transfer and career opportunities in the labor market. Case studies at colleges that adopted the model early show promising indications of improvement. For example, at one college, the share of students earning 24 or more credits in their first year increased from 8 to 15 percent in one academic year (Jenkins et al. 2018).

Other supports include a mental health counselor for learners in online or hybrid coursework who is available by phone and video conference. Similar to the advisors specific to online learners, this mental health counselor was brought on specifically for online students as ACC’s distance education population grew. Online learners who need financial assistance can also connect with the financial aid office by phone. (Online learners who need a laptop can use financial aid in some cases or get a loaner laptop.) Tutoring is available at all hours through [Brainfuse Online Tutoring](#).

Other Examples of Academic and Personal Supports

Through interviews and research into other community colleges’ strategies, we discovered additional interesting examples of academic and personal supports.

ACADEMIC SUPPORTS

Colleges take many approaches to providing advising supports. Like MCCC and ACC, online learners at Itawamba Community College (ICC) and Lone Star College are assigned an advisor who helps them with

academic and personal needs. At ICC, the advisor is a faculty member, and online learners are also offered an e-learning advisor for needs specific to distance education. The e-learning advisor is well-equipped to help with fully online learners' technology issues and is knowledgeable about the fully online learner experience overall. The College System of Tennessee's e-campus (TN e-campus) takes a similar approach: online learners are assigned a student liaison who provides guidance with program and course offerings and registration, technology requirements and issues, and complaints or concerns with instructors or classmates. The liaisons also administer specialized courses for online learners. Box 4 provides an example from a four-year college.

BOX 4

Academic Support Example from a Four-Year Institution

Penn State World Campus, the online campus of the Pennsylvania State University, has a tiered-advising approach: students are assigned a tier 2 advisor upon enrollment, but if their grade point average falls below a 2.0, they are reassigned to a more intensive tier 3 advisor. These students are required to meet with their tier 3 advisor and complete a recovery form to get back on track. Penn State World Campus also uses the uCoach platform from InsideTrack.

Several colleges made sure that necessary academic supports were available at any time students needed them. Most colleges we interviewed had tutoring available for online learners at all hours using platforms such as NetTutor, eTutor, and Brainfuse. In addition to the online tutoring, ICC allows students to access the on-campus student success center using Zoom, a web conferencing software. At the Community College of Vermont (CCV), technology supports such as Zoom guides are available at any time and are embedded into the student portal and within courses on the college's learning management system, Canvas. Additionally, as a part of CCV's library services, librarians can be embedded into online courses to help students with research throughout the semester.

PERSONAL SUPPORTS

Most colleges refer students to the appropriate institutional office on campus, which online learners can connect with virtually, for personal needs such as financial aid or mental health services. At ICC, students are offered confidential advisors²² who are available to talk to students about personal matters. Lone Star College has a counselor who helps with personal crises and other mental health matters.²³ Moreover, using the online SafeColleges platform, all students must complete the Student

Campus Health, Safety, and Risk-Management Awareness (CHSRMA) online modules, which aim to create a safe and supportive learning environment.²⁴

Common Themes

Some common themes emerged from our interviews regarding what academic and personal supports colleges considered important for supporting online learners. Several colleges emphasized the importance of a strong orientation process and an assigned advisor as ways to ensure learners feel connected to the institution, understand the requirements and expectations of online learning, and have a person to contact throughout their learning experience. Personal supports were also viewed as an integral part of advising because colleges recognized that factors outside the classroom affect students' performance. Many colleges noted the importance of both academic and personal supports (such as tutoring, technology, and mental health services) being available online and outside of business hours to serve online learners who need services at different times. Across all colleges, academic and personal supports were seen as a critical part of learner success.

Engagement Supports

To combat isolation among students, engagement supports can be used to increase the connection between students and (1) what they are learning, or learner-to-content engagement, (2) their peers, or learner-to-learner engagement, and (3) the individual teaching them, or learner-to-instructor engagement. This section highlights supports aimed at increasing engagement through online methods.

Learner-to-content engagement supports involve the use of technologies to facilitate meaningful interaction between learners and course content. One example is adaptive learning technology, which is designed to adapt to students' skill levels and remediate skills deficiencies by repeating questions, modules, and practice activities students are struggling with.

Learner-to-learner engagement often involves using social media and other communication channels such as discussion boards, chat applications, blogs, and peer assignments for promoting student-to-student interaction. We heard during our interviews, for example, that Penn State World Campus and CCV's online courses incentivize peer-to-peer engagement by having students submit assignments or complete presentations to their peers and having peers provide feedback on assignments. And some colleges are utilizing peer-mentor programs and student clubs, organizations, and affinity groups to help students connect with one another.

Research shows that students find learner-to-instructor interaction is the most meaningful type of engagement, and evidence suggests retention and completion are improved with effective learner-to-instructor interaction built into a course (Martin and Bollinger 2018). Learner-to-instructor engagement supports involve the use of screen casting (a digital recording of computer screen output with audio narration) instructional videos, and other strategies to increase instructor visibility, such as individual and group interactions and requirements to post grades within specified time frames (Dixson 2010; King 2014). Moreover, timely and thorough feedback on work products is highly desired by students, particularly in online settings (King 2014).

Studies have documented the need for increased learner-to-learner, learner-to-instructor, and learner-to-content engagement as part of online courses to help address the lack of interpersonal connections in online courses (Bernard et al. 2009). This report does not focus on the characteristics of effective online instructors or instructional design for online courses. Instead, we focus on the supports that students need when completing their coursework online, including supports related to effective learner-to-instructor engagement. More research is needed to assess the effectiveness of these approaches relative to in-person learner-to-instructor interactions.

Federal law established the concept of “regular and substantive interaction” between students and instructors to differentiate online courses, which are eligible for federal student aid, from correspondence courses, where students work independently at their own pace.²⁵ Federal policymakers are currently considering updates to these requirements that could go into effect as early as July 2020.²⁶

Bernard and colleagues’ (2009) meta-analysis of studies on student-instructor interaction concluded that stronger interaction and greater engagement between students and instructors is associated with improved achievement and stronger outcomes. They highlighted the following factors as important for the interaction’s effectiveness:

- The course offers regular engagement, which helps students feel like part of a community
- Instructors are responsive to requests for feedback
- Discussion forums are available and interactive
- Virtual meetings are a component of the course
- High-quality feedback is provided on assignments
- In-person meetings at a physical location are possible if desired

Technology can be used to support this interaction, but it can also be a hindrance if students have too much difficulty using tools to interact with their instructors and each other. Technical support through course management systems, synchronous and asynchronous software, email, automated alerts, and other tools that facilitate the completion of coursework “any time and place” (particularly after regular business hours) are particularly useful (Harrell 2008).

