

Ready for Work: Adapting High-Impact Workforce Training Models in Community College Settings—Executive Summary



Elizabeth Zachry Rutschow, Amy Feygin, Melissa Chavarria
American Institutes for Research

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Executive Summary

Introduction

Millions of adults in the United States are out of the workforce or have difficulty securing and advancing in jobs that provide family-sustaining wages. This is especially the case among those who do not hold a bachelor's degree or higher and those who live in regions that are in industrial decline (Austin et al., 2018; Autor et al., 2016). Obtaining a postsecondary credential—including a traditional 2-year or 4-year college degree as well as shorter-term training—is among the surest paths to jobs and careers that provide family-sustaining wages (Belfield & Bailey, 2017; Carnevale et al., 2018; Carnevale et al., 2020; Cormier et al., 2022; Daugherty, 2022; Marcotte, 2019; Ruiz & Hearn, 2024). Community colleges are an essential provider of education and training in both these pathways, helping individuals develop the skills they need to move into high-wage, high-demand careers. However, community college students often face challenges progressing in and completing pathways to a credential despite multiple interventions intended to improve their success (Holzer & Baum, 2017; Scrivener & Weiss, 2022).

In contrast, certain workforce training programs—some of which partner with community colleges—have shown dramatic effects on participants' training completion, employment, and earnings in randomized controlled trials (RCTs) (J-PAL Evidence Review, 2022). Researchers have studied these programs—generally referred to as “sector-based workforce programs” or “sectoral programs”—to understand the features that have led to their success (J-PAL Evidence Review, 2022; Katz et al., 2020; Kazis & Molina, 2016; Schaberg, 2020). To date, however, few have considered how these features can be adapted in alternative settings like community colleges to reach the millions of youth and adults who need their services.

With funding from the Strada Education Foundation, the American Institutes for Research[®] (AIR[®]) set out to address this gap in knowledge by conducting a systematic review of research on the sectoral programs with the strongest record of success based on RCT studies. We define effective programs as those that have increased participants' earnings 3 or more years after program participation. We identified three programs—Per Scholas, Year Up, and Project QUEST—that meet this standard, each of which provides short-term training (15 weeks to 2 years) to help participants enter high-wage, high-demand jobs. All three programs demonstrated positive effects on participants' earnings 6 or more years after participation in the program. We reviewed implementation studies of the programs and conducted interviews with program leaders to more deeply understand the services they provide, as well as their commonalities and differences. Based on this analysis, we considered whether and how such approaches could be adapted in alternative settings like community colleges.

This report highlights three commonalities in effective sectoral program practices: (a) deep employer involvement, (b) short-term occupational training tailored to employer and labor market needs, and (c) support services and advising that help participants persist in the program and graduate with the workplace skills that employers seek. The report recommends that community colleges give equal weight to developing students' occupational skills and workplace readiness skills, as well as invest heavily in relationships with employers and bring their perspectives into multiple aspects of academic programming and supports. It also suggests that policymakers incentivize community college–employer partnerships and support more streamlined ways for curriculum changes that align with changing labor market needs. Given the dearth of information about community college workforce training practices, we recommend that researchers prioritize learning about how successful workforce practices can be adapted and implemented within community college settings and analyze the promise these strategies may hold for increasing students' success.

Building a Blended Evidence Base: Rigorous Evidence on Effective Community College and Workforce Training Practices

Over the last 2 decades, community colleges have implemented a variety of interventions in an effort to improve students' success. Early in the millennium, these interventions tended to be short term or “light touch” and included intensive advising for a semester or a year, courses that taught students strategies for success in college, or learning communities (Rutschow et al., 2012; Scrivener & Au, 2007; Visher et al., 2012). When these interventions proved to be unsuccessful in rigorous RCTs, researchers sought to implement and study more intensive, multi-semester strategies that integrated several approaches to improve persistence and graduation rates (Miller et al., 2020b; Scrivener et al., 2015).

These interventions have been studied extensively in rigorous RCTs. Although some interventions have shown promise in supporting students' short-term success, like course completion and retention, few have demonstrated longer-term effects on educational progress, degree completion, employment, or earnings (see Exhibit ES.1). Of the 15 interventions outlined in Exhibit ES.1, only four improved certificate or degree completion rates, and only two improved earnings. Moreover, the community college interventions that have shown promise tend to focus on supporting students in traditional academic pathways that culminate in an associate degree or transfer to a 4-year college, rather than shorter-term workforce training pathways. At the same time, recent research has shown that many associate degree pathways are poorly aligned with available jobs (Strohl et al., 2024). More information is needed about ways to strengthen community college programs, including shorter-term workforce training programs that provide direct entry into the labor market.

Exhibit ES.1. Impacts of Community College Advising and Support Interventions Studied in RCTs

Intervention	Follow-up period (years)	Percentage-point differences between intervention and comparison group			Difference in annual earnings
		College credits earned	Certificate or degree completion	Employment	
Course-based advising and support					
Learning communities ^a	1.5	0.10	—	—	—
Student orientation and success courses ^b	2	-0.3	—	—	—
Summer bridge programs ^c	2	0.0	—	—	—
Staff mentor paired with college math course ^d	1	0.0	—	—	—
Developmental education reforms					
Accelerated math pathways ^e	5	0.39	2.5	—	—
Course placement using multiple measures ^f	4.5	0.4	-0.3	—	—
Corequisite developmental math courses ^g	7	–	7.7**	—	\$4,606*
Modularized developmental math courses ^h	1.5	0.0	—	—	—
Financial aid tied to performance					
Performance-based scholarships ⁱ	4–5	2.1***	3.3**	—	—
Aid Like a Paycheck ^j	2	0.0	—	—	—
Intensive advising support					
Intensive technology-mediated advising ^k	1	0.89, 0.01, -0.83 (3 sites)	—	—	—
Intensive advising with modest stipend ^l	1	0.0	—	—	—
Comprehensive support					
Scaling Up College Completion Efforts for Student Success ^m	1.5	0.7	—	—	—

Intervention	Follow-up period (years)	Percentage-point differences between intervention and comparison group			Difference in annual earnings
		College credits earned	Certificate or degree completion	Employment	
Accelerated Study in Associate Programs ⁿ	6	8.2*** (3 years)	15.1***	-0.3	\$1,948**
One Million Degrees ^o	3	—	2**	—	—

Note. Statistical significance levels: *10% level, **5% level, ***1% level.

^a Visher et al. (2012). ^b Rutschow et al. (2012). ^c Barnett et al. (2012). ^d Visher et al. (2010). ^e Sepanik & Barman (2023).

^f Kopko et al. (2023). ^g Douglas et al. (2023). ^h Weiss & Headlam (2018). ⁱ Mayer et al. (2015). ^j Weissman et al. (2019).

^k Miller et al. (2020a). ^l Scrivener & Au (2007). ^m Sommo et al. (2023). ⁿ Miller et al. (2020b). ^o Hallberg et al. (2023).

Alongside research on interventions for improving the outcomes of community college students, extensive research on the effectiveness of workforce training models has also been conducted over the last 2 decades, including sectoral programs that train individuals for high-demand jobs in high-wage industries (Hendra et al., 2016; Maguire et al., 2010). These programs typically combine shorter-term occupational training in sectors such as information technology (IT), health care, and advanced manufacturing with career readiness training and other support services (Maguire et al., 2010).

Frequently, studies of sectoral programs have found more positive impacts on participants' education and labor market outcomes than community college interventions (Maguire et al., 2010). But like community college interventions, few sectoral programs have had lasting effects on participants' outcomes in long-term follow-up studies. Three programs—Per Scholas, Year Up, and Project QUEST—were the exception. These programs demonstrated dramatic effects on long-term employment and earnings in studies that followed participants for 6 to 11 years after they entered the program (see Exhibit ES.2; Fein & Dastrup, 2022; Kanengiser & Schaberg, 2022; Roder & Elliott, 2021; Schaberg, 2017). These programs—along with other sectoral programs that demonstrate effects on early employment and earnings—have garnered a great deal of attention in recent years as researchers have sought to understand what might explain their success (e.g., Hendra et al., 2023; J-PAL Evidence Review, 2022; Katz et al., 2020; Peck et al., 2021).¹ To date, however, few have considered how the features of these programs might be adapted in alternative settings such as community colleges, which have the potential to reach many more individuals than sectoral programs can accommodate currently.