Two Colleges’ Approaches to Delivering Engagement Supports

In table 3 we summarize what we heard from two colleges about their strategies for delivering engagement supports.

TABLE 3

Engagement Supports Offered at the Community College of Vermont Pharmacy Tech Apprenticeship Program and Itawamba Community College

	Community College of Vermont Pharmacy Tech Apprenticeship Program	Itawamba Community College
Staff	<ul style="list-style-type: none"> ▪ Faculty ▪ Employer sponsor (apprenticeship program) ▪ Advisor near physical location 	<ul style="list-style-type: none"> ▪ Proctors (staffed in testing labs) ▪ E-learning instructional coordinator ▪ Lead online instructors ▪ Dean of eLearning
Technology	<ul style="list-style-type: none"> ▪ Zoom and web conferencing, including Zoom polling ▪ College student portal ▪ Learning Management System (Canvas) ▪ Telepresence software 	<ul style="list-style-type: none"> ▪ ICC Online Instructor Assessment (online evaluation tool) ▪ Grading feedback and student engagement form
Structure of interactions	<ul style="list-style-type: none"> ▪ Synchronous (live, real-time online) lecture ▪ Cohort model 	<ul style="list-style-type: none"> ▪ Proctor monitors instructor activity on Canvas ▪ E-learning coordinator connects with instructor by email throughout the semester and joins class at least once a semester
Supports	<ul style="list-style-type: none"> ▪ Zoom guide ▪ Student welcome guide ▪ Discussion boards ▪ Technical supports ▪ Local advisor ▪ E-tutoring 	<ul style="list-style-type: none"> ▪ E-learning coordinator ▪ Engagement assessment rubric ▪ Engagement proctors check student engagement and frequency of feedback ▪ Instructor assessments and grading information

Source: Authors’ analysis.

COMMUNITY COLLEGE OF VERMONT PHARMACY TECH APPRENTICESHIP PROGRAM

The CCV Pharmacy Tech Apprenticeship Program offers an Intro to Pharmacy course that features fully synchronous (live and real-time) online lecture. Completing the program provides an industry-recognized credential. Once students have finished their on-the-job training, they are eligible for the Pharmacy Technician Certification Board’s national assessment.

CCV was approached by the health care company CVS Health with the idea for an online apprenticeship program that would allow the company to recruit pharmacy technicians across the state. Staff at the college were concerned that an online course without in-depth instruction would not be supportive enough for students who might be first-time online learners. The college decided to develop a synchronous lecture led by a veteran instructor who is a trained pharmacist. The instructor shared that being able to talk with students in real time and work through on-the-job scenarios they might encounter in a pharmacy was critical.

The program provides geographic flexibility because students can train in a virtual environment from anywhere in the state, but one limitation is that conducting lectures in real time means students lose the flexibility of completing coursework at their own pace and on their own time. The staff that we spoke with felt that the potential trade-off between student flexibility and the synchronous structure of course delivery was necessary for program effectiveness. One staff member at CCV said that “Some students [who never see a human] just don’t feel any kind of accountability unless they see someone’s face. For students who really need that, videoconferencing can be a lifeline.”

The college has developed a student guide that includes tips and best practices for students using Zoom to join lectures in real time. The guide also includes a section welcoming students to the course, containing information about textbooks, what to do before the first class, and technology troubleshooting tips. The instructor has also used other technical supports to facilitate student engagement, such as polling software that allows students to answer questions in real time during lectures, and chat boxes, which she has students drop questions in throughout the class so they can be addressed at the end.

The first half of the first class was used to make sure no one has any issues with the technology and that students are aware of the culture in the course and their expectations to participate. Outside of class, students can also engage with an advisor in person, and a coordinator in any of CCV’s regional offices across Vermont can help them arrange that meeting. E-tutoring is also available for academic support.

Although the college provides students with supports for success in the course, faculty who teach online courses at CCV are also required to complete a five-week course before they can teach online. It covers the pedagogy of online teaching and the intensity of engagement it requires, including, according to an administrator at CCV, “the time-consuming nature of it.” The administrator continued, “I think that training is really essential for new faculty unfamiliar with the structure.” The college also developed a checklist of best practices for teaching online that focused on increasing student engagement.

The checklist was informed by Quality Matters’s standards for teaching online, and it outlines expectations for high-quality online instruction and is organized by four topics: Course Objectives; Course Design and Delivery; Participation and Communication; and Learner Evaluation and Assessment. Box 5 presents more information about Quality Matters. Among the best practices included in the checklist are frequent and regular posts in discussion forums; prompt responses to student inquiries; and prompt, regular evaluations and feedback that facilitate learning and communicate to students that their academic work is important. Per one administrator at CCV, “the quality of what faculty put in influences what students put in. Students aren’t going to do well if they are disengaged.”

BOX 5

Spotlight: Professional Development for Faculty

Quality Matters is a quality-assurance organization focused on faculty professional development that provides a network of professional instructors to help improve and nurture all aspects of online courses. It involves a nationally recognized, faculty-centered peer review process designed to certify the quality of online courses and online components. The Quality Matters rubrics and processes are designed to be continuous, centered, collegial, and collaborative.^a In the Quality Matters process, an online course is identified by a participating institution for Quality Matters peer review. A team of three certified peer reviewers, all of whom must be actively teaching online, work collaboratively with the instructor whose course is under review.

^a More information about the Quality Matters rubrics and processes can be found at “Underlying Principles of Quality Matters,” Maryland Online, accessed February 29, 2020, <https://www.qualitymatters.org/index.php/qm-membership/faqs/underlying-principles>.

ITAWAMBA COMMUNITY COLLEGE

ICC, located in Fulton, Mississippi, is also providing robust support around student engagement by investing in resources that allow instructors to provide high-quality feedback to students, which keeps them aware of where they stand in a course and where they need to improve. ICC is a member of the Mississippi Virtual Community College, a consortium of all 15 community colleges in Mississippi, meaning students across the community college system can leverage instructional resources and technology to access traditional junior college coursework and alternative education options.²⁷

At ICC, an e-learning coordinator on staff at the college provides support by sending reminders about student engagement, instruction sheets, and professional development resources to instructors. A proctor

regularly checks the learning management software, Canvas, to make sure the instructor is grading assignments promptly, posting weekly notices for learners, and responding to emails within 24 hours.

Lead instructors at ICC review and evaluate adjunct faculty's performance using the ICC Online Instructor Assessment, which includes questions about the frequency of course announcements about class assignments; the quality of announcements (whether they are personal and engaging); whether grading is complete and provides high-quality, instructive, personalized feedback; and whether the instructor manages student issues and communications professionally. The assessment also requires the lead instructor completing the evaluation to describe one area in which the instructor could improve or should receive more training and support for and one area in which the instructor excels and should be commended. The assessment feeds into a rubric that the Dean of eLearning uses to assign the instructor a student engagement score.

This type of ongoing assessment and feedback can be particularly helpful for adjunct professors, who are hired close to the start of the semester and may be new to teaching an online course. The college also provides instructors with resources to help them succeed. Online instructors are provided with a full course shell that has been copied over from a lead online instructor familiar with the course. The online instructors can add to and supplement this shell, but they do not need to create the course from scratch.

According to the Dean of eLearning, a good online instructor possesses great time management skills, self-discipline, and initiative. Being flexible and willing to adapt to student schedules in ways that engage them when they are available is critical.

“While most [instructors] are in the office Monday through Friday, students work on their homework at night and on weekends. Teachers have to understand problems with technology and student questions may occur, and you can’t be the teacher who is not responsive or say, ‘No; sorry, you missed the deadline [in those scenarios]’.”

—Denise Gillespie, Dean of eLearning, Itawamba Community College

ICC also requires that online instructors post times they are available for appointments with students on Zoom. This collection of resources and services helps facilitate more intensive engagement between online students and their instructors.

Other Examples of Engagement Supports

Through interviews and research into other community colleges' approaches, interesting examples of student engagement and technical supports emerged.

A key aspect of engagement is collecting student feedback on courses, a common practice in community college programs. College staff from the Minnesota State Colleges and Universities System (or the Minnesota State System), MCCC, and ACC all said they collect feedback through anonymous online surveys at the end of the semester. However, survey participation is not always mandatory or tailored to online learners. An instructor from the Minnesota State System's Live Online program shared, "It's up to the student to take the time, I encourage [survey completion] and want the feedback. The administrators also definitely want the [input]." Many college staff members we interviewed reported searching for ways to more effectively survey students about desired improvements in online courses. In an effort to more effectively engage with and collect high-quality feedback from students, MCCC created a Student Experience Team, which conducts focus groups with students to collect information about their college experience and field student surveys to engage students about their course experience. "This has allowed us to avoid going to the same set of students each time for feedback," reported one administrator.

Technical support—the suite of supports designed to ease difficulty with technology platforms and deliver course content in a more accessible way—is an important part of engagement. At Lone Star College, technical supports are provided for students through the Virtual Learning Assistance Center. The Virtual Learning Assistance Center provides a knowledge and resource base for information such as how to drop courses and how students can complete proctored assessments in an online environment. At ICC, students can get technical support from the e-learning technical support staff person and from the Information Technology Help Desk.

Common Themes

Across colleges, some key common themes emerged as strategies for success in providing engagement support to online learners. First, instructors should provide high-quality feedback on assignments and communicate regularly with students. Establishing standards for engagement for instructors may help with this. Further, some college staff maintain that in certain course contexts, synchronous, real-time instruction for online learners is needed. High-intensity course engagement, such as the kind required by synchronous learning, may not be financially sustainable for colleges writ large, but depending on the needs of the course, colleges may be able to pool enrollment across distance learners and offer

intensive engagement for the same cost as an in-person course, making high-intensity engagement more accessible for online students. Colleges should continue to explore other ways that technology can help automate some of the more personal connections between instructors and students and utilize technology to collect feedback from students on their course experience over time for continuous improvement. Ultimately, colleges will have to weigh the costs and benefits of online courses that require intensive engagement to make decisions about where to target scarce resources and effectively meet student needs.

Career-Oriented Supports

Career-oriented supports for students in fully online courses and degree programs are designed to help students succeed in the workplace and sometimes involve work-based learning and practicum components. They can also help students persist by addressing a key motivation for students enrolled in postsecondary education: to build skills and credentials needed for employment. This motivation to immediately enter the workforce after completing a credential is aligned with data showing that many students are not completing courses to earn college credit toward a degree but instead enrolling in noncredit coursework. The number of noncredit students at community colleges has grown substantially in the past two decades (Xu and Ran 2015), with the number of students pursuing nondegree awards (such as certificates) on the rise. Enrollment growth in noncredit coursework has been concentrated in workforce instruction and contract training programs oriented toward teaching skills in a manner responsive to employer demand (Van Noy et al. 2008).

Career supports, which include career-readiness, job-search, and job-placement supports, are offered in online for-credit, noncredit, and employer-sponsored courses and programs. Effective career supports may be particularly important for online learners because evidence suggests that employers tend to view online degrees less favorably than traditional degrees.²⁸ Thus, one goal of career-oriented supports is to facilitate connections between students and employers.²⁹ Increasing the effectiveness of career-oriented supports for online students might help increase employer awareness of students' skills and provide more job-placement opportunities for online students.

Close relationships between employers and community colleges can facilitate the development of programs and curricula that reflect the needs of businesses and industries and produce trained graduates that employers want to hire (Dailey et al. 2017; Scott et al. 2018). The importance of this connection in the online context was supported in our interviews.

“Completion of online degrees without career connections is meaningless ... online degrees must establish a pathway for immediate connection to the workforce.”

—Ajita Menon, Senior Advisor to the Chancellor, California Community Colleges

At the same time, there is a lack of strong research documenting evidence-based approaches for providing effective career supports in the online context. A 2019 survey examined the demands and preferences of 1,500 online college students. They were asked to describe how they use 11 different career services and their demand for various types of services (such as job shadowing and interview workshops).³⁰ Roughly 23 to 36 percent of current students did not use the services listed in the survey, pointing to the limited utility of available services and/or the need for increased awareness of these services among fully online students. About 7 percent of students identified at least one career service that their school does not offer.

Among online students who did use career services, résumé creation was the most popular service students used early in their academic career, with 23 percent reporting its use. For students nearing graduation, working with a career advisor was the most popular service (29 percent). Self-assessments (28 percent), job search websites maintained by their school (25 percent), and job-search guidance (24 percent) are used most throughout students’ time in school. Although usage of career services decreased after graduation, 10 percent or more of students surveyed indicated they were interested in help after graduation with internship placement, job interviews, job shadowing, career mentoring, and networking.

Some colleges and nonaccredited education programs also offer supports for students who are completing online employer-sponsored customized training programs and incumbent worker training programs (programs designed for employees to complete training programs that allow them to advance in their careers).

Two Approaches to Delivering Career-Oriented Supports

Table 4 summarizes what we heard from college staff from the Live Online program and Calbright College about their strategies for delivering career-oriented supports. The table provides examples of career-oriented services provided by an employer-sponsored program (Live Online) and by a new public community college in California (Calbright). Calbright College is California’s first fully online community

college. It was launched in November 2019 and is in the initial year of implementing programming and supports for students. Amid ongoing leadership transitions, it will be important to understand the long-term impacts of the colleges' efforts to support students in a career-focused model of online learning.