¹ Some research studies and syntheses have focused on career pathway programs, most of which are also considered sectoral programs. For instance, Peck et al. (2021) define career pathway programs as programs that offer services similar to the ones that sectoral programs offer (training in a specific sector with a focus on completion of industry-recognized credentials, support services, and employer connections). In addition, career pathway programs offer multiple entry and exit points for individuals as they move up the career ladder. For ease of reference, we refer to these career pathway programs as “sectoral programs” throughout this report.

Exhibit ES.2. RCT Studies of Sectoral Programs With Long-Term Impacts on Education and Earnings

Program	Length of follow-up period	Percentage-point difference in		Earnings difference	Average salary at latest follow-up	
		Completed training or earned credential	Employment ^e		Treatment group	Control group
Per Scholas ^a	7 years	35.9*** ^d	3.1	\$4,844**	\$40,494	\$35,651
Year Up ^b	6 years	27.9*** ^f	0.5	\$8,251***	\$35,589	\$27,338
Project QUEST ^c	11 years	13.0**	10.1**	\$4,616*	\$35,500	\$29,870

Note. Statistical significance levels: *10% level, **5% level, ***1% level.

^a Kanengiser & Schaberg (2022) and Schaberg (2017). ^b Fein & Dastrup. (2022). ^c Roder & Elliott (2021). The follow-up period for completing training or earning a credential was 2 years. ^d Hendra et al. (2016). Completion of training or a credential is not fully reported in later follow-up reports. ^e Each of these programs had employment impacts at various times during follow-up studies. ^f Fein et al. (2021).

What Do Effective Sectoral Programs Do and What Are the Implications for Community Colleges?

Our reviews of the implementation studies on Per Scholas, Year Up, and Project QUEST along with interviews with program leaders reveal that these programs share a number of features that distinguish them from traditional community college practices. We found that these three programs shared 21 program features, which we organized into three dimensions: (1) employer involvement; (2) occupational skill training; and (3) student supports and advising.

We also reviewed recent syntheses and meta-analyses of sectoral and career pathway programs that had early effects on participants' training completion, employment, and earnings as well as case studies of promising community college workforce approaches (Davidson et al., 2019; Fuller & Raman, 2022; Katz et al., 2020; Kazis & Molina, 2016; Maguire et al., 2010; Peck et al., 2021; Schaberg, 2020). Of the 10 studies reviewed, we found that all recommend providing occupational skills training in high-wage, high-demand industries and having employers involved in program development. Nine out of 10 suggested focusing on developing an employer-ready candidate, using labor market information (LMI) to inform program planning, and embedding workplace-readiness skills training into the program. Several studies recommended providing individualized coaching or case management, on-the-job training, or work-based learning experiences. Overall, 15 of 21 program features were present or recommended in 8 of 10 of the reports, suggesting a number of commonalities that community

colleges could consider when strengthening their workforce training programs (for more information on these features, see Exhibit 4 in the main report).

Employer Involvement

Engagement with employers is one of the hallmarks of effective sectoral programs, with employer input imbuing nearly every aspect of program development, services, and supports. Employer input was evident across multiple features of Per Scholas, Year Up, and Project QUEST during each RCT (see Exhibit 5). At the start of the RCTs, each program had existed for more than 13 years and had departments and staff dedicated to cultivating and managing relationships with employers. Staff with experience in the relevant industries served as liaisons to employers. They sought employer input to ensure that program services met employers' needs and provided opportunities for employers to interface directly with participants. For example, employers conducted classroom presentations, led mock interviews, or hosted internships or other work-based learning experiences. In interviews, program leaders emphasized the importance of employer relationships in providing ongoing feedback that informed their program adaptations and revisions. They also discussed the reciprocal nature of these relationships, as they were able to cultivate employers' understanding of their student populations, many of whom were from low-income backgrounds. The trust developed also supported employers' commitment to hiring their program graduates.