TABLE 4

Career-Oriented Supports provided by the Live Online Program and Calbright College

	Live Online (Minnesota State System)	Calbright College
Staff	<ul style="list-style-type: none"> Instructor College staff Employer mentors 	<ul style="list-style-type: none"> Faculty Program directors (cybersecurity, information technology, and medical coding) Mentors and counselors Employer partners
Technology	<ul style="list-style-type: none"> Simulation technology, including Tooling U and Amatrol Video conferencing systems, including Zoom Course management software, including Desire2Learn 	<ul style="list-style-type: none"> Mobile apps Mobile-first technology (designing interactive content with a small screen in mind)
Student context	<ul style="list-style-type: none"> Current employees 	<ul style="list-style-type: none"> Working adults and underemployed Californians
Course characteristics	<ul style="list-style-type: none"> Competency-based education Open to employees (incumbents), adult learners, and industrial manufacturing technician apprentices Cost of tuition paid by employer sponsor partners or the Department of Labor (for apprentices) 	<ul style="list-style-type: none"> Competency-based education Designed for responsiveness to employer needs and labor market changes Work-based learning experience Free or low-cost education to students Prior learning in the workplace is articulated for skills already acquired
Structure of interactions	<ul style="list-style-type: none"> Instructor interacts with students via live lectures Simulations allow learners to test course knowledge in real time 	<ul style="list-style-type: none"> Counselor develops education and career plan with student after registration in advance of enrollment Testing self-paced progression through instruction, from 10 weeks to one year
Supports	<ul style="list-style-type: none"> Laptops/labs provided to employer partners as needed Technology training Tutoring Simulated work experiences/experiential learning support 	<ul style="list-style-type: none"> College and career essentials course contextualized for selected pathway Job placement support Additional learning supports are currently under development, including embedded learning and navigation support

Source: Authors' analysis.

LIVE ONLINE PROGRAM

The Minnesota State System offers a series of eight-week training courses for incumbent workers as part of its Live Online program. Currently, 10 colleges across the state offer the program, and five colleges are actively enrolling students.³¹ The initiative is co-led by staff at South Central College and

Anoka-Ramsey Community College/Anoka Technical College, and the goal is to expand Live Online program offerings across the state. Although the program is designed to train incumbent workers and apprentices, dislocated workers and other adults also can participate in short-term training sessions of eight weeks or less for one to three hours a week (Bucci et al. 2018). Course content is delivered using mediated telepresence, and work-based learning opportunities are provided through simulated learning programs for manufacturing, such as Amatrol and Tooling U-SME. “Mediated telepresence” consists of a live video-conferencing distance-learning platform designed to deliver training directly to the workplace. These live, interactive classrooms must be attended in real time; classes are not recorded. The Live Online program uses two pieces of software for simulated learning:

- Tooling U-SME provides online manufacturing training with comprehensive programs.
- Amatrol designs, develops, and manufactures technical training systems and is used to train and teach individuals technical and workplace skills ranging from entry-level technical skills to advanced technology troubleshooting for both degree and certification preparation.

In a simulated learning environment (also called a simulation laboratory or lab), a workplace such as a factory floor or a hospital room is replicated. There, participants practice occupational skills.

Advanced manufacturing core courses offered through Live Online align with the Manufacturing Skills Standards Council Certified Production Technologies Certificate, a nationally recognized credential. The certificates are stackable: the 8-credit manufacturing certificate is built into the 16-credit Production Technologies Certificate. The Production Technologies Certificate coursework is offered for credit, and it can be applied toward an academic certificate, diploma, or degree in advanced manufacturing at participating colleges.

Live Online (originally called +Connect) was launched with funding from a Department Trade Adjustment Assistance Community College and Career Training (TAACCCT) grant awarded to South Central College and other partner colleges in the Minnesota State System. The TAACCCT grant funding recently ended. According to a 2018 evaluation report, in year three of the grant, across all partner schools, the program had served 764 enrolled participants and over 55 employers (Bucci et al. 2018). The coleader for the Live Online program shared that 114 apprentices have completed their full credentials through the 16-credit Production Technologies Certificate, and the program has had a high rate of success.

Live Online is unique in that it was designed to allow incumbent workers to receive training on site at their place of employment, but students can also join from home if that is more convenient for their schedules. Live lectures are delivered using a web conferencing system. As part of partnerships with

employers, spaces at job sites that have been configured for course participation are provided as student supports. The program director shared that “we have to bring the education to them [employees]. It’s harder to get students to come in and devote a bunch of hours fitting [school] into their day because life is really busy.”

Students and employee sponsors are also provided a Virtual Classroom Technology Manual that describes expectations; lists resources available to students; and provides system requirements, step-by-step video call-in instructions, and a guide to attendee controls for screen sharing and audio.

The program director and instructor frequently work with a contact at the employer site (either an employer mentor or supervisor or a contact within the human resources department) and an information technology contact who can help troubleshoot technology issues in real time with students. An instructor shared that when an employer supervisor or mentor is in the room, “students always do better. Especially if they take an interest in how the other students are doing.”

For students who have challenges with reading comprehension and other basic skills, one-on-one basic education and contextualized tutoring is provided by the instructor through Zoom calls and telephone conversations. The cost of tuition is often paid by employer sponsor partners or the Department of Labor (which provides funding for apprentices), and the college provides free laptops and lab space for students as needed. The Live Online instructor shared that previous TAACCCT grant funding allowed for a dedicated advisor available for students in the program, but financial support is no longer available for that role. The instructor felt that the dedicated academic advisor was a valuable addition given that once grant funding ended, instructors had to step in to take over the advisor’s tasks, such as monitoring student progress and acting as a liaison with the company.

CALBRIGHT COLLEGE AND CALIFORNIA FORWARD

Calbright College was initially conceptualized and designed for adult and underemployed students interested in “careers not credentials” and is currently piloting three competency-based, sector-based programs in cybersecurity, information technology, and medical coding. The college is testing self-paced progression through instruction, and programs are expected to take between 10 weeks and one year to complete depending on the program and students’ prior learning experience.

California Forward is a nonprofit bipartisan governance reform advocacy organization that brought together groups of employers, college leaders, and adult workers across 14 regions in the state at the beginning of program development to help ensure the college’s training programs reflect skill demands in the workplace. A report produced by California Forward (n.d.) describes findings from these regional

meet-ups and from the results of surveys fielded with both employers and workers. The report, *Can Technology Help Us Get Future-Ready?*, notes that “strong regional public-private partnerships be used to help execute a plan for developing digital learning infrastructures and that employers must be at the center of curriculum design and training development. Creating the [digital learning] infrastructure will limit barriers to upskilling and working closely with employers will limit a mismatch between skills taught and skills required to do the job” (17).

In this way, California Forward has served as a key partner for Calbright College by working to advance online education infrastructure in the state and highlighting the importance of a coordinated approach for employer engagement in career-oriented programs. The report notes that Calbright College has the opportunity to expand access for adult workers who otherwise might not participate in additional education. A California Forward representative we spoke with said that “the online community college is good for the economy for jobs, cuts down on greenhouse gas emissions, [and serves] people in low income scale—it gives them access.”

One staff member we interviewed from the program shared that when developing the program’s competency-based curriculum, “we looked at meeting changing labor market needs, suitability for the online modality. What are the fundamental job readiness, soft skills, and employability skills that employers value most?” The college worked with prospective students to design programs and supports that staff believe reflect the needs of the unique student population of unemployed and underemployed adult workers. The college hopes to eventually have a robust apprenticeship model that is designed with the needs of future employers in mind. Formal partnerships with employers were still in development as of our interview with Calbright staff in September 2019.

To date, the online student supports Calbright College offers include counseling on an education plan for registered students before enrollment, a college and career essentials course, and job placement support. Moreover, tuition is currently being waived for all students who are accepted into the program. A senior advisor to the program shared that the college will continue to focus on career supports as course offerings are fine-tuned, stating “There is a way of teaching career readiness skills in this modality [that is not yet fully understood]. That is what the next frontier of this work is.”

Other Examples of Career-Oriented Supports

Many colleges provide general career services to all students, including students completing courses online. Further, most college staff we spoke with indicated their schools have a website for career resources that online students can access for relevant needs, but some colleges have moved beyond

that to provide more specific supports. For example, at ACC, the career services department has four or six specialists who work with students in person on a campus as well as over telephone, email, and video conference.

BOX 6

Career-Oriented Support Example from a Nonprofit Education Provider

“[Education is successful when] there is no competition. Everyone in our cohorts are guaranteed a job, and no one wants to see anyone else fail. The greatest problem with education is when it’s separated from employment.” – President of the Institute for American Apprenticeships

The Institute for American Apprenticeships (IAA) is a nonprofit education provider that runs cohort apprenticeship programs for employees and invited guests of employer partners. Roughly 10 percent of IAA programs are fully online; students complete all coursework and their apprenticeship fully online and are preparing for occupations, such as medical coding, where they will work full-time from home. Employer partners provide applied and hands-on learning opportunities at employer-partner sites through simulated work experiences and mentoring delivered through technology. In conjunction with IAA’s nonprofit and government partners, employer partners help cover tuition and fees. Teaching assistants serve as mentors who work with students during the academic portion of the program, as they transition to employment, and during their apprenticeship to help students interact and effectively communicate with their employer and peers and develop the study skills necessary to succeed in the course. During students’ first fully online course in the academic phase of the program, teaching assistants focus on coaching how to navigate the online experience. During the apprenticeship portion, teaching assistants and employer supervisors provide mentorship to students virtually. Further, although all students enter the program with employment or an employment agreement, reemployment support is offered to IAA graduates who may become unemployed.

At ICC, six fully online academic degree programs (offering associates of applied science) prepare students for careers and involve work-based learning or practicum components. ICC staff assist students with placement into the work component. Even though the program is fully online, students work with employers in on-the-job training experiences that are on site, in person, and close to where they live. The college also offers a Career Exploration course and an Intro to Healthcare Professions course for students who want to go into the health sciences but have not been admitted yet.

We also identified an example from a non-community college context. The Institute for American Apprenticeships is a nonprofit education provider that supports students in online employer-sponsored apprenticeship programs (box 6). As community colleges expand their involvement in registered

apprenticeships and develop their efforts to provide career-oriented supports, we can learn from employer-focused and other employer-sponsored workforce development programs.

Common Themes

Strong employer relationships, such as having an employer mentor available on site at employer-sponsored programs, are important for ensuring supports meet the needs of a shifting labor market whether the jobs students are preparing for are virtual or at a physical site. And having a strong employer connection to an online program may help validate the credentials or degrees earned online. Given that technology has made simulations and other virtual work-based learning opportunities possible, colleges should explore ways to expand work-based learning in the online context.

As online noncredit and workforce training programs continue to expand, more opportunities will arise to leverage technology in ways that support student success in career-oriented programs.

Discussion

Across our interviews and literature review, we have woven together promising practices and recommendations for college staff interested in providing supports for their online learners and reflections on where it would be helpful to learn more. These emerging findings are summarized in two [fact sheets](#), “How Community Colleges Can Better Support Online Learners” and “Supporting Community College Students Online: Filling Knowledge Gaps for Success.” We provide more detail in this section.

Promising Practices and Recommendations

The following recommendations are intended to elevate promising practices to support and improve outcomes for online learners that can be used by college staff and instructors, higher education administrators, and policymakers.

Academic and Personal Supports

- **Develop a robust orientation for online learners.** A strong orientation and intake process can help students understand what is required of them throughout their online learning experience, become familiar with the resources available to them, and help them better prepare for online learning. College staff shared that many students who pursue online learning have a misconception that online courses will be easier than traditional in-person courses. To help with this, screenings and other pre-enrollment assessments could be better integrated into the intake process to determine whether online learning is the right fit for students and to help set expectations. Students deemed at risk for learning in an online environment but who choose to move forward with completing their coursework online can then be better matched with services and advising support that meets their needs.
- **Have an assigned advisor be the first point of contact for online students’ academic and personal needs.** Although faculty and college leaders are important for supporting students completing fully online coursework and degree programs, an assigned advisor can help online students feel more strongly connected to the institution, increase students’ awareness about the resources available to them, and provide referrals for specific support services to other institutional offices.

Engagement Supports

- **Establish standards and provide support to instructors for engagement with online learners.** Teaching online requires a high level of investment on the part of the instructor, possibly requiring responsiveness outside of traditional business hours. Providing clear accountability metrics for college instructors that describe how they are expected to engage with students throughout the online course before the start of the semester helps ensure instructors are fully informed of the commitment required. Some community colleges have established such metrics and can use them as a foundation to design and tailor professional development resources to the needs of instructors who do not meet expectations or are new to teaching online courses.
- **Collect survey feedback for continuous improvement of the online course experience.** Colleges collect feedback from students on their course experience through anonymous online surveys at the end of the semester. However, we heard from individuals interviewed that survey participation is not mandatory or designed to get input specifically on the online course content or online course experience. Identifying a way to more effectively engage students around desired improvements in their online courses was a recommendation shared by many staff. Quality student surveys designed to identify gaps and assess the effectiveness of supports can allow for a continuous improvement process, increasing students' likelihood of student success in online courses. Effectively engaging online students is tied to increased retention and completion rates, which are key accountability goals for colleges.