The employer focus of all three programs contributed to multiple aspects of their development and management, from the content of the training offered to the types of supports provided to students. However, Project QUEST was unique in its partnership with Alamo Colleges District, which fostered connections between the college and industry leaders to build stronger pathways to higher-wage jobs. For instance, when trying to support the growth of high-wage careers in the health industries, Project QUEST interviewed employers to identify key skills and worked with the Alamo Colleges District to revamp its curricula and add new courses that met industry demands. Project QUEST also relied on the trust employers had in their program to negotiate employee-friendly changes, such as increasing wages for particular positions or revising academic skills requirements that were a barrier to workplace entry (Rademacher et al. 2001).

Occupational Skills Training

Occupational skills training, or training in the technical skills that are needed to accomplish specific job tasks, is a key component of sectoral programs. Per Scholas, Year Up, and Project QUEST each focus on high-wage, high-demand industries. RCT program participants at Per Scholas received training in IT while those at Year Up received training in IT and finance, and those at Project QUEST received training in health care (Fein et al., 2021; Hendra et al., 2016; Roder & Elliot, 2018).

This training content was informed by reviews of LMI, which documented key high-wage industries within the regions where the programs operate, along with the types of roles and positions available and the types of skills that are needed to obtain these jobs. Furthermore, all three programs worked with employers and within their communities to validate their LMI findings and to modify their offerings based on current labor market conditions.

The length of time that sectoral programs provided occupational skills training to participants varied. Per Scholas was able to increase participants' long-term earnings with only 15 weeks of training, or less than 4 months. Year Up provided training for just 6 months (followed by a 6-month internship). Project QUEST's training could be as short as 7 months or as long as 2 years, along with one or two semesters of prerequisite courses. The success that these programs achieved with short-term training—including training as short as 15 weeks—reveals that successful skills development can occur outside of multiyear degree or certificate programs.

Furthermore, the experiences of Project QUEST and Year Up reveal that community colleges can be strong partners in developing and providing sectoral training, but they also point to key areas that community colleges might consider strengthening. For instance, Project QUEST leaders noted that the frequent placement of students into developmental education courses often delayed their training and quick entry into work. To navigate this challenge, Project QUEST developed its own pre-training program that upskilled students more quickly. Similarly, Year Up worked extensively with its community college partners one-on-one to overcome issues such as inflexibility in revising for-credit course content, the more regimented academic calendar, and limited opportunities to course correct with students who were struggling academically.

Support Services and Advising

Providing intensive support services and advising alongside occupational skills training is a key feature of the sectoral programs that have improved participants' earnings in the long term (J-PAL Evidence Review, 2022). These supports, which are similar to those provided by many community colleges, include coaching, case management, cohort-based learning communities, and efforts to meet students' basic needs and mental health needs. However, support services and advising in effective sectoral programs have features that distinguish them from programs typically offered in community colleges. We focus on support services in two categories: (a) intensive screening and wraparound supports, and (b) workplace readiness supports.

Intensive Screening and Wraparound Supports

Per Scholas, Year Up, and Project QUEST used intensive screening and admissions processes that measured multiple aspects of students' readiness for success in the program during the RCT. The admissions process could be lengthy, requiring applicants to take skills assessments and

participate in multiple interviews with program staff that assessed their social, emotional, and life needs.

Programs used information gathered during the screening process not only to assess potential participants' readiness for program entry but also to consider what services and wraparound supports might be required to promote their success while in the program. These supports—which can include a range of services such as housing, food assistance, financial support, mental health counseling, or childcare—aim to ameliorate or eliminate nonacademic barriers that could jeopardize student success, and have become an increasingly important strategy that both sectoral programs and community colleges use to increase student success (American Association of Community Colleges, 2024; Coca et al., 2022; Feygin et al., 2022).

Per Scholas, Year Up, and Project QUEST offered a tailored set of services to students based on their identified needs along with mentors, coaches, or advisors who provided individualized guidance in accessing these supports. For example, all three programs had one-on-one case managers or coaches who regularly helped them find services to overcome life challenges such as homelessness, mental health challenges, or food insecurity either within their own programs or through partnerships with local agencies. Although community colleges have similar student support services staff, they generally have less frequent interactions with students. Leaders of effective sectoral programs who worked with community colleges noted that their students had difficulty understanding the availability of these services and how to access them without the one-on-one guidance that they provided. As a result, each of these programs provided these services with their own staff rather than relying on community colleges' supports.