Career-Oriented Supports

- **Involve employers in the process of developing and implementing online career-oriented services.** Just as with in-person programs, strong employer relationships are key to supporting students effectively when providing career-oriented services online. Effective career-oriented supports facilitate connections between students and employers. For example, employer partners that are invested in a program's success might commit to mentoring online students, providing in-person work-based learning opportunities, and hiring program graduates; all of these help validate the relevance of credentials students earn online. Strong employer partners also provide feedback on what students need to know and do, which can help colleges shape the supports provided to students and adapt programs to the needs of a shifting labor market. It is important for policymakers to implement policies and incentives that promote employer involvement in these programs (Scott et al. 2018).

- **Leverage technology to facilitate work-based learning experiences online.** As workforce development and technical training programs continue to be offered online and as technology evolves, the ability to offer tactile simulations and other work-based learning in a virtual reality environment will improve. These advances will expand the use of online modalities for elements of training for professions that have traditionally required on-site education (for example, advanced manufacturing). Colleges should focus on piloting new models for implementing work-based learning online to further the field's understanding of how they work, what elements (including career-oriented supports) can be delivered in the virtual environment, and what training must be delivered in person. Competitive federal grant programs such as TAACCCT can be key for allowing for experimentation. With TAACCCT ending, new federal funding may be needed to support efforts in this area.

Technology

- **Consider how technology can supplement other resources and ease advisor and college staff burden.** Colleges seeking to increase efficiency while prioritizing support services for their online learners can consider automating certain aspects of support service delivery using technology. For example, although colleges understand the importance of an engaged and involved relationship between the advisor and learner, they may not have the funding or capacity to implement that practice for all students enrolled at the college. Technology can be used to help fill this gap, automating certain aspects of the online student orientation or intake process. However, technology is not a panacea. It is one tool in an instructor's toolkit that affects students' experiences learning online. Certain in-person interactions are difficult to replicate online, and some services, such as personal supports, may be more effectively delivered in person.
- **Don't let the technology be "the tail wagging the dog."** Working with technology to provide supports online should be a goal-driven rather than a product-driven approach. We heard from one interviewee that "[Colleges that struggle with supporting students effectively using tools online] allow their processes to be driven by a tool that looks appealing, and they're just doing what's necessary to make the tool work, as opposed to thinking about how they want to change strategies and processes and what tool will be the best support for [achieving those goals]." Decisions should not be driven by the latest fads or new technologies. Rather, start with the learner's needs and related goals and strategies in mind and select technology from there.

Where Are the Research Gaps?

Although there is some nascent evidence about the efficacy of fully online coursework and degree programs, and research is under way to understand how to effectively provide supports to community college students online, more work remains to be done. Developing a body of rigorous, evidence-based research will help shape decisions among higher-education administrators at the college, state, and federal levels about how to channel scarce resources toward equitable and effective supports. It will also inform funders and policymakers interested in investing in, scaling and sustaining effective approaches. Below are five key knowledge gaps that need to be addressed.

How to Better Assess College and Program-Level Outcomes

Data on student academic and employment outcomes are typically not reported separately for online and in-person students at the college or program level. Currently these data are reported in the aggregate, which makes student outcomes in specific programs difficult to assess. Colleges should collect and transparently report on data about their own students' college and program-level outcomes, both in person and online, to measure improvements over time. Employment outcomes by program and college should also be reported to the extent possible and made publicly available online. Federal and state policymakers can also play a role by championing transparent and consistent data reporting across colleges.

- *Why does this matter?* Although some colleges and programs are tracking this information for their own purposes, students' ability to optimize their decisions when it comes to online coursework and supports is largely dependent on their access to high-quality information about specific programs they are pursuing, including student outcomes data.

Whether Evidence Finds a Return on Investment

The cost of providing support to online learners was not a research question for this study but warrants further investigation. In a resource-constrained environment, community colleges may see online programs and the provision of supports online as one way to save money. But little is known about whether supports for online learners have a strong return on investment or the potential up-front costs required to introduce new online programs and maintain them over time. This includes needing to learn more about (1) whether online programs themselves (given the up-front costs required to introduce new technology and curricula and maintain them over time) save colleges money compared to in-person

programs and (2) whether online support services have a strong return on investment for students relative to those for in-person programs (measured by reduced time to completion, degree attainment or transfer, as well as reduced attrition).

Colleges should track this information and undertake ongoing assessment of these efforts for performance improvement. Rigorous, independent research is also needed to understand cost implications and the return on investment.

- *Why does this matter?* Evidence on the return on investment of providing support services to online college students can help policymakers and funders target their investments, allocate scarce resources, and invest in or scale up efforts that have demonstrated effectiveness.

Which Services Work Best for Different Students

Understanding which groups of students can benefit most from student supports relies on understanding students' prior educational experiences, current home life, and their preferences. One researcher we spoke with shared that "one of the things we are thinking about is market segmentation of different types of online learning and different approaches [for serving different learners]." For example, students who require remedial education, single parents, students seeking employment in rural areas, and students with military experience all likely have different needs. Researchers need to be able to access this data on student characteristics to assess how different support services impact outcomes for online students, particularly for students who are at risk for struggling in online programs. This starts with colleges collecting these data.

Another area for further inquiry is understanding the motivations of students that enroll in online courses and programs, the risks they perceive associated with participating in online coursework and their experiences participating in online education. As institutions continue offering more coursework online and the share of students participating in online education continues to increase, it is vital that the student voice is incorporated into the discussion about what works for students and what does not.

- *Why does this matter?* Understanding students' needs and motivations for completing coursework online is critical for colleges to develop and implement supports that reflect the needs of their unique student populations. Researchers, policymakers, and funders should sponsor, conduct, and invest in further research about supports that leverage student characteristic data and the perspectives of students involved in online coursework.

When Technology Enhances or Diminishes Learning

One expert we spoke with summarized the need to understand when technology enhances or diminishes student learning outcomes, stating “The fundamental question is: What kind of interactions have to be personal? Things like personal reminders for students can modify behavior. But how can you find ways to make people learn? Can you find ways to help them understand, become more motivated, and feel part of a learning community? To what extent are services that are provided to community college students (in-person or online) complementary?” Designing research that addresses these fundamental questions about the ability of technology to supplement or replace in-person supports and personal interactions—in addition to understanding when technology falls short—is key. It is also important to understand how the supports online students need differ from the supports classroom students need.

- *Why does this matter?* Better understanding where technology falls short and whether (and in which cases) it requires more effort or resources to support online students will allow colleges to enhance the tools and technology available to them.

How to Best Support the Online Instructor

The importance of faculty to a student’s experience and success learning online cannot be overstated. Strong learner-to-instructor interaction is associated with better course outcomes. As one college staff member shared, “Much of the [student] experience is mediated through their learning experience. Students can go talk to the instructor after [an in-person] class and say it didn’t make sense. In online, you are at the mercy of how we design [the learning experience].” Limited faculty professional development resources and the need to hire adjunct instructors close to the start of the semester can be a barrier to supporting online instructors at many community colleges. Despite these limitations, research should examine how to best support online learners given this context.

- *Why does this matter?* Instructors need adequate professional development and instructional design resources to jump into a learning environment that may be new to them and can pose different challenges than teaching in-person courses.

Looking Forward

Online learning holds the promise of increasing access and flexibility for community college learners, but certain students may be left behind. More needs to be done to understand how to adequately

support community college students completing courses online to ensure fully online coursework is not furthering existing inequities. The colleges featured in this report have provided rich examples of how they are supporting their fully online students through academic and personal supports, career-oriented supports, and engagement supports. Future studies exploring the evidence of effectiveness and the cost of supports are needed to help direct investment to scale up supports that work. Doing so is mutually beneficial to colleges and the students they serve: colleges meet their accountability goals, and students are more successful in their courses and prepared to enter the workforce.

Appendix: Research Methods

To answer our research questions, we primarily conducted interviews with staff at public two-year colleges about their online credit-bearing courses and degree programs. We also interviewed three representatives of a four-year institution and one nonprofit training provider who are innovators in their field to draw lessons and insights from the types of supports provided to students completing coursework online at these programs, and we spoke with representatives of two e-Learning Consortia. E-learning consortia are interinstitutional partnerships across a state or region designed to increase capacity for technology-mediated courses and programs,³² and they can involve public statewide virtual schools or partnerships with groups of institutions and vendors. These partnerships can “help overcome the prohibitive high costs that can be involved in the development and maintenance of high-quality online learning opportunities” (Association for Career and Technical Education 2010, 3).³³

Eight states are represented across the 11 education institutions and e-Learning consortia we interviewed. More information about interview respondents is shown in table A.1.

TABLE A.1
Interview Respondent Types

Organization type and programs of focus, if applicable	Number of organizations represented	Individuals interviewed
Education institutions		
<i>Fully online 2-year college</i>	1 ^a	2
<i>Fully online 4-year college</i>	1	3
<i>Education nonprofit (Fully online apprenticeship program)</i>	1 ^a	1
<i>2-year public colleges</i>	7	12
<i>Online courses and programs of study (non-specific)</i>	5	7
<i>Fully online apprenticeship program</i>	1	3
<i>Fully online incumbent worker training program</i>	1	2
<i>Statewide e-Learning Consortia with community college membership</i>	2	3
Other respondent types		
<i>Workforce intermediary</i>	1	1
<i>Subject matter experts</i>	5	5
Total	18	27

Note:

^a Organization has programs and certificates that are not accredited or their programs are in the process of seeking accreditation. Education is offered to students at these programs at no cost. See “[Previous Course Review](#),” Institute for American Apprenticeships at Vermont HITEC, accessed March 2, 2020, and “[Calbright Accreditation](#),” Calbright College, accessed March 2, 2020.

The range of organizations we spoke with reflect the breadth of postsecondary programs available to online learners; they range from more traditional academic programs designed to help students transfer seamlessly to four-year colleges, to employer-sponsored, competency-based programs oriented toward immediate placement in a job or apprenticeship program. We explore this context further in the report.

AUSTIN COMMUNITY COLLEGE

- April Whalen, Student Success Manager
- Javier Lara, Distance Education Advisor

CALBRIGHT COLLEGE

- LaMar Bunts, Acting Chief Success Officer

CALIFORNIA COMMUNITY COLLEGES

- Ajita Menon, Advisor to the Chancellor

CALIFORNIA FORWARD

- Susan Lovenburg, Chief Operating Officer

COLLEGE SYSTEM OF TENNESSEE E-CAMPUS

- Callie Wise, Student Success Manager
- Christine Mayer, Executive Director of Operations

COMMUNITY COLLEGE OF VERMONT

- Jennifer Alberico, Director of Online Teaching and Learning

COMMUNITY COLLEGE OF VERMONT PHARMACY TECH APPRENTICESHIP PROGRAM

- Tiffany Keune, Associate Dean of Workforce Education
- Elizabeth Brown-Higdon, Instructor

EAST CENTRAL COMMUNITY COLLEGE

- Christa Wilhite, Dean of eLearning Education

INSIDETRACK

- Kai Drekmeier, President & Co-Founder

INSTITUTE FOR AMERICAN APPRENTICESHIPS

- Gerald P. Ghazi, Board Chair & President

ITAWAMBA COMMUNITY COLLEGE

- Denise Gillespie, Dean of eLearning

LIVE ONLINE PROGRAM, MINNESOTA STATE SYSTEM

- Heidi Braun, Director of Workforce Development
- Gerald Musielewicz, Instructor

LONE STAR COLLEGE

- Eric Nathan, Director, Online Faculty Support
- Vincent Nguyen, Director, Online Student Services/Enrollment Management

MISSISSIPPI COMMUNITY COLLEGE BOARD

- Krista M. LeBrun, Assistant Executive Director for eLearning & Instructional Technology

MONTGOMERY COUNTY COMMUNITY COLLEGE

- Phil Needles, Vice President of Student Services

OHIO STATE UNIVERSITY

- Shanna Smith Jaggars, Assistant Vice-Provost of Research and Program Assessment in the Office of Student Academic Success

PENN STATE WORLD CAMPUS

- Chris Millet, Director of Learning Design
- Ashley Adams, Director of Student Affairs
- Dawn Coder, Director of Academic Advising & Student Disability Services