Preemployment and Workplace Readiness Supports

Per Scholas, Year Up, and Project QUEST placed a heavy emphasis on helping students learn about workplace norms and behaviors and demonstrate their mastery of these skills. All three programs had dedicated staff and curricula for building workplace readiness. The programs had weekly meetings or courses that provided instruction in workplace norms, and their students had one-on-one meetings with individual advisors, coaches, or case managers that reinforced these skills. They also placed a strong emphasis on developing soft skills that are important on the job, especially when working in teams, such as problem solving, conflict resolution, workplace ethics, and communication in business environments. In interviews with AIR staff, program leaders pointed to workplace readiness training as the most important feature in students' ability to obtain jobs. They noted that these are the skills that the employers wanted the most and that they had difficulty finding in other job applicants, which led to their further investment in each of these programs' graduates.

In addition, all three programs provided support for participants in obtaining and persisting in jobs through tasks such as résumé development and interview preparation while also maintaining ongoing relationships with employers interested in hiring their graduates (Fein et al., 2021; Hendra et al., 2016; Roder & Elliott, 2021). Each program used its employer-dedicated management team to identify job opportunities and support participants in their outreach to employers. The programs made direct connections between employers and their students, often filtering jobs to find the best match for candidates and providing employers with participants' résumés. To ensure participants' success in their jobs, all three programs provided post-program supports, which researchers have suggested is important for graduates' continued career advancement (Kazis & Molina, 2016; Ratledge et al., 2023; Tessler et al., 2014). These supports included at least 4 months of continued contact with participants after program completion, information about job fairs or opportunities, and re-employment assistance for individuals who lost their jobs.

Rigorous research on community college interventions focused on helping students develop soft skills or explore different careers has shown that these efforts have had few meaningful effects on students' progress through college and their completion of a credential (Rutschow et al., 2012; Scrivener et al., 2009). This finding suggests that a deeper focus by community colleges on workplace readiness skills may provide a more promising avenue for increasing students' success. Community colleges likely need to provide these services more intensively and with more attention to the workplace norms and practices expected in specific industries. Community colleges might consider creating employer advisory boards to help them develop the content for this type of training and better understand the key workplace readiness skills that employers seek in their candidates. Finally, if offering these services internally proves difficult, colleges might consider partnering with local or national organizations that can provide such supports, similar to the partnership that Alamo Colleges District developed with Project QUEST.

What Do These Findings Mean for Strengthening Community College Workforce Training?

The practices of effective sectoral programs—along with rigorous research on previous community college interventions—give us a window into the types of new, potentially more promising interventions that community colleges might consider for improving students' education and labor market success. The following sections present key takeaways on how these learnings might be applied by practitioners, policymakers, and researchers.

Practitioners

Effective sectoral programs have demonstrated that it is possible to make significant strides in supporting individuals' advancement in the labor market within a short period of time if deep investments are made in the programs' relationships with employers. Community colleges should consider developing similar connections with employers. Like effective sectoral programs, community colleges should focus on bringing employers' perspectives into multiple aspects of program development and implementation and ground their programming in employers' wants and needs. Strategies such as developing integrated employer and college task forces to build program curricula or gathering feedback from employers on the success of their graduates and adapting their programming accordingly could be helpful. These types of strategies and relationships would also foster employers' trust in their programs and interest in hiring their program graduates, further supporting their students' labor market success.

Second, community colleges should focus on building students' workplace readiness skills throughout their time in college. Leaders of effective sectoral programs note that workplace readiness skills training is even more critical to their participants' success than occupational skills training. The programs ensure that students have concurrent, ongoing, and intensive workplace readiness skills, which has facilitated employers' trust and hiring of their graduates (Barclays & Per Scholas, 2022; Hendra et al., 2023). In addition to providing explicit instruction in workplace readiness skills, community colleges can build these skills by fostering direct contact between employers and students through internships and other work-based learning opportunities.

Third, community colleges should provide one-on-one guidance to help students access supports and navigate career exploration and employment. Effective sectoral programs provide coaches, mentors, or advisors who know students' strengths and challenges and who can connect them with a variety of supports. These individuals play a critical role in building students' knowledge of available supports but also help them to access the supports. If providing such services is too resource intensive and requires substantial staffing, colleges might consider partnering with outside organizations that specialize in skills.