PHASE TWO ADVISORY

- Melinda Karp, Founder

URBAN INSTITUTE

- Lauren Eyster, Senior Fellow
- Sandy Baum, Consultant

Notes

- ¹ Community college enrollment at public two-year colleges represented 96 percent of enrollment as of fall 2017 (Allen and Seaman 2017).
- ² As of fall 2017. See “Table 311.15: Number and percentage of students enrolled in degree-granting postsecondary institutions, by distance education participation, location of student, level of enrollment, and control and level of institution: Fall 2016 and fall 2017,” National Center for Education Statistics, accessed January 24, 2020, https://nces.ed.gov/programs/digest/d18/tables/dt18_311.15.asp.
- ³ Developmental coursework is often required for students who are unprepared for introductory college courses such as English, writing or mathematics
- ⁴ Eduventures analysis of Integrated Postsecondary Education Data System eight-year completion data for the 2008 cohort at two- and four-year schools.
- ⁵ See “The Young-Parent Balancing Act,” Urban Institute, November 20, 2019, <https://www.urban.org/features/young-parent-balancing-act>.
- ⁶ See “Changing Community College Systems for Student Success,” Urban Institute, accessed February 28, 2020, <https://www.urban.org/policy-centers/cross-center-initiatives/building-americas-workforce/projects/changing-community-college-systems-student-success>.
- ⁷ See CUNY Accelerated Study in Associate Programs (ASAP), accessed February 28, 2020, <http://www1.cuny.edu/sites/asap/>.
- ⁸ See “Table 311.15: Number and percentage of students enrolled in degree-granting postsecondary institutions, by distance education participation, location of student, level of enrollment, and control and level of institution: Fall 2016 and fall 2017,” National Center for Education Statistics, accessed January 24, 2020, https://nces.ed.gov/programs/digest/d18/tables/dt18_311.15.asp.
- ⁹ Urban Institute Analysis of National Center for Education Statistics. National Postsecondary Student Aid Study 2016.
- ¹⁰ Although the terms are not always clearly differentiated, these frameworks have adopted the use of principles (WCET 2001), scales (Walker and Fraser 2005), categories (NIST 2009), clauses (Canadian Standards Association 2009), benchmarks (Phipps and Merisotis 2000), dimensions (Jung 2011, 2012), elements (MarylandOnline 2008), standards (MarylandOnline 2008), and values (International Center for Academic Integrity 1999), to help organize colleges’ approaches to online learning (International Center for Academic Integrity 1999).
- ¹¹ In May 2019, the What Works Clearinghouse released a practice guide that includes evidence-based recommendations for supporting postsecondary student learning and completion, but it was not specific to online learning or community college contexts. The report found that colleges interested in using technology to advance student learning should (1) use communication and collaboration tools to increase interaction; (2) use varied, personalized, and readily available digital resources to design and deliver instructional content; (3) incorporate technology that models and fosters self-regulated learning strategies; (4) use technology to provide timely and targeted feedback on student performance; and (5) use simulation technologies that help students engage in complex problem solving.

The What Works Clearinghouse report details the ways that technology can be used to advance student success (course completion). However, the report is not specific to the community college or fully online context.

- ¹² Pre-enrollment supports, such as intake surveys, may also be used by institutions to engage with prospective students to understand what types of supports would be most useful to them (Achieving the Dream 2018).
- ¹³ The Global Community for Academic Advising was formerly known as the National Association of Academic Advising. The organization changed its name to the Global Community for Academic Advising in October 2016, but it maintains the NACADA acronym.
- ¹⁴ “Resources – Distance Education Advising Interest Group,” NACADA, accessed February 26, 2020, <https://nacada.ksu.edu/Community/Advising-Communities/Distance-Advising-for-Online-Education/Resources.aspx>.
- ¹⁵ NACADA has a web page that lists resources for approaches to advising. See “Advising Approaches,” NACADA, accessed February 26, 2020, <https://nacada.ksu.edu/Resources/Clearinghouse/advisingapproaches.aspx>.
- ¹⁶ This information was gathered through interviews with faculty, staff, and administrators at these institutions (Dean of eLearning, advisor, instructor) and experts in the field. See a full list of interviewees and their roles in the appendix.
- ¹⁷ The first grant MCCC received was initially referred to as Integrated Planning and Advising Services (IPAS), but it is now referred to as Integrated Planning and Advising for Student Support (iPASS).
- ¹⁸ “Starfish EARLY ALERT,” Starfish Retention Solutions, accessed February 26, 2020, <https://www.starfishsolutions.com/home/starfish-enterprise-success-platform/starfish-early-alert/>.
- ¹⁹ In-person students can go to a behavioral health kiosk on campus.
- ²⁰ ACC leadership is having discussions about requiring students to meet with an advisor in their first semester.
- ²¹ ACC is considering the development of an artificial intelligence tool to answer common questions students ask on the help line.
- ²² See “Behavioral Intervention Team,” Itawamba Community College, accessed February 26, 2020, <http://www.iccms.edu/BIT>.
- ²³ “Crisis Resources and Support,” Lone Star College, accessed February 26, 2020, <http://www.lonestar.edu/mental-health.htm#crisis>.
- ²⁴ “Campus Health, Safety, and Risk-Management Awareness (CHSRMA) Online Modules,” Lone Star College, accessed February 26, 2020, <http://www.lonestar.edu/CampusHealthSafety.htm>.
- ²⁵ The requirement for regular and substantive interaction was established in the Higher Education Act reauthorization in 2008, which specified the requirements for institutions offering distance education to be eligible for federal student aid. For a program to be considered distance education, “it must use technology to support regular and substantive interaction between the students and the instructor, synchronously or asynchronously.” In 2014, nonregulatory guidance clarified some of the requirements around regular and substantive interaction, requiring that (1) interaction between students and instructors occurs regularly as a required part of the program; (2) interaction must be provided by institutional staff who meet accrediting agency standards for providing instruction in the subject matter being discussed; and (3) educational models that involve different instructors performing different roles (e.g., in competency-based education) may be used to ensure regular and substantive interaction between students and instructors, but an institution must still comply with the other requirements. For more information, see “Accreditation in the United States,” US Department of Education, last modified January 28, 2020, https://www2.ed.gov/admins/finaid/accred/accreditation_pg12.html.

- ²⁶ For more information about the negotiated rule-making process that took place between higher-education representatives and US Department of Education officials in January and April 2019 on distance education and related topics, including what constitutes “regular and substantive interaction,” see a synopsis of expected rule changes that could go into effect as early as July 2020 from Mark Lieberman, “[Moving Forward \(at Last\) on Federal Rule Changes](#),” *Inside Higher Ed*, April 9, 2019.
- ²⁷ For more information about the Mississippi Virtual Community College, see <https://msvcc2.squarespace.com/about-the-msvcc>.
- ²⁸ See Dan Carnevale, “Employers Often Distrust Online Degrees,” *Chronicle of Higher Education*, January 5, 2007, <https://www.chronicle.com/article/Employers-Often-Distrust/34334>.
- ²⁹ Dan Carnevale, “[Employers Often Distrust Online Degrees](#).”
- ³⁰ Students were asked whether they used any of the following career services during their most recent online program: (1) working with a career advisor; (2) job search website maintained by the school, (3) self-assessments; (4) guidance in how to conduct a job search, (5) resume creation, (6) guidance in how to conduct a search for an internship, (7) interview workshops, (8) career mentoring, (9) job shadowing, (10) school-sponsored job fairs, and (11) alumni networking events. See Clinefelter, Aslanian, and Magda (2019) for more information.
- ³¹ The five colleges actively enrolling students include South Central College, Pine Technical and Community College, Minnesota State Community and Technical College, St. Cloud Technical Community College, and Anoka-Ramsey Community College/Anoka Technical College
- ³² “e-Learning Consortia Profiles,” WICHE Cooperative for Educational Technologies, accessed February 26, 2020, <https://wcet.wiche.edu/initiatives/consortia/profiles>.
- ³³ For more information about e-Learning consortiums and how colleges utilize these partnerships to leverage resources and technology tools across partner institutions, see Association for Career and Technical Education (2010).

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