Finally, community colleges should look to build stronger connections between their noncredit and credit programs. Leaders of effective sectoral programs highlighted the need for flexibility in programming to adapt to labor market changes, a practice that is often more easily accomplished in community colleges' noncredit programs than those that are for-credit. As conditions allow, colleges might later adapt these programs into for-credit degrees and certificates. Alternately, colleges could consider providing college credit for students' knowledge building after the fact as some colleges are doing for adult students and those that come in with specialized skills.

Policy

Federal and state policy has a strong voice in community college practices and resources. Policymakers can support the integration of effective sectoral program practices into community college programming by devoting resources to developing quality programming for short-term programs, including noncredit courses, and establishing mechanisms to track students' progress through these courses and into the workforce. For instance, developing integrated education and labor market databases that can be used to monitor students' education, employment, and earnings would help colleges track their students' labor market success and trace this back to the education and training they received (Syverson et al., 2020).

Second, policymakers can incentivize and support colleges' collaborations with employers and industry connections. Some federal policies, such as the Workforce Innovation and Opportunity Act, have encouraged these collaborations, and the recently developed Bipartisan Workforce Pell Act may provide new resources to fund shorter-term training that employers seek (Campbell & Love, 2016; Deming et al., 2023). Similarly, providing support for colleges' development and implementation of these collaborations might also help. Examples of this type of work can be seen in Jobs for the Future's Talent of Tomorrow Fellowship, the Strada Education Foundation's efforts to increase the capacity of employers and community colleges to partner with one another to build work-relevant education and training pathways for students (Bonilla & Freeman, 2022; Leavitt & Leigh, 2023).

Finally, policymakers can support efforts to build more streamlined processes for reviewing and approving course and program content changes. Although providing rigorous curricula is important, policymakers should consider whether more expedient or employer-informed processes can be developed to measure program content and quality. Some alternatives have been suggested by organizations such as the U.S. Chamber of Commerce Foundation and would allow for more employer voice in defining the skills and knowledge needed for future employment (Goger et al., 2024; U.S. Chamber of Commerce Foundation, 2016).

Researchers

Researchers should seek to build knowledge about the practices that community colleges can use to strengthen students' employment and career advancement. These efforts could start with highlighting colleges that are providing comprehensive workforce readiness supports, which would help further the field's knowledge of how these practices can be implemented more systematically in postsecondary settings. Likewise, descriptive studies can serve as an initial effort to help us understand which approaches hold the most promise for improving student outcomes. Once these foundations are established, researchers should prioritize more rigorous

evaluations of the impact of these strategies on students' educational and labor market progress.

Additionally, efforts should be made to track employers' perspectives of and relationships with community colleges. In focusing only on the voices of community college leaders, we leave out a critical measure of how well community colleges are integrated with their local labor markets and how effectively they are meeting employers' needs. Researchers should seek to understand whether and how community colleges are collecting and integrating employer feedback and whether the services they provide align with employers' needs. Given that employers are the ones who provide the opportunities for employment and advancement, inclusion of their voices and perspectives is key to assessing the performance and success of community colleges.

Conclusion

Community colleges are one of the most important providers of education and training throughout the United States. However, to date, we know very little about what practices they might employ to support students' direct entry into the labor market and whether this can be accomplished in new and unique ways that may go beyond colleges' traditional academic focus. Effective sectoral programs provide a strong model for what practices may be most important, but much more needs to be learned about how these strategies can be successfully adapted to community college settings, given the very different parameters under which they operate. Experimenting with these new innovations—and assessing their effectiveness in supporting students' success—could provide an important bulwark against recent critiques of postsecondary institutions' relevance, strengthen colleges' future enrollments, and build employers' trust in their graduates. Most importantly, investments in new strategies to support students' workplace readiness are likely to help them in reaching one of the biggest goals they have when entering college: to land a well-paying job that will help them build toward the strong economic foundation that they deserve. Finding new ways to help them accomplish this task seems a small price to pay for the chance at making this dream a reality.

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1400 Crystal Drive, 10th Floor
Arlington, VA 22202-3289
+1.202.403.5000 | [AIR.ORG](https://www.air.org)

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